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- Chapter:** Architecture and Spatial Planning
- Chapter:** Civil Engineering, Infrastructure and Environment
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EDITOR SPEECH

International Conference is the 6th international interdisciplinary peer reviewed conference which publishes works of the scientists as well as practitioners in the area where UBT is active in Education, Research and Development.

The UBT aims to implement an integrated strategy to establish itself as an internationally competitive, research-intensive university, committed to the transfer of knowledge and the provision of a world-class education to the most talented students from all backgrounds. It is delivering different courses in science, management and technology.

This year we celebrate the 16th Years Anniversary.

The main perspective of the conference is to connect the scientists and practitioners from different disciplines in the same place and make them be aware of the recent advancements in different research fields, and provide them with a unique forum to share their experiences. It is also the place to support the new academic staff for doing research and publish their work in international standard level.

This conference consists of sub conferences in different fields:

- Management, Business and Economics
- Humanities and Social Sciences (Law, Political Sciences, Media and Communications)
- Computer Science and Information Systems
- Mechatronics, Robotics, Energy and Systems Engineering
- Architecture, Integrated Design, Spatial Planning, Civil Engineering and Infrastructure
- Life Sciences and Technologies (Health and Food)

This conference is the major scientific event of the University for Business and Technology. It is organizing annually and always in cooperation with the partner universities from the region and Europe.

In this case as partner universities are: University of Vlora, University of Tirana – Faculty of Economics and University of Durres.

As professional partners in this conference are: Kosova Association for Control, Automation and Systems Engineering (KA – CASE), Kosova Association for Modeling and Simulation (KA – SIM), Quality Kosova, Kosova Association for Management.

This conference is sponsored by EUROSIM - The European Association of Simulation.

We have to thank all Authors, partners, sponsors and also the conference organizing team making this event a real international scientific event.

This year we have more application and publication than last year. Congratulation!
Edmond Hajrizi, Chair

University for Business and Technology

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**IC - ARCHITECTURE AND SPATIAL
PLANNING**

Assessment of heating energy consumption and resources by the residential sector in city of Prishtina

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Abstract. Heating energy consumption and main heating energy resources are currently global challenges which are closely being treated. Kosovo as a future potential EU member is in front of an energy challenge in terms of consumption and efficient use of it. To elaborate and start first steps of creating national approach towards more efficient use of energy, it is crucial to asses and to infer the current situation of energy consumption and resources, especially heating energy consumption.

Therefore, development of a database with detailed data gathered on the field, to create an overall “picture” of current energy consumption and resources used for heating by the residential sector. The main focus of this research paper is to identify the main heating energy resources used by the residential sector in city of Prishtina, the heated net floor space area in dwellings and user satisfaction based on heating quality within households. Completion of the detailed database with all needed data, is achieved by a survey which was conducted widely throughout city of Prishtina, covering the city’s urban area. Survey distribution throughout the city of Prishtina and separate neighbourhoods was one of the main challenges but yet the core of this investigation, in terms of result generation.

The research results will create a clear “picture” of energy resources used for heating by residential sector in general and in specific neighbourhoods in city of Prishtina, application of thermal insulation, types of windows and percentage of heated area within a household. All generated data within the research will be used, also as basis for further research for more detailed calculations (dynamic building energy and climate simulations) of energy consumption by households. More empirical and measurable results may be generated in future using the results of this research.

Keywords: Residential sector, heating energy, energy resources, heating performance, inhabitant’s satisfaction.

Architectural and urban structure changes on the fortress of Ulqin

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Abstract. The fortress of Ulqin represents a rich historical heritage and it is one of the most specific fortified antic towns in the Adriatic coast. It is a living heritage where the flow of life has never been stopped in the midst of history. In Ulqin's fortress, at the first glance, you can observe architectural structures over 2000 years old: and all different layers added to the structures during different periods of time. Often these structures are combined together and sometimes old structures or materials are used to construct new ones. So it is often difficult to precisely determine the age of the structures as a whole. However, the outward appearance of the fortress is clearly seen to have been undergone different changes, so in this paper I intend to analyse various factors that have influenced the appearance of structures of the fortress and shaped it to the form we see today. In addition to the mass destructions that have been caused by natural impacts (such as the 1968 and 1979 earthquakes), big influence on the changing of the appearance of the fortress or altering the authenticity of the old structures has affected the unsustainable management of this cultural heritage in the last 20-30 years. Through this paper, I will try to explain how this living heritage has been treated, how the urban structure in total and the housing as units developed and especially what the consequences of the changing of different administrations were. As well what potential does this living heritage still preserves to be a powerful candidate for admission in UNESCO.

Keywords: Living Heritage, UNESCO, Management Plan, Influence, Urban Structure, Identity, Alterations

Characteristics of urb/architectural developments in Tirana and Prishtina, during the last decade

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Abstract. Rapid urbanization as a process of societal transformation and intensive architectural developments in urban areas in Tirana and Prishtina, as capital cities of Countries in transition in sense of achievements for community living there and their urban qualitative life. Considering the planning process and role of different partners towards urban prosperity, the urban developments during the last ten years in both capital cities, based on research done and presented in this paper, using comparison methodology on some contextual bases:

- Policy context
- Physical space context
- Site landscape context

With analyses aiming to explain which are effects of three-dimensional mentioned above “contexts” related with: urban space and its integration within public realm (open space, streets, urban greenery, social features...) and architectural values related to sustainability, in line within general objective-urban community satisfaction!

Keywords: urbanization, architectural, community, process, urban, integration, sustainability.

Educational buildings in Albania: Typologies based on morphological development.

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Abstract. There are about 3400 school buildings in Albania and constantly new schools are being renovated and built. It is widely known that the educational sector and the built environment contributes to the achievements of learning and teaching, and causes many effects in the learning process. The importance of the educational infrastructures, is the main purpose of this study, which tries to categorize the typologies, morphology, and space distribution of schools, designed in the years 1945-1990. This period corresponds to the largest number of school's constructions of 'type models' in Albania. The study is focused on the analysis of 150 different school's plans and based mostly on primary resources collected from the Central Technical Archive of Construction, Tirana.

Keywords: Architecture, School, Typology, Morphology

Monuments, Protection and Rehabilitation Zones of Vienna. Genesis and status in legislation and administration.

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Abstract. Austria has a very long tradition in monument protection. Already in 1853, the central commission to research and preserve the built historic monuments started to operate. The current law on monument protection is from the year 1923. Hence, the most successful steps to secure the country's built cultural heritage date back to a new provincial legislation, administration and finance system implemented in the early 70ies of the 19th century based on so-called Old-City Preservation Acts. By this sensitive approach, Austria safeguarded the most important historic city centers of Austria like Salzburg, Graz and Vienna vividly in their traditional characteristics without turning them into museum cities without contemporary life. Especially Vienna managed to balance the protection of its extent historic urban environments with parallel ongoing directed urban expansion.

This paper will reflect the genesis of this very successful integrated conservation process for its capital Vienna in the context of the Austrian tradition of monument protection and the European Year of Architectural Heritage 1975. Further, it will outline its legal, administrative and financial framework. Finally, it will describe its different phases of development reacting on shifting goals during the course of the times.

Keywords: Architectural Heritage, Monument Protection, Integrated Conservation, Preservation of the Urban Environment, Urban Renewal, and Rehabilitation Zones

Underground houses - systematic approach toward underground construction of living space.

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Abstract. The urgent need for energy consumption reduction and trends of global warming leads toward exploring possibilities to “hide” living space from explosion to climate changes as a result of global warming. This paper aims to present benefits of underground houses, underground living space. Housing is elementary process of mankind life that was performed from the existence of life in different forms, shapes, levels and social developments. House, as one used to get protected by phenomena of the nature, historically used in different shapes, levels and materials, created mentality that one percept as protective, and isolated space, for life activities. This paper treat possibilities, and priorities, of underground housing and construction of underground house in current development of technology, climate development impact, current development of mentality of society and approach of society toward energy efficiency, as underground house is one of the contribution. Paper as well analyze applicable standards and current legislation in Kosova for underground construction and housing.

Keywords: Underground house, housing, living space, efficiency

Research and Education: The Renewed Medical Campus of Pécs

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Abstract. With the growth in international education and the increase in the number of students, the examination and development of university campuses at the University of Pécs have become necessary. A new building will be added to the Campus of the Medical School where it is required to place student and educational spaces, as well as research laboratories of international standards. It is a complex architectural task to create new modern spaces, establish relations with one another and also with the existing theoretical building block in the area. The large green space in the campus is closed, unused, but can be taken advantage of with the thoughtful placement of the new building. Student comfort can be improved significantly if the green surface is connected to the life of the area. During the design process, a complex, modern annex has been formulated in accordance with the above educational and research aspects.

Keywords: medical school, green campus, research & education, student comfort

Assisting Simulation Teaching Method with Architectural Tools

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Abstract. The social requirements of health education and the increased attention to the patient made it important to ‘practice’ on patients with the help of simulation training opportunities before the real situations in the last quarter of the 20th century. The legal and ethical aspects of the practical interventions on patients required the regulation of healthcare education. The Medi Skills Lab – Simulation Training Centre project started at the University of Pécs in 2012. The main task of the Laboratory is to develop the manual skills of medical students and doctors in graduate and postgraduate training. During the operation, it is necessary to hold compulsory, elective, optional courses and to realize the training needs of external partners. Education with simulation tools has different spatial organizational demands in connection with architecture. New planning methodological directions and designs are induced by the related functions that are separated in accordance to the technologies. The coherent relations between the functions can be reduced by user levels also in spatial organization.

Keywords: medical simulation, simulation center, education, ‘spatial organization’, ‘planning methodology’, interior design architecture,

City center, underground infrastructure

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Abstract. City centers are in the process of urban change, a process that is encouraged by complex structures and systems but this process also needs to be addressed, discussed to be affected and redirected. An adequate road infrastructure solution at the center of the city would provide an elastic center that is able to change. This is an attempt of multidisciplinary thinking as an urban phenomenon in all its dimensions at the same time: social, ecological, economic, cultural. The process, which will be a continuum, which sets a number of steps in the transformation of the center for next decades.

Keywords: city center., infrastructure, elasticity

High buildings, golden section and golden number

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Abstract. Today's construction is the product of laws and rules that are more likely to lead to more economic benefits than the space that will allow a normal life in a residential, urban, or urban area. Every day and more we are witness to this phenomenon, lack of natural light, green areas that are degrading above, parking spaces that make sidewalks and narrow streets, insufficient distance between objects and the stability of object when it comes to the depth of the basement. The gold section and the golden number, constant these, which we find from our DNA to the star constellation that gives a sense of the universal law of everything's. In architecture the Princip's with geometric methods of the golden section and mathematical Princip's of the golden number, give the most sustainable choices and dimensioned proportions that emerge as the product of these methods are the ones that should contain each building, urban area and cities where we live.

Keywords: building's, sustainable urban areas, proportion's

The development of the concept of “public space” in Tirana

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Abstract. The term “public space”, also known as urban space is a pretty old phrase, but was used as a concept with a clear definition during the modern era. The evolution of this term is well known in Tirana because of its constant development especially in the recent projects.

The first attempts started in 1914, but there was not a real concept of the public space, which was definitely affected by the citizens’ lifestyle. The public spaces in Tirana have changed a lot since then by recreating the concept of “public use”. There are many examples of squares, streets and parks which have gone through the process of change during the years with the development of the concept that have affected people’s lives.

Our project is an example of small neighbourhood squares that have turned into landmarks in Tirana. We finally came to the conclusion that the public space is one of the most important elements that represent a healthy and balanced life because of their functions and also the greenery.

Keywords: urban space, evolution, lifestyle, square, landmark, functions, greenery.

New Urban Agenda - How far -by thespatial planning legislation in Kosovo and Albania

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Abstract. Sustainable Urban Development in Kosovo and Albania is the subject to this research paper. Analyzes of spatial planning legislation of two countries, toward approaching New Urban Agenda, its strategic objectives, priorities, modalities of urban management is of importance.

Kosovo and Albanian cities are facing rapid urbanization due to several reasons, migration, economic development challenges, that initially are regulated by spatial development legislation, whereas global trend are saying for the facts that one third of the global population will live in cities by 2050 (UN, 2014), in Albania over two third of population will live in cities after 2035 (UN, World Urbanization Prospects, 2009 Revision), and in Kosovo

By this paper research would be identified and weighted main indicators of sustainable spatial development of the Spatial Planning Laws and National Documents of Kosovo and Albanian.

Keywords: Sustainable Urban Development, Sustainable Development Goals, Inclusive Human Settlements, Resilient Cities.

Revitalization of new dinamo factory through the urban agriculture

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Abstract: The country's industrialization recognized its peak during the '60s and' 70s. Industrial constructions served as catalysts for the construction of several new housing blocks in Tirana. Around these industrial areas were built dedicated dwellings mainly for the workers' families. After the total abandonment of these structures, the industry was no longer the main revenue generator in the country, so Albanians turned to private activities.

For seven to eight years, we have turned attention to these factors from these areas and abandoned structures. The first is the private factor, which has begun to reuse some of the areas in these areas. The second factor is the institutions of local government and those of urban issues study. Solutions for controlling informality and territory in peripheral areas have long been required. The third factor is the people in the area, who are interested in community life and seek public spaces and structures for social activities. The main purpose of this research is to read and re-evaluate one of the abandoned industrial structures along the Tirana River and to propose a way to reuse this structure more environmentally friendly and as beneficial to the residents themselves.

The qualification of spaces between industrial buildings will give the area an open functional market and another quality of urban design. This will enrich the public and semi-public space considerably. So these former industrial zones will be used differently from the community and will therefore be configured differently in the city context.

Keywords: industrial constructions, revitalization, public space, hybrid space, urban agriculture.

Renewal of a Housing District from the sixties in Budapest

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Abstract. At the time of its construction the housing estate József Attila (1956-1963) in Budapest was a sample project (installation, interior spaces, new structures and materials) which has been obsoleted in the last 50 years. After winning the architectural and urban competition using open-minded architectural thinking that can make the housing estate a new role model again - increasing existing values and give new ones, the paper presents the principles of design which could be standard for neighborhoods of similar history.

Keywords: renewal, housing estate, urban, value adding

Exploration of housing evolution in Tirana during the years 1929-1943

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Abstract. This paper traces the evolution of housing typologies, focusing in Tirana, Albania. The study reviews the fundamentals of housing throughout the two historical periods, 1929-1932 and 1939-1943. The housing projects analysed are designed mostly by Austrian and Italian architects. The methodological approach is based on reviewing a number of case studies starting from one-family house to multi-family housing typology. The main purpose of this paper is to identify the process of transformation and development of housing based on the typologies, functionality, and occupancy. Also, particular elements of aesthetics are analyzed and compared. This study highlights that the improvement of living conditions happened because of a better design and situation of housing in anurban context.

Keywords: Housing, Villas, Italian-Austrian architecture, Occupancy

The Development of the 'Western Campus'

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Abstract: With the Modern Városok Program ('Modern Cities Program') Pécs has gained a development opportunity with the help of which not only the buildings and premises of the university faculties participating in international training can form more sustainable, unified university campuses, but with urban planning infrastructure development is being prepared both in short and long term. One of the main development areas of the 'Modern Cities Program' is the establishment of the 'Western Campus'. In the first stage, the formation of a migration map and the grouping of the faculties and buildings inside and outside the premises were necessary for the unified Campus. During the preparatory phase, the infrastructure connecting university areas were developed and the pedestrian and bicycle road networks were redesigned/expanded. In the second phase, the faculties were complemented in accordance with their needs, some faculties were redesigned inside the building (Faculty of Pharmacy), others were enlarged (Faculty of Sciences), but new buildings were also designed (Medical School, Faculty of Engineering and Information Technology ÉG 81-56). The International Studies Centre and the Centre for Foreign Languages are placed in this homogeneous structure, which also indicates the essence of the Campus.

Keywords: urban development, university development, sustainability, modular architecture

Concepts for University developments, focusing on campus of Rokus str., Pécs, Hungary

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Abstract. The university faculties are situated in different parts of the city and they are not connected to each other. The faculties are located in minimal areas, they are surrounded by residential and public functions. The communication between the faculties and the transport network are not solved for the students and for the city. Traditional campuses have not been established around the universities and the development goals of the university to create them were ineffective. The University of Pécs – as a campus – can only work optimally if the faculties and their surroundings are interconnected by suitable transport, infrastructure network. Within the framework of 'Modern Cities' University Development Program, it is possible to reconsider the existing premises and to regroup the faculties – when the disunity of the Faculty of Engineering was solved, the significant property stock of the campus in Rókus street partly lost its function due to reorganization. The maintenance of the cadastre in its current form is expensive due to its under-utilized operation. However, the existing properties should be considered an opportunity rather than a problem. With the planned increase in the educational capacity of the Faculty of Pharmacy, we are able to create spaces for transparent education of international standards with a functional change in new emerging development areas in the existing buildings.

Keywords: University development, Public spaces

Impact of Regulatory Plans in the Value of the Land in Pristina

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Abstract. Post-war Kosovo faced big demographic movements. Pristina as the capital has suffered most changes. People from rural areas moved to the city. In areas of the city where no regulatory plans existed, owners hesitated to make investments in their properties and economic development stopped. There have been also people who have developed their property even though there was no law background to do so. Mainly this was done haphazardly without any criteria and became an obstacle for future development plans of the city. The value of the land in the areas of the city for which the regulatory plan has been drafted has increased immediately. The city, apart from development within its urban boundaries, has expanded the outer boundaries to create new residential neighbourhoods to accommodate new residents from all municipalities. These boundaries now include areas of agricultural land which changed its destination to construction land. Low priced agricultural land became highly priced construction land. This paper aims to highlight the impact of regulatory plans on the value of the land.

Keywords: City, urban policy, regulatory plan, land, investment, construction

The Unifying Role of the University Business Center (UBC) Campus

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The Development of the Faculty of Business and Economics at the University of Pécs and the Impact of the Development on the Operation of the Eastern Campus
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Abstract. While working out the concept of the university development and examining the connections between the existing university facilities and the surrounding public spaces, we have come to our goal: the formulation of a new building for the Faculty of Business and Economics and the introduction of the concept of the Eastern Campus to the university public. The analyses carried out consider the components of the present state in this area of Pécs after the European Capital of Culture Program was closed and the life of the city and the university has returned to the normal operation. Naturally, the elements completed during the ECOC Program are integrated and continue to operate. The building of the new University Business Center has been placed and formulated analysing this situation as a starting point.

Keywords: University development, Eastern Campus, University Business Center, Public spaces

Creating the Database of Housing Necessity for Kosovo Spatial Planning

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Abstract: The rapid development rate of the information technology, has affected almost all life spheres, especially the housing sector, which is a dominant factor in the sustainable Urban Management and Spatial Planning of the City, in certain areas or even of the entire State.

Solution of many problems in the housing sector, which is made through housing programs and which is complex in urban planning management, would be too difficult or impossible without a housing database.

Also, the best coding and all the energy spent in terms of efficient development of the residential database would be irrelevant, if users do not use these data to design sustainable management of urban and spatial planning, as it has been so far.

The housing database should be well designed and updated with the ability to link to the other web servers, so that we can easily access the desired information to draft and manage the sustainable urban and spatial planning.

With this research, will be identified and evaluated indicators that influence in sustainable urban development and residential for all, by developing households with property rights, and all this based on legislation and documents of Spatial Planning, Construction, Legalization, and Housing in Kosovo, Albania, in the region countries, in the EU and in USA.

Keywords: spatial planning, sustainable urban development, purpose of drafting, management and housing administration, housing database, housing for all, municipal development plans, programs, design and financing of specific housing programs.

Revitalization of the Kokalari Estate within the historic context of Gjirokastra

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Abstract. In the historic center of the UNESCO World Heritage site of Gjirokastra lie the remains of one of the town's most notable family-residences. Built in 1883, the edifice owns an extraordinary composition for the late Ottoman period. Today the ruin is a memorial site dedicated to Musine Kokalari, who spent her youth in Gjirokastra. She was declared a "National Heroine" years after her death in 1983 for her defiant stand against the totalitarian regime. This paper exposes the factors, which endanger the monument and explicates the necessary operations for a successful revitalization following the ideas of Arjeta Kokalari, curator of the "Muzeu Kokalari".

Keywords: preservation of cultural heritage, ottoman architecture, revitalization, contemporary architecture, museum and education.

RESEARCH CLINIC: Education - Research – Healing

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Architectts: Fogas Renáta Dla, Szerencsés Dániel, Szigony János, Szintén Bianka, Borbás Réka, Hegedüs Csilla, Fenyvesi Dániel, Molnár Ferenc, Tóth Gábor, Pintér Noémi, Garas Gergely, Szarvas Richárd, Nagy Sándor, Kinászt András, Hohman Ákos, Kovács Attila

Abstract. The Clinical Center of the University of Pécs, as the largest health center in the South Transdanubian region of Hungary, started its long-term development strategy "Research Clinic / 3D Clinic" in 2017. This aims to increase the service portfolio of the Clinic to "smart technologies" level. The program is a shift in higher education and health care, either.

Due to the extensive activity of the PTE Clinical Center, its services are built around three main dimensions. Education - research / development - health care. This triple unit has the power of the Clinic and the ability to achieve the best results through a "smart technology" for a healthy society, a highly skilled workforce, a human and economical healthcare system, and future-oriented research.

As a first step in this investment, centralization of health care, reconstruction of existing building complex and transition to "smart technologies" will be implemented. In the second step, a new building complex of the "Research Clinic / 3D Clinic" will be implemented.

Our presentation introduce the architectural developments and technological innovations of the "Research Clinic / 3D Clinic" project for the various buildings.

Keywords: clinic, education, research

The advantage of prefabricated concrete structures

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Abstract: The research deals with the analysis and advantage of prefabricated concrete structures against steel structures.

The focus of the study is mainly montage structures of business / economic facilities, mostly one floor, but the height of which is 9m, which is several times higher than that of normal floors.

The research is based on the analytical method, which helps in the final results.

In addition to the many advantages, here the analysis is based mainly on two main aspects:

1. - The aspect of construction time (Speed & Strength).
2. - Aspect of the construction cost (Cost Effective).

The analysis shows that the application of structures from prefabricated concrete elements, compared to steel structures, in addition to the above mentioned advantages (Speed & Strength and Cost Effective), there are many other advantages, such as:

- Quality
- Long Life & Low Maintenance Structures
- Weather & Fire Resistant
- Energy Efficient & Green Building Structures
- Easy Installation
- HCS Act as a Ducting System
- Minimal On-site Activity
- Flexible Designs & Long Spans
- Acoustic Performance
- Recyclable
- Water tight.

Keywords; prefabricated structures, steel structures, economic facilities, construction time, construction cost.

Investigation of human settlement environment - Architecture and landscape design for Beikanzi village

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Abstract: The vast rural areas where contain rich historical and cultural heritages and natural resources areas are the root for the stability of China and the foundation of the Chinese nation. It is China's historical, cultural and natural heritage as a "living fossil" and "Museum" and it is also a vehicle of Chinese traditional culture and the Chinese nation's spiritual home. With the rapid development of China's economy and society, the urban construction has been unprecedentedly supported. However, the rural areas which occupy the absolute advantage in area of land have been far behind the current development level. Take the "Beautiful Village" Project as an opportunity which is initiated by the government, by means of design to make rural indicators in line with the city, gradually change the status that the rural areas are far behind urban areas.

The experiences and impressions of the architects from CAFA who took part in the architecture design for the villages are recorded in this paper. Taking the activity as a chance, the architects did lots of investigations about the inhabitation situations of the villages in China. Finding out the difficulties during the development, trying to solve the problems by practices and researches. In this way, the architects strive to design a high standard living level for the rural areas in China.

Keywords : Village development, Urban-rural integration, Internationalization, High standard

Investigation of the impact of revitalization of public spaces in the increase of usage and the perceiving of these areas

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Abstract. The first concepts of urban spaces in Kosovo were introduced in between 17th to 19th century when the cities were forming and their gathering and social functions such as mosques, hammams, open-air bazaar and clock towers were introduced. These vital structures, beside their primary respective function, served as gathering, discussing politics and socializing spaces. Results of this study were developed through critical review and observation of recently intervened public spaces, comparison between them and interviews with citizens and frequent users. This ongoing study aims to analyze the impact of revitalization of urban spaces and the way people use and perceive these spaces, as successful examples for future interventions in the chosen study case “Parku i Qytetit” in Prishtina, in terms of maintenance, quality urban space and design. Results from survey and comparative studies of other examples showed that these spaces were mostly used for recreation and sports, relaxing and socializing. Problems and potentials revealed during technical analysis will be improved through a design proposal for the study case of “Parku i Qytetit”.

Keywords: Revitalization, quality urban space, perceive, socializing, future interventions

Bad Design to Kitsch: Examples from Eastern Point of View

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Abstract: The design case is applied to make a difference in living and to facilitate people's life, from product scale, architectural design to urban scale. A design practice should be able to respond to the user's cognitive and behavioral needs. Today, design solutions that can not respond to these needs are confronted as bad design.

Today, when the habits of consumer society and the low expectations of users are combined, it is inevitable to encounter kitsch phenomenon in design solutions. Kitsch is a term used to refer to banal, rugged, and boring design solutions made with sharp and commercial concerns. It is not easy to define Kitsch exactly, but we can recognize its representation as soon as we see it. It can also be said that the efficiency of design takes a thin line in terms of application results. The results below this line may be inadequate and bad designs, and those above may be overriding and kitsch. In this study, the examples which show the kitsch design from the bad design are put forward with the examples of product, architecture and urban scale in the eastern countries, especially taking the center of Europe.

Keywords: Bad design, Kitsch, Design, Architectural design, Urban Design

Integrating Resilience, Green Building and BIM in Architecture theory and practice

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Abstract. The paper contents qualitative research that covers scope of Resilience, Green Building and BIM (Building Information Modeling) concepts implementation. Objective of paper is to facilitate the discussion on question how these concepts can be integrated to apply in architecture theory and practice by making science-based building decisions that will improve the overall performance of construction projects. Research is done in global and regional context focused in Republic of Kosovo.

The specific objective of this paper is to facilitate socially innovative actions and initiatives as a primary source for integration of resilience, green building and BIM technology in the daily life.

Participating and observing group discussions with architects, spatial planners and environmental professionals helped to uncover trends in theory and practice, and dive deeper into the problem. State of art literature review on this topic and personal interviews in daily work helped to analyze and compare local, regional and international implementation of concepts. Results of research paper will help understanding of the global and regional architects and planning professionals in order for there to be clear the need for promoting the notion of BIM, resilience and green building and integrating them in theory and practice.

In conclusions will be described conditions for integrating new concepts interconnected in new inclusive strategies. Integration will narrow the gap between the EU and Balkan countries. In recommendations will be proposed framework that can potentially enhance community decisions by creating opportunity to achieve synergy among different interconnected multispectral stakeholders in building sector.

Keywords: Integration, Resilience, Green Building and BIM

Reuse and regeneration of industrial zones

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Abstract: The research in this paper deals with the industrial heritage, analysis of industrial buildings built during XX century in Europe and in Kosovo, where as the case study is taken the city of Pristina and industrial revitalized buildings as good examples in Europe.

Industrial heritage is part of the cultural heritage that deals with the buildings and artifacts of the industry that are inherited from the past, and preserved for future generations, as a symbol and urban identity.

In Western European countries, the phenomenon of resurrection and industrial heritage is constantly growing and developing, in Southeast Europe is still a continuous process, while it has not yet started in Kosovo.

Pristina is one of the main cities of Kosovo, which in the first half of the 80's enjoyed a very good economic state, while from the war in 1999 and today it has faced problems of this nature as a result of the dysfunction of the industry in this field.

The main purpose of the research is to analyze industrial buildings built in the 20th century in Pristina, their current state, the potential of these buildings and the possibilities of reuse in the urban context.

The main focus of the study will be the possibility of adaptive reuse, revitalization for the benefit of the community and economic development.

Keywords: Kosovo, Urban regeneration, Industrial heritage, community, adaptive reuse

Spatial Planning Challenges of Mega Regions: Understanding Dynamism and Complexity of Istanbul and Periphery

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Abstract. Istanbul Metropolitan Area is a regional magnet according to OECD Territorial Review, has been challenging socio-economic, administrative, governance transformations and spatial planning projects since last decade. In this study, transition of metropolitan governance structure of Istanbul Metropolitan Area assessed with interaction of diverse planning projects' practice. The mechanics and dynamics of interrelated projects and their loops classified with policy analysis approaches. Themes/sectors of metropolitan scale master planning processes lead by Istanbul Metropolitan Municipality are; earthquake, environment, transportation, urban regeneration, logistics lighting, bicycle, etc. Add to this phenomenon, ecological, transportation and logistics connections of 14.5m metropolis with her periphery have created another dimension of dynamism. Periphery of Istanbul has become "urban-region" or "mega-region" with relations of other cities and metropolises located around the Marmara Sea. As a result more feedback and fine-tuning actions proposed in order to have an optimum regional scale sustainable development from mechanical point of view.

Keywords: mega-regions, spatial planning, feedback loops, fine-tuning

Residential building stock transformation in years and strategies for the future - Albanian case

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Abstract: This research aims to present a clear picture of existing situation of the residential building stock, their adaptation and transformation during years, which can serve as bases for the needed strategy of future retrofitting. It will be evidenced the importance of tools and procedures for environmental regeneration and architectural retrofitting of residential buildings blocks, in the frame of energy efficiency. The research aims, although, to provide building researchers and practitioners with a better understanding of how to effectively conduct a building retrofit to promote energy conservation and sustainability.

The methodology used for this research will be based on a phenomenological approach towards the understanding of the urban process, giving the main attention to the contextual realities. The tools used will be inquiries of different types: Empirical and observational; Descriptive research; Conceptual; Normative and evaluative.

Although there are many retrofit technologies available, the way to identify the most cost-effective retrofit actions for the residential sector is still a main technical challenge. This research will try to present a proper approach for the selection and identification of the best retrofit options for existing buildings, in the Albanian context. All the findings will be dictated from the European normative, in the frame of energy efficiency, and the evolution of the construction sector technologies. In conclusion will be presented a concentrated guideline with different tools and procedures that can control and regulate the building construction sector for retrofitting of existing residential blocks. The guidelines will affect the decision of all the actors involved in this process, from the policy makers to the final users of residential buildings and construction sector.

Keyword: retrofitting, sustainable design. energy efficiency, passive techniques, comfort.

The City and the Dream

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Abstract. This paper proposes to deal with Good Government as the Sine qua non of good design on any scale. It will address these issues in historical perspective and above all, in its conceptual dimension and complexity. It will stress the fundamental importance of political order in achieving good design and vice versa, design as the basic element in good government.

Keywords: The city dream, good design, good government, complexity

Application of Complex Adaptive Leadership Approach in Multinational Construction Company in Albania

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Abstract. The vivid non-linear business environment of nowadays, enhances companies to embrace the complexity leadership approach, in order to remain competitive in a globalized industry. Maintaining their adaptive system is found to be the main challenge. This paper aims to analyze the up-to-date literature based on Complex Adaptive Leadership approach, focusing on Chaos Theory and Complexity Science. In addition a real-life case of a German company investing in real-estate sector in Albania is introduced. The highly dynamic environment of construction project depends on the information flow and interaction between project stakeholders, which is proved to impose high unpredictability, continuous disequilibrium and emergence. Butterfly Effect, Strange Attractors, Self-Organization, Emergence Decision-Making, Feedback and over all Complex Behaviors of the Company Leadership are discussed considering the circumstances under which the company has terminated the agreement with General Contractor during the construction phase. Finally the consequences of these changes are disclosed and recommendations for improving future actions are proposed.

Keywords: Leadership, Complex Adaptive Leadership, Chaos Theory

The Integration Methodology of Sustainable Urban Dynamics Indicators with Focus on Transport

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Abstract. This paper discusses urban dynamics with focus on the sustainable transport indicators. It provides with principles for identification and selecting of indicators, and represents an indicator integration methodology. Indicators are very important components for various assessments due to proper decision-making. The successful assessment of various transport investment projects and programs depend on the accuracy of selecting, integrating and measuring associated indicators. The research addresses the importance of development of a satisfactory methodology for integration of urban planning indicators, indexing them, or constructing indicators measurable, more practical and understandable. From this perspective, this paper addresses the need for making indicators more understandable and easier measured in order to become used in urban dynamics decision-making processes. Based on the addressed needs this paper focuses on the differentiation and disintegration of indicators into more functional and easier to be measured indicator set. For these purposes, this paper suggests a systematically communicative methodology for integration of sustainable urban planning indicators. The empirical evidence show the existence of a great number of departments, institutions, and agencies carrying out research in the field of urban planning indicators. However, there is not clear methodology for integration of urban dynamics indicators. Consequently, this paper suggests a systematic approach for integrating urban dynamics indicators with focus on Transport.

Keywords: urban dynamics sustainable urban planning, impacts, factors, indicators, integration

How do we live?

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Abstract. Now days, technology is everywhere, in our homes and working areas, we even carry a lot of electronic technology with us. It is one of the most used notions and a part of life. Ourhouses also have a lot of electronic technology, it relieves our lives. Technology can also make our space more comfortable, saves our time in many ways. However, technology can not physically enlarge or replace our spaces. Flexibility is an essential component of our lives, increases our space and allows the most possibilities through the changes of our lives. It remains a part of our lives and complements our space. How do we live today between a lot of technology and often a lack of living space that many people have? A smart addition of these two components, technology and flexibility would be an ideal combination...

Keywords: housing, technology, flexibility, function

**IC - CIVIL ENGINEERING,
INFRASTRUCTURE AND ENVIRONMENT**

Key Lecture - Self-Healing Capacity for a Sustainable High Performance Fiber Reinforced Cementitious Composite

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Abstract. Challenges that civil engineering industry is facing nowadays have changed compared on what had to be faced in the past decades. Sustainability, economic aspects and life cycle of construction materials represent now important requirements, as highlighted in the new Model Code 2010. New solutions are being developed to provide an answer to the newest code requests. Self-healing/repairing materials can perform an accomplishments of these challenges by introducing an innovative way of thinking for materials, the concept of “bio-mimicking”. Different studies confirmed the self-healing capacity of cementitious composites, depending in the type of activated mechanisms. Microscopic and chemical investigations allowed the observation of different sealing/healing mechanisms, as due e.g. to continuing hydration of unhydrated cement/binder particles, crystallization of calcium carbonate or the improvement of the bond between fibers and matrix. This paper will try to light up the way through which these mechanisms can promote crack sealing or healing capacity.

Keywords: self-healing, self-sealing, concrete, sustainability

The effect of Particles PM10 and PM2.5 in dust emission of urban infrastructure from Thermal Power Plant Technology Kosovo

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Abstract: Airborne particulate matter with aerodynamic diameters less than 10 microns (referred to as PM₁₀) is one of the six criteria pollutants used by the U.S. Environmental Protection Agency as indicator of air quality. During the last decade, the health effects of urban aerosols have become a major concern for the society.

The main environmental problems in Kosovo include all issues related to water supply and sanitation system, air quality, solid waste management and urban infrastructure. The major problem remains high pollutions, energy losses and low collection efficiency. The awareness of environmental issues among the general public is poor. Air quality is degraded by various polluters, including traffic and two big thermal power plants which are located close to the surface lignite deposit in Obiliq. Emission of dust and ash from the thermo power plants exceeds by far the EU standards. Gas emissions have a high level of PM, CO₂, SO_x, NO_x. For coal generation, reducing non-GHG pollutant emissions (SO₂, NO_x, PM) is significantly important. Additional problems are the ash hills that have more than 40 million tons of ash and are taking about 165 ha of agricultural land, as well as the pits created the coal extraction in the lignite open pit mines.

Keywords: industrial technology, air pollution, infrastructure, cyclone, electrostatic precipitators.

Animal By-Products and Waste Processing and Extermination Technology and Environmental Preservation

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Abstract: The purpose of this paper is to identify and analyse the impact of animal by-products and waste and its disposal on the environment while coming up with and implementing, necessary measures for the preservation of the environment and public health in the particular location where such an activity is undertaken.

The building where the processing and extermination happens, is quite important even necessary for Kosovo based on data about animal waste and necessary treatments for it.

This paper also encompasses the current environmental state also the technical characteristics of the processes regarding construction and functionalization of the plant which will do the processing and the extermination.

In order for the plant to proceed with foreseen activities, a project detailing the Environmental Impact Assessment through which all the relevant processes and impacts will be defined regarding the relationship plant–environment, not disregarding cumulative effects and impacts on a wider region is needed.

Keywords: animal waste, environment, treatment plant

P.M. 2.5 and Air Pollution in Prishtina

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Abstract. High concentration of fine particles, the primary concern of worsening air pollution in Prishtina is believed to be fast paced economic and infrastructural growth in the capital of Kosova. This study is mainly focused on measuring the fluctuations of one constituent of air pollution, P.M. 2.5 (which are particles ranging from 2.5 to 10 micro-meters suspended into the environment). The measurements were done in Prishtina, mainly in the parts more frequented by people. Exposed to mixed combustion emission from roads with traffic, construction areas, and/or burning trash are a case of peculiar concern to people near those places. However, due to Kosovo's continental climate, the fluctuations of these micro particles vary during different seasons throughout the year. The results have shown that during winter the levels of P.M. 2.5 skyrocket, due to the heating systems used by individual households; on the other hand. During summer, these levels appear normal, under the international standards. Consequently, from measuring the maximum and the minimum of P.M. 2.5, we can infer the causes of the increase and decrease during different seasons.

Keywords: Air Pollution; PM Particles; Athletic Performance; Health

Source Protection: Environment Impact of Waste Water Treatment Plant at Mramor – Badovc Lake

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Abstract. From 2010 Government of Kosovo, finalized regulations and rules regarding water zone protection. In this regard Regional Water Company Pristina made some steps towards these goals, in order to protect own sources. During 2010 company invested in a design for protection zones and based on this there were construction of RC retaining walls – barrier, towards the road at Lake, Screens at the discharge point from the streams, and finally in 2015-2017 construction of Waste Water Treatment Plant (WWTP) at Mramori. WWTP was constructed on 2016, finalized with sewage network on 2017, under operation and based on results from the samples taken at the inlet and outlet of the Plant we made calculations on Environmental Impact as well cost savings O&M, methodology is based on an assessment towards main parameters

Keywords: BOD, TOC, Protection, and Water Quality

Enhancement in asphalt concrete qualities by utilizing Ferronickel slag.

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Abstract: The resulting reports from various programmes and associations that undertake technical criteria surveys in the field of applications of metallurgical slag, including ferronickel slag, conclude that these represent the valuable raw materials for the following industries: construction, production of cement (Portland, metallurgical cement), fire retardant materials, glass minerals, bituminous aggregates (concrete asphalt, cement blocks, paint & adhesive substances), etc. Ferronickel slag in Drenas based on its mineralogical contents, whilst primary it can be used for production of asphalt concrete, simultaneously will serve in additional improvement of some physical – mechanical qualities.

Projection of quantities of bitumen, considering the ratio between aggregates and slag substances, is determined by the combination of analytical and graphical methods. However, production and review of physical and mechanical factors of asphalt cement has been determined in laboratory conditions, in accordance with EU standards methods EN (933, 1303 – 4, 13036-1, etc).

Laboratory examination for consumable layers of asphalt cement AB 11s B50/70 with slag content has demonstrated advanced qualities associated with: stability, roughness, flexibility, water absorption, plasticity, effects of bitumen usage, durability of road construction, etc.

Keywords: slag, asphalt cement, quality enhancement.

The effect of fine material amount on optimum water content of roller compacted concrete

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Abstract. In this study the effect of fine material amount on the optimum water content of roller compacted concrete (RCC) was investigated. The fine aggregate was replaced with calcite which maximum particle size was 63 μ , in amount of 0%, 2%, 4%, 6%, 10% and 14% by weight of total aggregate. Six different mixtures were prepared in the study. The optimum water contents of the mixtures were determined by using modified proctor test. Optimum water content, maximum dry unit weight and maximum fresh unit weight of produced specimens were measured. Optimum water content of specimens decreased depending on increasing fine aggregate amount, however these values increased after a limit value. Maximum fresh and dry unit weights of specimens increased depending on increasing fine aggregate amount, however after a limit value the fresh and dry weights of specimens decreased.

Keywords: Roller compacted concrete, calcite, optimum water content of concrete, modified proctor test.

The effect of elevated temperature on the lightweight concrete containing waste PET aggregate

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Abstract. In this study, the effect of waste PET as lightweight aggregate (WPLA) replacement with conventional aggregate on the some physical and mechanical properties and residual compressive strength of concrete was investigated. For this purpose, five different mixtures were prepared (the reference mixture and four WPLA mixtures including 30%, 40%, 50% and 60% waste PET aggregate by volume). The fresh and dry unit weights, compressive strengths, flexural-tensile strengths, water absorption and porosity ratios of the mixtures were measured. In addition the specimens exposed to elevated temperatures at 150, 300 and 450 °C and the residual compressive strengths were measured. Test results indicated that the unit weight, compressive strength and flexural-tensile strength of the specimens decreased as the amount of WPLA increased in concrete. After exposing to elevated temperature, WPLA mixtures retained their structural integrity and compressive strengths at 150 °C and 300 °C. However there was a significant decrease in the residual compressive strength values of WPLA mixtures at 450 °C.

Keywords: Waste PET aggregate, residual compressive strength, elevated temperature, recycling

Correlations between non-destructive (UPV) and destructive tests of conventional concrete using high-early strength cement

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Abstract. Concrete quality, except in the laboratory, can be determined at the construction site. Therefore, the concept of non-destructive testing (NDT) is to obtain material properties “in place” respectively in construction site monitoring the structural "health". There are different methods to assess concrete properties in situ, such as Non-destructive Testing (NDT) methods. Ultrasonic Pulse Velocity (UPV) is one of the most used NDT considering indirect and predicted tests to determine concrete quality in situ, whereas this test is affected by many parameters depending on the nature of materials used in production concrete. The main objective of this paper is to propose an appropriate simplified correlations for concretes made by local materials and for compressive strength levels reflecting the conditions and current practices on building sites in Kosovo. The specimens used in this study were made of concrete with varied cement content, water-cement ratios (w/c) and different coarse aggregate contents. The UPV measurement and compressive strength tests were carried out on concrete cubes at the age of 2 and 28 days. This study presents some correlations established between destructive and non-destructive test for better estimation of potential strength of concrete on site for conventional concrete using High-Early Strength Cement.

Keywords: Concrete, Quality control, Construction sites, Polynomial regression, UPV.

Using of proper pavement material for the Intersections with slow-moving traffic

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Abstract. Use of proper pavement material for some of intersections need special attention by road designers. At Camp Bondsteel-Kosovo on 2002 were built four road intersections using the concrete as pavement material. Heavy and slow-moving trucks that are turning or accelerating exposed these intersections to some of the highest stress level. After some years this intresections start deteriorating on their surface due to friction. The concrete pavements did not survive this period of usage and after eight years were removed and replaced with asphalt pavements. After more than seven years, the asphalt has shown minor distress but is still in good condition after years of outstanding service. This issue was resolved using aggregate and aggregate blend who meet higher standards. This blend of aggregate has high internal friction developing the degree of interlock needed to resist friction and or shearing. In this case, tough, durable aggregates were necessary, while rounded aggregate avoided in both the coarse and fine fractions. Due to slow-moving traffic on the hot weather, the binder has been selected with higher temperature grade than climate conditions. The asphalt section is still going strong after seven years.

Keywords: Intersection, Asphalt, Concrete, Aggregate, Binder.

Negative Impacts (SBS) in residential buildings case studies from Kosovo

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Abstract: This paper presents the negative impacts on residential buildings in Kosovo, as well as the main factors of the occurrence of sick building syndrome (SBS) in residential buildings in the case of Kosovo. It also examines the impact of different materials on this phenomenon and how many constructions in Kosovo are protected from this phenomenon.

For the assessment of the impact of materials on health and the environment, it is necessary to consider all the phases. Starting from the phase of construction, selection of materials, application from the beginning of the use of the building, including all the materials processing from the beginning until their application, the use of natural resources for the production of various construction products, the necessary energy for the production and processing of the materials used, and the amount of release and imitation of CO₂ (carbon dioxide). This paper also discusses the question of what sick building syndrome SBS is, how materials are affected by this phenomenon, what are the main materials affecting the residential buildings in SBS phenomenon in Kosovo, what buildings are affected by this phenomenon and how does this phenomenon affect human health.

Furthermore, this paper provides a deep analysis on factors influencing the phenomenon of SBS in different municipalities and several companies. It also discusses the influence of Asbestos and its impact on SBS, through a survey conducted in different municipalities and institutions and other companies. Through this discussion the paper attempts to provide information on the current knowledge about asbestos, as well as the manner of its assembling and dismantling, storage and all other information related to this material which has a great impact on the appearance on phenomena of SBS. A special emphasis has been put on the impact of materials on our health, recent research on the materials used and impact on the appearance of SBS case, including the diseases that occur as a consequence of the occurrence of diseased buildings.

Keywords: Kosovo, housing, phenomenon, life expectancy, SBS, Asbestos..

Interrelation between constructions, materialization and infrastructure of new buildings in Prishtina

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Abstract. Rapid growth of Prishtina city, is followed by heavy construction dynamics. Those constructions (buildings) with their main characteristics; their functions interrelated with surrounding space and infrastructure, will have direct impacts not only in city physiognomy, but, also on living standard of the people living there. Development problems of Kosovo's society as country in transition, related to institutional structures, laws, standards, design and planning preconditions; will have reflections on the level of sustainable development too. Main developments of last decade, in capital city, related to buildings and their surroundings, based on research work developed and presented on this paper, using comparative methodology on:

Engineering and sustainability context

Aesthetic and materialization context

Functional and spatial interrelation context

Through analyses aiming to explain which are three-dimensional effects mentioned above on constructions in urban area, related to the classified "contexts"!

Keywords: construction, materialization, community, infrastructure, research, sustainability.

Effect of fly ash on setting times of concrete Comparison of result by using Kosovo's and Japan's fly ash

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Abstract: Coal fly ash is discharged from coal-fired plants and it is expected to be used in industrial world. However, it's known that fly ash highly resembles to cement characteristics in its chemical properties and also physical composition. In light of this fact, this study intended to develop further. So, the objective of this research is to investigate the using of fly ash in producing concrete by replacing of cement content in different percentage and the focus in this paper is analysing the effect of fly ash on setting time of cement also comparing results achieved by using Kosovo's and Japanese's fly ash. The research conducts fly ash's basic chemical and physical properties, setting time for various contents of fly ash and also comparing results for both cases. All results are based on experimental tests according to ASTM and entire work took place in concrete laboratory in Japan. To develop this research 20 different mixes underwent to the testing procedures and results are compared by charts.

Keywords: fly ash, setting time, chemical analyses, physical analyses, comparison

Investigation of ternary binder based systems in terms of Calorimetry, Shrinkage and In-Situ XRD

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Abstract. Ternary binders are defined in this study as compositions of Calcium Aluminate Cement (CAC), Ordinary Portland Cement (OPC) and Calcium Sulfate (CS). Several mixtures were studied, calorimetric and shrinkage technique has been used to follow the hydration during 24 hours. The XRD technique is used as support in the analysis of the hydration products. The results have shown that the initial amount of CAC and CS play a key role in the hydration of PC/CAC/CS mixtures and especially affect the formation of ettringite. The mechanism of reactions (hydration kinetic) and the reactions speed (acceleration or retardation) depends by the aggregates (LSP, QP) put in the different binders. The addition of re-dispersible powders showed retardation in hydration kinetics, longer setting times and also changed the dimensional stability. Comparison of the phase development monitored by in-situ XRD was performed.

Keywords: Ternary binders, Calorimetry, Shrinkage, re-dispersible powder

An Investigation of Mechanical Properties and Microstructures of Mineral Additive Concrete

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Abstract. Concrete is the most widely used building materials today's world. Production methodology and using of different types of materials affect the cost of concrete. The most important of these materials is cement. The low cost to be realized in cement will directly affect the economic efficiency of the concrete. Pozzolanic materials such as mineral admixtures can be used by replacing with cement in concrete production. In this study, three different types of pozzolanic materials (fly ash, silica fume, blast furnace slag) were replaced with cement in %10, %20 and %30 ratios and concrete samples were produced. The specimens were tested for compressive strength after curing in laboratory conditions for 7, 28 and 90 days. Microstructure studies were carried out on the specimens using SEM analysis technique and relations between strength values and microstructures were tried to be established.

Keywords: Concrete, mineral additive, microstructure, compressive strength.

Landslide hazard for the residents of Shipitull Village in the South-West surface mine of Sibovc

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Abstract. Landslides represent permanent risk wherever they are, such as in road infrastructure, surface and underground mine, dams etc.

These phenomena depend on geomorphology of the terrain, rock formation, soil type that is under the influence of the gravitational force, which is tightly related with the variation of physic-mechanical parameters.

Analyzing the landslides is of great importance even from economic point of view; as they can destroy houses such as the case of surface mine, electric lines, agricultural fields etc.

Nowadays, science and technology is improving rapidly which enables to apply a variety of methods from the prospect of geotechnical security that we apply to prevent the landslides by using different software to calculate the slopes that are applicable to protect and prevent the risk wherever there are engineering structures.

Keywords: Landslides, hazard, evacuation

Geothermal sources in the Republic of Kosovo

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Abstract. Power supply is one the main challenge for sustainable development. Dealing with it requires a rational utilization of energy resources. Geological-lithological construction of the territory of the Republic of Kosovo enabled the formation of a large number of geothermal resources, which represent hot water springs occurring in different layers of the land, which are potential for future development. The aim of the paper is to show some features of geothermal resources as well as their potential as exploitation and economic valorization opportunity. Geothermal resources are characterized by favourable indicators, both form their potential and from spatial distribution in the territory of Kosovo. Water flows variate from 2 l/s to over 120 l/s, while their temperature variates from 15 °C to over 80 °C etc. The energy used by these sources so far is on a low level.

Keywords: Source, Geothermal, Energy, Potential, Kosovo.

Geotechnical characteristics of the Zabeli location, Gjilan

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Abstract: Many earthquakes that happened in the past taught us lessons, which are very essential when it comes to planning urban development and essential infrastructure as well as mitigating the effects of such calamities in future. The hazards associated with earthquakes are referred to as seismic hazards. The general goal of earthquake engineering is identification and mitigation of seismic hazards. Microzonation has generally been recognized as the most effective tool in seismic hazard assessment and risk evaluation and it is defined as the zonation with respect to ground motion characteristics taking into account source and site conditions. This exercise is similar to the macro level hazard evaluation but requires more rigorous input about the site specific geological conditions, geotechnical characteristics of site, ground responses of soil column to earthquake motions and their effects, ground conditions which would enhance the earthquake effects like the liquefaction of soil, the ground water conditions and the static and dynamic characteristics of foundations or of the stability of slopes in the hilly terrain. For the estimation of site effects (local soil and topographical effects) and induced effects (land instability and liquefaction) the knowledge on the bed rock where ground motion is being applied is required.

Keywords: geomechanical, geotechnical, hazard, microzonation, earthquake

Design of bearing capacity of the driven piles of a highway bridge foundation according to 3 different methods.

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Abstract: Contemporary design methods of bearing capacity of deep foundation (pile foundation) change according to different design codes. The main requisition of the designing process of the deep foundation is related with the axial bearing capacity, which should be sufficient to withstand the applied loads. Many authors has developed and published detailed methods to analyze the behavior of a single reinforced concrete pile or a group of piles, based on vertical bearing capacity due to lateral friction or residence at the pile point. The goal of this paper is to illustrate the calculation methods according to 3 analytical methods of vertical bearing capacity of bored single pile and group of piles of a bridge foundation. Only the vertical loads are considered during the design process. Shear loads and bending moment act as horizontal loads on the group of piles. A comparison between three different methods is shown to determine the bearing capacity and the stress limit allowed. The bridge is located in the 26 kilometer of Elbasan-Tiranë highway.

Keywords: Bearing capacity, reinforce concrete pile, lateral friction, bored piles.

Developing a new total sediment transport formula

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Abstract. Sediment transport is one of the most powerful factor on river hydrology. It has vital importance for water engineering projects. There are many sediment transport formulas in the literature but most of them are derived from small data sets of natural rivers or experimental designs. Each formulation has its own restrictions, which depends on the original dataset of that study. None of them have gained universal acceptance. As a result, investigation towards the development of more accurate and simpler formulae is still necessary and should be continued.

The aim of this study is to derive a new total sediment load formula which is more accurate and which has less application constraints than the well-known formulae of the literature. To achieve this aim, a wide range of dataset is compiled which includes both experimental data (flume data) and Natural river data so that a very large range (of parameters) has been achieved. Then this dataset is used to generate a new formula.

Five most known total sediment transport formulae, which are approved by American Society of Civil Engineers (ASCE) are used for benchmarking.

The dimensionless parameters of these widely used formulae are used as inputs in a new regression approach. The new approach is called Polynomial Best subset regression (PBSR) analysis. The aim of the PBSR analysis is fitting and testing all possible combinations of the input variables and selecting the best subset. All the input variables with their second and third powers are included in the regression to test the possible relation between the explanatory variables and the dependent variable. While selecting the best subset a multistep approach is used that depends on significance values and the Multicollinearity degrees of inputs.

According to proposed formulae, the sediment transport phenomenon is deeply related to velocity of water (U), slope (S), depth (H), shear velocity (U^*), sediment size (d_{50}) and specific gravity (G_s).

The new formula is compared to others in a holdout dataset and detailed performance investigations are conducted for field and lab datasets within this holdout data. Different goodness of fit statistics are used as they represent different perspectives of the model accuracy. After the detailed comparisons are figure out, PBSR is the most accurate equation that is also applicable on both flume and river data. Especially, on field dataset the prediction performance of the proposed formula outperformed the benchmark formulations.

Soft computational methods are used densely in this study because; these models are the good way to compare and to investigate the effectiveness of PBSR formula parameters (sensitivity analysis). The artificial neural networks (ANN), support vector machine (SVM) and decision tree (CART) models are chosen for this purpose.

Keywords:

Delineation of Groundwater Protection Zones for the Gjilan field

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Abstract . The well field of Gjilan is located in the south-eastern part of Kosovo about 1 km west of Pasjan and 35 km southeast of Pristina, the capital city of Kosovo. It is an important water supply for the city of Gjilan. A total of seven production wells have been drilled into the aquifer for the Water Utility Hidromorava. In Phase V of the Rural Water and Sanitation Support Programme the Project team has prepared a technical study to define the delineation of groundwater protection zones. The groundwater source in Pasjan is partially supplying the inhabitants of Gjilan municipality and Pasjan village with drinking water. The importance of this groundwater source for drinking water purposes and availability of geological, hydrogeological and other data's were the main elements in the selection of the Pasjan groundwater source as a study area by the project. To delineate Ground Water Protection Zones (GWPZ) 1, 2 and 3 according to Kosovarian regulations a groundwater model is set up to calculate the groundwater flow in the well field. As a pragmatic solution to support and facilitate the implementation of a GWPZ 2 a 50-day-line is calculated. For the Sanitary Protection Zone the whole catchment zone is calculated. As example for the delay of hazardous impacts on the water quality, a 200-day line areas was calculated. Close to wells of the Hidromorava Water Utility, and supplied by the same aquifer, two production wells of the local RC-Cola Company have been identified. The influence and interference is significant only to the extension of the GWPZ 3. Therefore 2 different boarders to the GWPZ 3 have been calculated: Version a includes the 2 wells of the commercial company into the GWPZ 3 , version b excludes the commercial wells. GWPZ 1 are defined as very limited areas of a 10m-square, that have to be fenced. GWPZ 2 are mainly circles of 100 m to 200 m diameter surrounding the production wells. These areas are the minimum areas to be declared Protection zone 2 and requiring consequent protection against chemical and biological contamination. The GWPZ 3 has an E-W extension of ca. 1,8 km, and N-S extension of 2 km. This area needs to be protected against chemical contamination. The Morava river passing the well field area is a main factor of recharge for the wells and therefore requires upstream protection against any contamination. Further the waste dump and an abandoned petrol station close to GWPZ 3 require active cleaning and decontamination action. This is a template document to guide authors in writing their extended abstracts by direct editing. Abstracts are limited to a maximum of 500 words. The authors are required to present an extended summary of their study including their findings, conclusions and outcomes. Abstracts will be published at abstract book.

Keywords: Groundwater1, Groundwater Protection Zones2, Discharge3, Water Level4.

Optimal Design of Steel Crossed Beams using Genetic Algorithms

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Abstract. The optimal problem in the structural design is an important issue in the engineering design. Various authors have analyzed the optimization of steel structures using algorithmic approaches. These techniques are generally grouped in deterministic or meta-heuristic techniques. From the introduction of structural optimization in the 1960' up to now, various methods have been proposed. A genetic algorithm, is built and applied in this study using MatLab soft R2017a to a crossed beams system. The structural analysis is done with the direct stiffness method with constraints verification based on EuroCode 3:2005 criteria. Results are reported in the study.

Keywords: steel structures optimization, genetic algorithm, crossed beams.

The effect of (L/d) ratio in the strength of metallic elements under the central compression based on SKEN-1993-1-1

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Abstract: Every element that is a part of a structure, depending to its lifetime it is a subject of external actions, whereby one of them is also a case of central compression. Besides central forces (axial), the comprising elements of structures or lonely elements might be loaded with non-central forces, with bending moment and with forces that acts normal in the longitudinal axes, so transversal forces.

Mainly in the group of elements that are under the effect of central compression are vertical elements such as columns, whereby the main duty of them is to transfer loads form the construction to the basement respectively in foundation and have much smaller cross section parameters, comparing with their length.

Besides elements on vertical position in this group can be involved also the elements as ones in slope positions, whereby in this case we have to deal with sway elements that has to sway structures mainly towards horizontal actions. In this paper of work we are going to present the basis analysis, treatment and dimensioning the vertical metallic elements based on the European Normative for projecting especially EN1990 and EN1993-1-1, the case when we have to deal with elements that work on central compression. As a practical case that is going to be considered in this study is the element which is fixed on both edges with hinges, so the first case of EULER, were it is going to be presented the effect of the ratio (L/D) in buckling resistance (Nb,Rd). In the end of this paper work is going to be presented an overview of the project, suggestions and conclusions.

Keywords: Structure, steel, behavior, SKEN-1993-1-1, Circular Hollow Section

Seismic actions induced by cladding panels on precast concrete frame structures

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Abstract. The strong earthquakes occurred in Southern Europe in the last decade pointed out a poor seismic performance of the connection system of the cladding of precast industrial structures. The cladding of these buildings usually consists of sandwich concrete panels of remarkable mass, connected to the frame structure with mechanical devices. The estimation of the out-of-plane seismic action on these connections is a key step for their correct proportioning. However, the formulation currently provided in the Eurocode 8 for the estimation of the seismic action on non-structural elements was calibrated with different objectives. Furthermore, given there is no in-plane structure-panel interaction, a quote of the panel mass is lumped in correspondence of their connection for a correct proportioning of the frame structure. The designers need to make assumptions on both aspects that often bring to remarkably different solutions.

The paper presents a consistent dynamic formulation of the problem of the vibration of rigid bodies connected with cantilever columns. The solution brings to closed-form equations to evaluate the exact out-of-plane action on the connections and the correct amount of panel mass to be lumped.

Keywords:

Capacity Design for R/C Structures According to EN 1998-1:2004

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Abstract. Capacity Design is a design process in which it is decided which objects within a structural system will be permitted to yield (ductile components) and which objects will remain elastic (brittle components). Material nonlinearity need only be modeled for ductile components, while components which will not yield need only consider elastic stiffness properties. In this design philosophy the capacity design approach that is currently used in practice demands strong column/weak beam frames or wall equivalent dual frames, with beam sway mechanisms, trying to involve plastic hinging at all beam ends. This paper aims to present Capacity design procedure for reinforced concrete (R/C) structures according to the EN 1998-1:2004.

Keywords: Capacity design, ductility, strong column/weak beam, plastic hinge

Beam- Column joints for R/C Structures According to EN 1998-1:2004

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Abstract. Joints are crucial zones for the transfer internal forces effectively between the connecting elements like beams and columns. The behaviour of reinforced concrete moment resisting frame structures in recent earthquakes all over the world has highlighted the consequences of poor performance of beam column joints. The basic requirement of design is that the joint must be stronger than the adjoining hinging members, usually the beams or columns. This paper aims to present design approach for Beam- Column joints for reinforced concrete (R/C) structures according to the EN 1998-1:2004.

Keywords: Beam-Column joints, reinforced concrete frames, strong column /weak beam, shear strength, diagonal cracking

Classification of framed systems based on beam-to-column joint performance

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Abstract. The construction industry is currently facing its biggest transformation as a direct result of the accelerated changes that society is experiencing. Steel construction combines a number of unique features that make it an ideal solution for many applications in the construction industry. In comparison to some other fields, the design procedures for joints and connections have significantly evolved in the last decades as a result of the progressive awareness by practitioners of the significant contribution of joints and connections to the global cost of structures. The steel framed systems can be classified with respect to different criteria, each of them associated with specific aims. By focusing attention on the most commonly used criteria, which are also considered by international standards, the following discriminating elements can be selected for frame classification. This paper presents classification of framed systems in steel constructions based on beam-to-column joint performance.

Keywords: steel, beam, column, joint, framed, systems.

Form and Logic of structures

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Abstract. Almost all of Civil Engineering structures does harbor some degree of logic. Sometimes, it is plain to see it and sometimes it lies hidden so only a well-informed eye can detect it. Natural phenomena are dual in their mode of interaction. So are Tension and Compression, which do represent the basic genome of any structure be it simple or very complex. Bending and torsion are somewhere in between. A structural Form that respects this interplay in addition to the flow of forces being in consonance with the principal laws of Nature, imperatively results in not only economically and mechanically efficient ones but in aesthetically pleasant silhouettes also.

Demonstration of resonance effect through dynamic analysis of single-degree-of-freedom systems

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Abstract: The response of single-degree-of-freedom systems to harmonic excitation has a very important part in structural dynamics. By understanding the response of the structures due to harmonic excitations, we can learn general information about the structure and its response due to different types of loads.

This paper consists of a brief theoretical part, and later focuses on the study of a linear response of a characteristic single-degree-of-freedom system, subjected to a set of external forced vibrations with various frequencies.

An algorithm for the computation of dynamic analysis (response history analysis) of SDOF system was developed in Excel VBA based on the numerical method of Interpolation of excitation.

In this paper, it is graphically presented the response spectra for a characteristic SDOF system, subjected to a set of external forced vibrations within varying frequencies. This graph helps to visualize the resonance effect of an external force over vibrating systems, which under specific conditions can be detrimental to the structural stability.

Keywords: Dynamic analysis, Interpolation of excitation, Single-degree-of-freedom system

Effect of steel content on strength and ductility of singly reinforced RC beam sections

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Abstract: Even though pure singly RC sections are never used in practice, because for constructive reasons at least two bars must be added at compressive zone of the section, in this paper singly reinforced section is used in order to point out the impact of steel content on strength and ductility of RC beam sections.

The lower limit of steel content is dictated by ultimate steel strain, while the upper limit is the content which corresponds to balanced failure condition, i.e. the condition where the crushing of concrete occurs at the same time when steel yield strength is reached.

Because trial-and-adjustment technique was to be used and several analysis with small increments were to be carried out, a small program was developed in Microsoft Excel in order to reduce computational efforts.

At the end, the results were presented through the graphs and tables, where an optimum steel content was found for this particular case analyzed.

Keywords: Singly RC section, Ductility, Strength, Steel content

Design of RC slabs for serviceability - deflection considerations

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Abstract: Design of RC slabs for serviceability denotes that the RC slab systems should be checked for performance of the structure or structural members under normal use, for the comfort of people and for the appearance of construction works.

All these serviceability criteria for RC slab systems are normally satisfied by limiting the cracks and deflections for slabs to acceptable limits. By limiting the slab deflections, they attain a sufficient level of stiffness which prevents the development of slab deflection levels that would prevent the damage of attached partitions or other construction elements. Also, adequate stiffness level of slabs would prevent undesirable vibrations of the floor system, which greatly affects the sense of occupant's safety. In addition, slab deflections should be limited to a level that is unnoticeable by occupants which would convey a sense of inadequacy or safety concerns.

This paper makes a review on the levels of acceptable cracks and deflections, as the main considerations for meeting all serviceability criteria, and in addition it presents the currently available methods for their estimation.

Keywords: RC slab, analysis, design, crack control, deflection control, serviceability

Micro armed concrete and cracks on slabs

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Abstract. The purpose of this work is to describe fibres properties, micro armed concrete as a composite material and the use of it as a solution to prevent the cracks on slabs.

The purpose of fiber usage inside a concrete mass is to create a composite material by creating a skeleton concrete from fibre (glass, carbon, synthetic, etc..) in order to improve the properties of the concrete, increasing the ductility, decrease the plain and volumetric cracks.

The aim of this experimental program was to obtain concrete properties reinforced with fibres, especially from bend tests.

There have been prepared 18 samples for testing, 9 of such slabs with dimension 150x150x8cm with different amount of fibre, divided into three groups with three slabs. For each group, there have also been prepared three cubic samples with dimensions 15x15x15cm in order to evaluate concrete comprehensive strength.

There were identified considerable causes that affect cracks, including here thermal movements, plastic shrinkage, and early age settlement, as well as a number of other issues. Polymer fibre represent the possible solution to avoid the cracks in slabs: they have shown to be the appropriate element to improve properties during the early age, such as shrinkage and deflection, and most of all, fibre improve the behavior of the construction after the cracks.

It has been noticed that fibre reduces early age shrinkage, with the effect of increasing the dosage. Long term shrinkage is not affected by using polymer fibres. Concrete strength during the early age has been improved with the use of fibres, but in long term somehow it has decreased when there were used high dose of fibres. It has been shown those fibre properties are appropriate indicators to avoid slab crack.

Keywords: Composite materials, fiber, micro armed concrete, SKEN-1992-1-1.

The influence of the radius of the curve and the lateral slope on the safety of the vehicle

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Abstract. The movement of the vehicle in a curve related to the construction of the road is expressed through the influence of the radius of the curve and the transversal inclination of the road. Two of these quantities are fixed quantities ever since the projection and then construction phase of the road. During the vehicle's movement in the curve, their influence is shown through the critical slide velocity. This critical velocity is defined from the influence of the centrifugal force. For smaller values under critical velocity, this influence is expressed through the safety of the movement or the comfort of the driver and passengers in the vehicle. The gained values of the critical velocity are displayed in the table of values of the influential parameters.

Keywords: Radius, slope, velocity, force

Method of research method of impact of accidents of the communication and preventive measures

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Abstract: The number of traffic accidents today is growing, so it is very necessary to explore the factors and their elements that directly affect the cause of traffic accidents, through research methods to take preventive measures to prevent traffic accidents. We have been researching the factors and their elements in chains from the moment of the traffic accident to the final stage of reviewing and identifying the factors that caused the accident, where are also prescribed preventive measures for the prevention of accidents.

Keywords: Accidents factors and preventive measures

Challenges of Real Estate Appraisers in Kosovo

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Abstract. Kosovo is a new country with a goal to integrate quickly into the large family of EU countries. To achieve this, old work practices are changing, and new practices are also being applied in different fields of human activity. Real estate property plays an important role in the process of economic development and is considered as sacred. To be treated this way, the property must be evaluated correctly. Following the examples of EU countries, the Kosovo institutions have organized training, testing and licensing of the first domestic real estate appraisers. The basic data to perform this profession are scarce, incomplete or even misleading. Currently, only banks require real estate appraisal of properties. The property left as a mortgage loan should be valued by licensed professionals. In the future it is expected that the appraisal of real estate property will be mandatory for every real estate transaction between parties. This paper seeks to highlight the challenges faced by real estate appraisers in their day-to-day work in Kosovo's conditions.

Keywords: Real estate, construction, property value, economy, law

Use of Building Information Modeling (BIM) for Heritage Buildings in Kosovo

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Abstract. Building Information Modeling (BIM) had a huge impact in the construction industry, which has led to significant improvement in the design, construction, maintenance and management of buildings. While the BIM technology has been successfully used for years in the new construction, BIM for heritage buildings is a relatively new field of academic research and professional practice compared to the traditional way of documenting heritage buildings.

The aim of this research is to identify the potentials and challenges in using BIM for heritage buildings in Kosovo. How can BIM be applied to building heritage conservation and revitalization? What are the benefits and advantages? This study attempts to promote the use of BIM for built heritage, so to be better understood the unique character of the heritage buildings in Kosovo, to be developed more comprehensive conservation and revitalization strategies, which will lead to more sustainable projects, so the heritage buildings can be better preserved for future generations.

Keywords: Building Information Modeling (BIM), heritage buildings, Kosovo, conservation and revitalization

Heritage under pressure the case of the “bypass” in Gjirokastra world heritage site Albania

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Abstract: The following article is an account presenting a professional movement opposing a planned and approved project for the construction of a new road known as the “Bypass”, which endangered the Historic Center of Gjirokastra. The project, consisted in the construction of a new road, with the initial aim of diverting automobile traffic from the Bazaar, turning it into a pedestrian zone. However after a few procedural problems were noted, it became clear that the project itself was not fulfilling its original aim, and further more posed a threat to the historical center. During the only public consultation session held for the project, these shortcomings were mentioned however they were not considered further by the responsible authorities. At this stage a detailed technical report was drafted by the “Forum for the Protection of the Values of Gjirokastra”, in collaboration with a wide participation of different professionals who studied the multi-level effects of this project. The Forum’s report introduces 5 main group arguments and enough supporting evidence to demonstrate the jeopardizing effects that this project will have on the entire cultural heritage ensemble of Gjirokastra, if implemented. Below is a extract of the list of the identified technical and legal arguments, showing the perceived damages of this project to the structural integrity as well as the Outstanding Universal Values of the city of Gjirokastra.

Keywords: Cultural heritage, World Heritage Site, New infrastructure development, brutal intervention, Heritage under pressure, Heritage under risk, Mobility and Management Plan

Siphon rainwater drainage and advantages with larger buildings

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Abstract: Siphonic rainwater drainage system is relatively new idea in the construction industry. Originated in Finland, and in the past half a century has been globalised. It's becoming increasing common choice with architects due to its effectiveness in large commercial and industrial buildings.

In contrast with the conventional system, this approach aims to prevent air ingress into the pipe network and induce a full bore flow condition. This is achieved by utilising natural forces, such as negative pressure and gravity, to rapidly and efficiently remove the high volumes of water from the roof. System consist of air controlled roof outlets, HDPE pipe network & fittings – coordinated via a sophisticated designed programmes.

Siphonic rainwater drainage system negates the need for a slope in the pipework and reduces significantly quantities, thus saves space within the structure, programme time and costs. It is a reliable method of safeguarding the integrity of the buildings.

Keywords: siphonic rainwater drainage, construction objects

Theoretical Investigation of Concrete Beams Reinforced with Steel and Fiber Reinforced Polymer Bars

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Abstract. This paper presents a nonlinear finite element model to investigate the behavior of concrete beams reinforced with hybrid Fiber Reinforced Polymer bars and steel reinforcement. Different types of Fiber Reinforced Polymers; CFRP, GFRP and BFRP; were used along with steel rebars in the studied concrete beams. The study was conducted using the nonlinear finite element program “ANSYS”. For this purpose, research will be carried out on experimental specimens available in the literature prepared with a different cross-section, length, and reinforcement ratios. The study showed that the contribution of steel rebars to FRP reinforced concrete beams improved beam ductility and eliminated the unfavorable brittle failure of the concrete beam. The theoretical results also indicated that the FRP reinforcement was found to play an important role to resist loading after yielding of steel in over reinforced sections.

Keywords: Continuous beam, FRP, Nonlinear Finite Element Methods, and ANSYS

Geological-Technical Research on The Best Path Adoption For The Road Tetovo-Prizren

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Abstract: Considering the enormous impact of the geology and geomorphology of the region, this particular path has been adopted after careful consideration of both financial and practical aspect. Based on existing data related to such characteristics, we present several potential paths and eventually deduced the best path for the new Tetovo- Prizren road.

These cities are heavily populated and lie at the foot of the mountain Sharr; one at the edge of river Shkumbin-Pena in the plain of Pollog, the other at the edge of river Bistrica in the plain of Prizren.

These habitats are at an altitude of around 450[m], meanwhile only 30 [km] from each-other in airline distance. They have in between high peaks such as the Luboten peak with an altitude of 2754[m](the highest peak in the Balkans) Kobilica, Turcin, Vërtok, Ceripashina, Karanikolla, and others with an altitude of over 2500[m].

Particular of this region is the large amount of percipitation especially rainfall and frost in winter around 4-5 [months] which usually has a negative impact on communication systems.

Keywords: New road, Tetovo-Prizren, Mountain Sharr

IC - ENERGY EFFICIENCY ENGINEERING

Preparation of nanostructure ZnO: La film by low-cost solgel method and determination of diode parameters of p-Si/n-ZnO: La heterojunctions

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Abstract. Zinc oxide (ZnO) is widely used in solar cells, gas sensors, photodetectors due to its unique properties, inexpensive, high transmittance and wide optical band gap. These properties make it good candidate as host materials for the UV-vis emission of various rare earth (RE) elements. So, RE elements doped ZnO films have been increasingly taking an important role in optoelectronics and photonics. In this study, La doped ZnO (ZnO:La) films were prepared by the low-cost sol gel method using the spin coating technique. The crystalline structure and surface morphology of the films were analyzed by using an X-ray diffractometer and a field emission model scanning electron microscopy, respectively. The p-Si/n-ZnO: La heterojunction structures were fabricated. In order to characterize the electrical behavior of these structures, the current-voltage (*I-V*) characteristics were performed. It was observed that all of them showed good rectifying behavior. The diode parameters were determined by using different methods.

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Keywords: La doped ZnO, Nanostructure, Sol gel, p-n heterojunction.

Monitoring of air quality in Gjilan in 2016

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Abstract. Although Kosovo is a very small country with an area of approximately 10,887 km², the pollution in country level is very low, but the main pollution problems are in urban areas which are highly contaminated. In this research we have presented the monitoring of air quality in the region of Gjilan where the analyses of air quality are taken from KHMI. The measured parameters throughout the year 2015 are: SO₂, CO, NO₂, and O₃, PM₁₀ and PM_{2.5}, all these being measured in µg/m³, and always referring to the directive 2008/50 / EC and the Law on Air Protection from pollution (no. 03 / L-160).

Keywords: air pollution, contamination, industries, organic compounds, observation, analysis, measuring, law, CO, NO_x, SO₂, O₃, PM₁₀, PM_{2.5},.

Wind turbine technology enables sustainable development of electricity in Kosovo

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Abstract: The requirements of the EU directives for the renewable energy market, in particular wind turbines, enable sustainable development to meet the requirements for electricity generation. Global changes and environmental disasters resulting from industrial pollution do not allow a sustainable development of alternative natural resource exploitation. Balkan states and Kosovo are obliged to increase energy efficiency, to increase the discipline related to flow of fossil fuel emissions, which means less CO₂ and greenhouse gases, and to advance the renewable energies by 20% up to 2020. Wind generation turbines are used to transform energy from a rotational mechanical action to generate electricity. Wind speed is the main parameter of which is shifting in the design of wind turbines that will be located in each geographic position in the country, the number of turbines to be placed, the location and spatial distribution in the territory of Kosovo. With a new energy strategy, with a near future orientation, Kosovo could be cautiously able to spend 100% of the RES, by following the rapid steps of economic development, including the development of the relevant education system in the new fields of innovative technologies, within the developmental competences. To reach a description of the new energy strategy of Kosovo's energy potential, it would bring economic stability with respect to the development of renewable energies related to the geographic factors that have been taken into account for the generation of wind energy.

Keywords: climatic conditions, turbine, geographic position, energy strategy.

Reproductive Energy Opportunity in The Republic Of Kosovo

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Abstract: By promoting the development of renewable energy generation, wind energy is becoming increasingly important for Kosovo. Therefore, this is particularly important to sensitize the energy market actors for the development and implementation of the EU Directives and thus to establish a sustainable legal framework for further investment in Kosovo. Among other things, through the creation of a sustainable and continuous supply of energy, incentives for further investment in other industries can be provided. Through developing new areas of competence, new study directions and vocational education, Kosovo can expand its IT services and energy services bids. In addition to local benefits, these services can also be offered in neighboring countries.

The purpose of this paper is to present and evaluate the potential of wind power in Kosovo and to present the results for the potential of wind energy in Kosovo.

Keywords: energy, wind, generators

Evaluation of physical - chemical contaminants in Lumbardhi River in Prizren for the period May - June 2017

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Abstract. This paper covers the monitoring of water pollution in the river basin from the source to the White Drin flow monitoring the river flow both in the rural and urban areas of water quality. The biggest problem in environmental protection is the quality of surface water. The results from the analysis of the study will serve to know the pollution from these physical-chemical parameters and at the same time to manage the eco-status in order to prevent negative trends and create a desirable balancing of so important the ecosystem as it is the system consist of Lumbardhi River, with biodiversity still maintained. The purpose of the work is to know the pollution of the Lumbardhi River during the period May-June 2017 as we think during that period of time there is a larger water flow due to the atmospheric rainfall and melting of the snowfall from the mountains because the river source is from an altitude of over 2500 meters and has an extension of 37 km to its discharge into the next river. On the other hand, based on the ecological condition and the physicochemical characteristics of the Lumbardhi River during time intervals, will serve as a starting point for integrating them into the management plans and if necessary for the programs, measures and environmental protection activities that should be undertaken to prevent our river pollution as we are dealing with a river that runs through the middle of our city and if clean, it would increase the beauty of our city with its landscape. So, the samples for analysis have been taken in four sample locations with different distances that are marked with L1, L2, L3, L4 and the same ones will be presented in our fig. The analyses are done at the hydro meteorological institute of Kosovo Pristina.

Keywords: Dissolved Suspensive Substances (DSS), Biochemical Oxygen Demand/Consumption (BOD₅), and Chemical Oxygen Demand (COD), Total Organic Carbon (TOC).

Economic Aspect of the Electricity Production in Subsidiary MPC Oslomej

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Abstract. The need to increase the production of electricity in the Subsidiary MPC Oslomej (Mining Power Complex-Oslomej), which operates as part of JSC ELEM (Macedonian Power Plants), 100% state owned company, represents a significant economic activity.

Therefore, the analysis in this paper focuses and aims at the economic aspect of the current electricity production, that is, the impact of the expenditures of the Subsidiary on the price of electricity produced by ELEM JSC, a price also regulated by the Energy Regulatory Commission of the Republic of Macedonia (ERC).

This shall draw attention to the necessity to timely prepare and adjust the industrial complex for operation in conditions of achieving and maintaining company competitiveness advantage in a fully liberalized electricity market in the Republic of Macedonia, expected in the year 2020.

In this context, the development of the Subsidiary and the extension of the operational life of TPP Oslomej (Thermo Power Plants-Oslomej) stand as the top priority of ELEM JSC, and support the general orientation of the Republic of Macedonia towards the European trends.

Keywords: economic aspect, electricity, production, expenditures

Improving efficiency, reduction of pollution and CO2 emission from Power Plant Kosovo

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Abstract: In recent years, global warming has been a major issue due to continuous growth of greenhouse gas emissions from different sources. Earth's atmosphere is composed of a variety of chemical compounds that act as greenhouse gases. Carbon dioxide (CO₂) is of primary concern due to growing global emissions in recent history. Since the expansion of coal use during the industrial revolution and the expansion of petroleum use during the 20th century, CO₂ emissions have risen steadily.

The major factor in Kosovo's political, social, and economic life today is the development and social sustainability. The biggest challenge for Kosovo remains the economy, efficiency energy and environment. The present economy and environmental situation in Kosova, put as in front of the responsibility to act more rationally towards nature and to be more responsible towards the protection of the environment for future generations. The establishment of energy sector, similarly to most of Kosova's industry, took place during the socialist times (i.e., between 1960s and 1980s). This includes the establishment of Kosova's thermal power plants and mining.

The protection lack of environment during the last 16 years, (especially earlier in history) as well as the conflict in Kosova has the origin of huge problems regarding present environmental situation in Kosova. The most important emissions to air from the combustion of fossil fuels are SO₂, NO_x, particulate matter (PM), heavy metals and greenhouse gases such as CO₂. The problem with dust emissions is serious and apparently cannot be solved without major redesign of the boilers. Ash from the both power plants is currently transported by open belt conveyors and is deposited at dumpsites. No environmental protection measures in the dumpsites are taken to prevent ash spreading by wind.

In order to reduce CO₂ emissions and pollution in general, two actions will be employed. One is an action by the measure of policy and regulation. The other action is the development of technologies. Policy & regulation: 1) closing old coal plants (TP KosovoA); reduced electricity by energy saving. 2) Replacing, Renewable Technologies: 3) improving efficiency and deploying old technologies and techniques-used BACT (Best Available Control Technology).

Monitoring of air quality in the urban and industrial areas in Kosovo

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Abstract. Environmental pollution has a direct or indirect effect, and is mainly caused by human activity or environmental processes that have harmful effects in the environment and human life. In Kosovo the air pollution in Kosovo is quite evident in the industrial areas. The power plant of KEK (TCA and TCB), from the Cement Factory and ferronickel etc. In the vast majority of cases, the pollution is caused by the emission of sulfur dioxide (SO₂), azotes (NO_x), ozone, lead and other heavy metals, such as carbon monoxide (CO), dust, PM₁₀, PM_{2,5} and steamy organic components. The aim of this inquiry is to study the air pollution in urban and industrial areas and to take further measures for estimation of air emissions. This scientific paper will with analyze the effect of ferronickel in environment and the facilities in Kosovo Energetic Corporation as the main cause air pollution in urban areas. Based on the arguments provided from this study it is concluded that the main pollutants in urban and industrial areas are the power plants (Kosova A and Kosova B), industrial complex of Mitrovica, the circulation of cars in urban areas, Ferronickel in Drenas, the Cement Factory Sharcem of Han i Elezit. The process of monitoring the air quality it is conducted by the Hydro-Meteorological Institute and some of the economic operators such as Ferronickel and KEK.

Keywords: monitoring air quality, air pollution, urban and industrial areas

The Transformation and Mathematical Graph Reflection of Lead-Acid Acu-Cell Electrical Parameters in the Equation of a Line.

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Abstract. Many of the industrial battery producers in the laboratory follow IEC 60896-11 standard to determine two crucial parameters of the cells: internal resistance and electrical short circuit. However, the majority of producers face difficulties because they lack equipment to measure discharge rate of the large capacity batteries. Such measurement equipment's are large expensive equipment. The purpose of this paper is to help overcome such burden by measuring internal resistance with micro impedance meter that is much cheaper and is handy-sized. After measuring internal resistance, the tension of cell that is not loaded ($E \equiv U_0$) is determined and is added to the equation of a line in explicit form ($y=ax + b$). The latter form then is reflected in the form ($E = -r_{i\text{ cel.}}I + U_0$), onward by transforming in other forms, such as segmental and general form, beside two parameters named above, other parameters, such as, maximum electric power and discharge rate parameters can be determined as well.

Keywords: acu-cell, lead-acid battery, reflection, equation of a line.

An Overview of Near Zero Energy Buildings with an Emphasis on Energy Savings

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Abstract. The indiscriminate exploitation of the planet's energy sources has nowadays led to an uncontrolled form of climate change, with negative consequences for both humankind and the environment. In an effort to curb this situation, energy savings in both the building sector and other sectors of activity (industry, transport, etc.) is a primary objective and an indispensable component of any energy policy been planned today all around the world. As the building sector consumes 40% of the energy required at European level, the European Union (EU) has made considerable efforts to significantly reduce these consumption levels. In recent years, the European Union's efforts have been made to improve the situation in energy policy and planning issues, focusing on energy saving as well as the use of renewable energy sources that have proven to have significant benefits for the environment, society and the economy. The European Council adopted a package and the European Parliament voted it and the 27 Heads of State and governments finally agreed to implement the 20-20-20 EU Energy targets: by 2020, reduce by 20% the emissions of greenhouse gases, increase by 20% the energy efficiency in the EU and to reach 20% of renewable energy sources (RES) in total energy consumption in the EU. It is characteristic that in the context of saving efforts in the building sector, provisions have been incorporated into the requirements of net Zero Energy Buildings (nZEB) both in the corresponding Community Directives. These provisions provide for the construction of all new buildings by 2021 at the latest with net zero consumption standards. In particular for public new buildings, the time horizon is even shorter. These targets difficult will be met. In this paper a review of definitions and methodologies of nZEB will be presented. It also examines the possibility of integrating two different systems of solar energy utilization into a residential building in the Patras area in order to achieve its energy self-sufficiency and hence its classification in the category of Zero Energy Consumption Buildings. More specifically, the integration of both photovoltaic and hybrid photovoltaic - thermal collectors was examined. The mathematical model for this proposed hybrid energy system is presented and analyzed. Examining these systems against other RES technologies was preferred because of their easier integration in building infrastructure but also the greater familiarity that users of the buildings usually have with both photovoltaic and solar thermal systems. The modeling of the operation of the two systems was done using the Matlab programming environment, taking into account the relevant literature and data available from manufacturers of related equipment. Different formats were developed to model the two technologies due to the different mathematical equations governing the operation of each of the proposed systems. Modeling took place for four representative months of the year (January, April, July and October) in the Western part of Greece. Obtained simulation results which have been very promising will be presented at the conference.

Applying a Revised Approach of Fuzzy Cognitive Maps on a Hybrid Electrical Energy System

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Abstract. Complex systems modeling is a rapidly developing research field which incorporates various scientific sectors from bio medicine and energy to economic and social sciences. However, as the systems' complexity increases pure mathematical modeling techniques prove to be a rather laborious task which demands wasting many resources and in many occasions, could not lead to the desired system response. This realization led researchers turn their attention into the field of computational intelligence; Neural Networks and Fuzzy Logic etc. In this way scientists were able to provide a model of a system which is strongly characterized by fuzziness and uncertainties. Fuzzy Cognitive Maps (FCM) in another methodology which lies in the field of computational intelligence. FCM came as a combination of Neural Networks and Fuzzy Logic and were first introduced by B. Kosko in 1986. All these years they have been applied on a variety of systems such as social, psychological, medical, agricultural, marketing, business management, energy, advertising etc, both for systems modeling and decision-making support systems, with very promising results. Classical FCM approach uses the experts' knowledge in order to create the initial knowledge base of each system. Based on the experts' knowledge, the interrelations among the system variables are determined and the system response is defined. Through years, improvements have been made and learning algorithms were embodied in the initial approach. Learning algorithms used data information and history to update the weights (the interconnections) among concepts (variables), contributed to the optimization of FCMs and reached more efficient systems' response. However, all these decades, researchers have mentioned some weak points as well. In the last years substantial research has been made in order to overcome some of the well-known limitations of the FCM methodology. This paper will apply a revised approach of the Fuzzy Cognitive Maps method on a techno-economic study of an autonomous hybrid system photovoltaic and geothermal energy. Specifically, the FCM model of this system includes twenty-five concepts and three of them are considered as outputs, the total system efficiency, the total energy production and the total system cost. The aim of the study is to provide maximum performance with the minimum total cost. To this end results for both the classic and revised approach of the FCM method are provided and discussed. Computational Intelligence and especially Fuzzy Cognitive Maps are a very promising field in modeling complex systems. The latest approaches of the method show that FCM can open new paths towards higher efficiency, more accurate models and effective decision-making results.

HYDRO GEOTHERMAL ENERGY POSSIBILITIES, EXPLORATION AND FUTURE PROSPECTS IN DUKAGJINI BASIN, KOSOVO

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Abstract. The thermo mineral waters and groundwater of shallow in the Dukagjini Basin in Kosovo have been known since the ancient period. That occur in different tectonic zones and faults in the Inner Dinarides. The zone covers high Carbonate rocks masses has varied geology that ranges in age from the Neo-Proterozoic to the Holocene. The geology is characterized by substantial structural features on regional scale, including normal faulting and thrusting. Triassic formations have a considerable extension in the north and northwest part of Dukagjini lowland. Bearing in mind the properties of thermal-mineral and ground waters in shallow the paper deals with possibilities of their use of geothermal energy of low enthalpy as a renewable resource. The paper analyses the way of use of thermo mineral waters in three spas and ground waters in shallow in Dukagjini Basin. The results hinted that the possibility of direct use of geothermal energy is a domestic resource which contributes to energy security and decreases the trade deficit by displacing imported fuels. It is also environmentally advantageous energy source which produces far less air pollution than fossil-fuel sources, an important contribution of living and new work in local communities.

Keywords: thermo mineral waters, hot waters in shallow, geothermal energy.

The economical growth in Kosovo a challenge to environmental preservation in the Republic of Kosovo

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Abstract. The developing economies pose a problematic issue for the environment, worldwide phenomena. The need for production, export, and economical growth comprise a challenge for every government and enterprise. The Republic of Kosovo has witnessed a considerable economic development during the recent years, but there is not carried out any strategy for the preservation of the environment. Taking in account the planning and the developing strategies in the Republic of Kosovo, from the side of the government and the respective enterprises, leads to a strong debate over the issue that is related to process and the policies for the preservation of the environment. The developing countries argue that they have much to do about employment, exports and an overall development of their countries. Consequently, they breach the rules and norms of environment preservation. The Republic of Kosovo is very rich with underground and surface resources, where there are vast amounts of minerals and charcoal. These resources can have a great impact in the economic development. In this study, it is also analyzed the activity of the enterprises that exploit the raw material of the Republic of Kosovo. This sounds good at the first sight, but emission of the remnants of this materials cause innumerable damages to the environment. We will elaborate these activities, respectively that of power plant Kosovo B in Obiliq, Ferronickel in Drenas and Sharcem in Han Elezit.

Keywords: Republic of Kosovo, preservation of environment, export
JEL: D13, M13, O13, Q13.

Using of HVDC Technology in Super Grids

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Abstract. This paper describes the HVDC system, its organization, as well as advantages over the AC system. Implementation of this system will help to make Europe sustainable energy independent which will require a renewable generation portfolio where much of this portfolio will be fueled by wind and will be developed offshore as it is presented in this paper. To deliver this energy to European consumers will require the development of a high capacity transmission system the so called Supergrid, which will be capable of delivering this energy to Europe's load centers. In this paper also is presented, a DC connection of the wind farm with a grid on the mainland as well as the importance of building a Supergrid.

Keywords: HDVC, Super Grid, Wind farm, converter stations

Smart Grid: A Survey

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Abstract. Creation of Smart Grid meets the energy requirements of the 21st century in a high-tech manner with real time approach by providing a significant improvement in power reliability and services, and integrating the latest digital communications in the current power grid. This grid improves the ability of consumers and utilities to monitor, control, and predict the use of energy. Up to the present time, Smart Grid has involved numerous researchers from different viewpoints. This paper provides an extensive literature review of Smart Grid technologies and its characteristics. There are a lot of problems and challenges in the field of Smart Grid. Therefore, this paper can help to find a new research topic in this field.

Keywords: Smart Grid, Power Services, Reliability, Digital Networks, Technologies

Renewables plus Storage Capacities

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Abstract. The purpose of this paper is to address the inherent intermittent nature of renewable energy, which is often overlooked from a practical viewpoint. The intermittency of renewables interrupts normal conventional grid flow, forcing the grid operator to adjust the real time operating procedures. Specifically, solar power –which generates renewable energy during the daytime- may force conventional power producers to reduce or turn off capacities to accommodate the energy produced: also referred to as priority dispatching. One practical method of overcoming this limitation, as well as ensuring that the grid is not thrown off balance is by combining a storage solution with a renewable resources. Such storage capacities, used to fill the shortfall intermittency or for emergencies, can be crucial in providing reliable power supply. Storage solutions combined with solar or wind power projects should be projected, to provide a steady supply of power regardless of weather conditions.

Keywords: Renewable energy, Intermittency, Resources, Storage, Battery.

Using of Computer Models for Cost-Optimization of Minimum Energy Performance of Buildings

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Abstract. Analysis of the buildings energy performance should include the calculation of cost-optimal levels of minimum energy performance requirements. EU regulation has established a comparative methodology framework for this calculation. It specifies rules for comparing energy efficiency measures, and the cost attributed to their implementation. To make building payable, it is not enough to minimize energy consumption needs by improving energy efficiency of envelope, but also use of optimized cost solution is required. Goal is to achieve balanced energy budget in a year cycle, by minimizing investment costs at the same time. Calculation methodology requires combined use of simulation programs and optimization algorithms. The most used computer models for these purposes were numerically optimized using simulation-based approach in which a dynamic building simulation program was coupled with the optimization engine (GenOpt). Analysis of preconditions for using of them and preferences of use are presented in the paper.

Keywords: Energy performance, Cost-optimization, Simulation, Computer

Opportunity for the exploitation of useful metals from the slags of blast furnace in lead metallurgy in the Trepça complex through the Electrothermic process

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Abstract. The slags of blast furnaces in lead metallurgy is a mixture of different oxides, but apart from the various oxides in the slime, the sulfur of metals, dissolved gases in it as well as the metals in the free state are also dissolved. In the composition of the slags enter these metals: Pb, Zn, Cu, Cd, Bi, As, Sb, Ge, Tl etc.

Therefore, exploitation of the useful elements of the slags is in correlation with the new requirements for rational use of raw materials on one side and for environmental protection on the other and together affect the overall lead yield economy.

In lead metallurgy from the blast furnace exceeds about 80% Zn and about 18-20% Cu, 1-2% Pb, about 8-10 g Ag/t as well as rare metals: In, Cd, Se, Tl, Ge etc.

The amount of slags deposited by lead metallurgy is about 3×10^6 t, therefore based on its quantity and its chemical and mineralogical composition, it is an important material for obtaining the most useful metals while the remaining material can be used in the construction industry.

The Electrothermal process is more prospective than the Fjuning and Welc process, in the technical and technological level, so its application is reasonable in this aspect.

Evaluation of the Ereniku river waters in the locations where the Lukac river flows

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Abstract. The fate and transport of many anthropogenic pollutants have an impact not only on hydrological cycles, but also on physico-chemical processes. Water resource monitoring will assess the quality of water, identify its depreciation, and help policymakers make decisions that will preserve not only natural areas but also improve quality of life. Therefore the purpose of this paper is to evaluate the physical and chemical parameters of the locations where the river Lukac flows into the Erenik river. Erenik is a river in the western part of Kosovo. The water quality of the Ereniku river comes from anthropogenic activities, mainly from sewage discharges, from agriculture, as well as from various factors that perform their activity in the watershed of the Ereniku river. Samples were taken from the river in June 2017 in three stations and analyzed the physical-chemical parameters such as: Iron, Manganese, Ammonia, Nitrite, Nitrate, Phosphate, Aluminum, spending of potassium permanganate, dissolved oxygen, turbulence, pH, electrical conductivity, Alkalinity, COD, BOD, N and P inorganic forms, etc. Water samples were analyzed in the physicochemical laboratory such as: pH meter, conductometry, turbidometry, atomic absorption method, spectrophotometric methods and classical chemical analysis methods (volymmetry). Parameters such as pH, temperature, hardness, blur are comparable to the qualities of mountain rivers, which are not significantly affected by human activities. The TSS, alkaline and EC values are higher where they show the influence of human activity and sewage, as well as the COD and BOD values show the impact of human activity.

Keywords: River, Ereniku, parameters, evaluation, human.

**IC - MECHATRONICS ROBOTICS AND
SYSTEM ENGINEERING**

Process Flow for Publishing Scientific Open Access Journals: the Publication of EUROSIM's SNE – Simulation Notes Europe

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Abstract. This contribution presents the process flow for scientific open access journal publication and discusses the challenges for authors, editors, production team, and publication team – on the basis of SNE Simulation News Europe, EUROSIM's scientific membership journal. For authors, the publication process shows a linear structure: contribution submission, contribution review, contribution acceptance, contribution layout, contribution proof reading, and electronic contribution publication. In behind, in big publishing companies different teams are engaged with these steps, financed by the business model of the publisher. EUROSIM has decided for open access publication, without article processing charge for the authors. Consequently most work must be done honorary, voluntary, and complimentary work. Basic financing is coming from membership publication fee of the EUROSIM societies. As benefit, members of EUROSIM societies can download issues and articles in high quality and with extended content, and SNE gives publication space to EUROSIM societies for post-conference publication of contribution of the EUROSIM society's international conferences, and for Sen Special Issues edited by EUROSIM societies. SNE's open access strategy requires a workflow which makes mainly use of open access software tools for layout, and electronic web publication – e.g. LATEX, and (Open) Office for layout, and Typo3 for electronic web publication at www.sne-journal.org.

Keywords: Process flow, work flow, open access publication, electronic publication, web publication

Maturity Level of Kosovo Manufacturing Industry with regard to Industry 4.0

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Abstract. In this paper the concept of Maturity Level of Kosovo Industry will be presented according to the Industry 4.0. Digitalization of factory has impact the entire business environment and lead to Smart Enterprises. To create a model of Smart Factory, first we have analyzed the existing situation of Kosovo Manufacturing Industry with regard to revolution of Industry. In this paper we will describe the results of a recent research at the Kosovo manufacturing companies and are included metalworking and furniture industry, where is developed a Maturity Level for Kosovo Industry. To describe the Maturity Level of Kosovo Industry we have delivered questionnaire and have been done interviews with CEOs (Chief Executive Officer). The average score of Industrial Maturity Level for Kosovo Industry is 2.14 which represent 2nd Industrial Revolution, but some of enterprises belong to 3rd Industrial Revolution. Also, the main barriers of this low level of Maturity Level of Kosovo Industry are highlights based on questionnaire and interviews with CEOs, such as: lack of training programs, language barriers, high cost of purchasing/maintenance of technology, unskilled workers, and est.

Keywords: Industry 4.0, Smart Enterprises – Factory, Digitalization, Kosovo Industry

Emerging Role of Robot-Assisted Occupational Therapy for Children with Down Syndrome

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Abstract. Robotic technology is becoming increasingly popular as a platform for both education and entertainment. It also provides us with new conceptual directions which might have incredibly positive impact on children with physical growth delays and intellectual disabilities. In this research project, the educational robot Roamer Too from Valiant Technologies has been used to explore the development of social skills of children with Down syndrome. In conjunction with an interactive collaborative environment, this device represents a unique opportunity for these children to fully engage in learning, play, communication, build relationships and have fun. The results of this study indicate that educational robots help to develop kids' social and learning psychologies, moving from a more standard knowledge acquisition by absorption toward acts of exploration, collaboration, and creation. As a result, children reflect social initiations, communicative competence and joint attention.

Keywords: Robot, children, Down syndrome, education, social

Development trends in Robotics and Mechatronics

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Abstract. Robots are always a frequently used as an example for Mechatronic Systems. Currently the field of robotics is very fast growing. Therefore the overview is definitely not actual and have to be improved. The main goal of this contribution is to make some additional remarks to the existing kinds of robots and introduce some new with special emphasis to Mechatronic Systems like manufacturing automation by Production 4.0.

Keywords: Production Automation, Agile Manufacturing, Robots

State Feedback of Complex Systems using Fuzzy Cognitive Maps

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Abstract. Complex systems have become a research area with increasing interest over the last years. The emergence of new technologies, the increase in computational power with reduced resources and cost, the integration of the physical world with computer based systems has created the possibility of significantly improving the quality of life of humans. While a significant degree of automation within these systems exists and has been provided in the past decade with examples of the smart homes and energy efficient buildings, a paradigm shift towards autonomy has been noted. The need for autonomy requires the extraction of a model; while a strict mathematical formulation usually exists for the individual subsystems, finding a complete mathematical formulation for the complex systems is a near impossible task to accomplish.

For this reason, methods such as the Fuzzy Cognitive Maps (FCM) have emerged that are able to provide with a description of the complex system. The system description results from empirical observations made from experts in the related subject – integration of expert's knowledge – that provide the required cause-effect relations between the interacting components that the FCM needs in order to be formulated. Learning methods are employed that are able to improve the formulated model based on measurements from the actual system. The FCM method, that is able to inherently integrate uncertainties, is able to provide an adequate model for the study of a complex system.

With the required system model, the next step towards the development of a autonomous systems is the creation of a control scheme. While FCM can provide with a system model, the system representation proves inadequate to be utilized to design classic model based controllers that require a state space or frequency domain representation. In state space representation, the state vector contains the variables of the system that can describe enough about the system to determine its future behavior in absence of external variables. Thus, within the components – the nodes of the FCM, ideally those can be identified that constitute the state vector of the system.

In this work the authors propose the creation of a state feedback control law of complex systems via Fuzzy Cognitive Maps. Given the FCM representation of a system, initially the components-states of the system are identified. Given the identified states, a FCM representation of the controller occurs where the controller parameters are the weights of the cause-effect relations of the system. The FCM of the system then is augmented with the FCM of the controller. An example of the proposed methodology is given via the use of the cart-pendulum system, a common benchmark system for testing the efficiency of control systems.

Beggar Robot Build From Scrap

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Abstract. Begging is a practice of asking a favor with no return back, favors can be monetary but also gifts, food etc. In Kosovo and region there is a great number of beggars in the streets and there are no government legislations for this occurrence, usually these beggars are children or women and the money gained from this type of activities it is uncertain how is spend. The robot was built from old computer materials such as the computer cases to build the body, CD rom to build the hands, and old monitor to replace the face, in controlling part we also used cheap open source electronics and sensors, such as Arduino UNO for sensors interfacing, ultrasonic sensors to detect the presence of people, and piezo resistive elements to detect the money, the face was animated with the game building platform Unity and interfaced with the Arduino so that the scenes were changed according to the feedback from the Arduino and the sensors, the money gained form the robot will benefit the poor families or support some case of seek people who need to be treated abroad or the treatment is really expensive. The idea behind beggar robot comes from a Slovenian artist SašoSedlaček, who build some of this robots in different countries, but the technical solution and the building of this particular robot was done by us.

Keywords: Robot, Beggar, Control, Open Source, Build form Scrap, sensor, gaming platform, social impact, donation.

**IC - COMPUTER SCIENCE AND
COMMUNICATION ENGINEERING**

Towards building a security model for semantic stream reasoning systems

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Abstract. State-of-the-art security frameworks have been extensively addressing security issues for web resources, agents and services in the Semantic Web. The provision of Stream Reasoning as a new area spanning Semantic Web and Data Stream Management Systems has eventually opened up new challenges. Namely, their decentralized nature, the metadata descriptions, the number of users, agents, and services, make securing Stream Reasoning systems difficult to handle. Thus, there is an inherent need of developing new security models which will handle security and automate security mechanisms to a more autonomous system that supports complex and dynamic relationships between data, clients and service providers. We plan to validate our approach on a typical application of stream data, on Wireless Sensor Networks (WSNs). In particular, WSNs for water quality monitoring will serve as a case study. The paper describes the initial findings and research plan for building a consistent security model for stream reasoning systems.

Keywords: semantic web, stream reasoning, data stream management system, wireless sensor network

Social Network Usage by Kosovo Citizens

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Abstract. We are living in digital world. All our activities, actions, purchases, associations, movements stored are stored in bits and bytes. Around 74% of online adults use social networking sites. More than 1.2 billion people are active on Facebook each day, distributing every day billions data. Main users of social network are young people. What is happening in Kosovo? Which social network is most used? What do they know about social networks? Are question that this paper will give answers. Based on survey made in 16 municipalities, where around 1000 school children answered 18 questions related to use of social network.

Keywords: Facebook, security, teenagers, Social Network, Republic of Kosovo, data

Analysis of central banks platforms on social networks

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Abstract. The paper describes the advantages of using technical and technological achievements through the social networks and their implementation in Central Banks communication. A study of some Central Banks on their use of social media and some of the most popular social networks are given, showing that social media is becoming an important medium of communication for Central Banks around the world. The study shows that a majority of Central Banks use Twitter to send alerts for information already disseminated through the website, even as they are not very active in responding to public tweets, and also shows an increasing number of Central Banks are turning to social media in an attempt to thrust information directly to their audiences.

Keywords: Social networks, the Central bank, communication, Facebook, Twitter

Development and Improvement of the Quality of the Mobile Services at the Mobile Market in Macedonia

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Abstract. To determine the strategic direction for the development of electronic communications market in the part of mobile telecommunication services in Republic of Macedonia, the Agency for electronic communication has made an assessment of the regulatory progress and that has been made in recent years. The needs are in order to obtain a clear strategy for the development of the mobile telecommunication market in Macedonia, and primarily will create a clear picture in the: technical, financial, operational and competitive segments. Republic of Macedonia at this moment has 2 mobile operators with own network and the third mobile virtual operator. They are with excellent prospects in this direction and potential that enables low-cost services to the users. This shows that in Macedonia the telecommunication services are with high quality and the lower prices. They are currently among the lowest in the region and in Europe. The analysis in this paper are made according to the actual results achieved of the situation on the mobile market and some basic recommendations for their better development, better quality and better prices.

Keywords: prices, customers, mobile market, mobile operator, electronic communications, competition, revenue

Implementation of ICT in the management of transport vehicles

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Abstract. Fleet Management is a M2M (Machine to Machine) solution for locating, tracking, managing and controlling the shipping fleet, including commercial motor vehicles such as cars, planes, ships, trucks and trains. All vehicles that are subject to monitoring are equipped with GPS devices in which SIM cards are installed, and which help monitor the position and parameters of the vehicle. The survey shows that in addition to monitoring the location and vehicle parameters, the implementation of such a solution in the fleets provides additional benefits such as saving fuel costs, maintenance, time etc. The purpose of this paper is to explore a real implementation of a fleet management solution in a public transportation company. Being part of a wider IT system, the fleet management solution, is associated with a range of different benefits for the transport company and the citizens, as its end users. This paper, furthermore, intends to quantify the perceived advantages and give recommendations for further system extensions that can optimize the operations of the transport company, thus increasing citizen satisfaction.

Keywords: Fleet Management, M2M, Tracking vehicles, GPS.

Some Applications in the Real Affine and Projective Plane

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Abstract. In this article we have presented some simple and interesting applications of planar transformations in the affine and projective plane constructet over real-number field, such as: Scaling about the Origin, Reflections, Rotation about the Origin, Shears, Concatenation of Transformations, Rotation about an Arbitrary Point Reflection in an Arbitrary Line. Initially, we have made a description of these transformations for which we will bring basic knowledge, the transformations we have described in the coordinated real affine and projective plane. Applications of transformations are considered in the last part of this paper. Each primitive has a mathematical representation which can be expressed as a data or type structure for storage and manipulation by a computer. At the end of this article we have provided some examples and geometric applications in robotics and computer equipment.

Keywords: Real affine plane, real projective plane, planar transformations, robotics.

Analysing Complex Healthcare Systems: from Big Data to Deep Data via System Simulation

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Abstract. Complexity of manmade systems increases rapidly and so do costs spent for them. National health systems invest annually more billions of Euros as the demand for health services increases (because of demographic change), but resources are limited. In addition complexity of processes increases: From diagnosis to therapy – Interventions are complex hybrid processes including e-health, decentralized services and personalized medicine. To measure efficiency and effectiveness becomes more and more complex but is an urgent need. Development of new methods, models and technologies is needed in order to support analyzing, planning and controlling. Quantity and quality of available data strongly increases and therefore facilitates the description and analysis of all areas in complex systems like health care. Based on data for healthy expenditures the evaluation for health care systems has a market of 75 to 120 Billion Euro only in the European Union.

To provide state of the art analysis for Health Technology Assessment (HTA), Comparative Effectiveness Research (CER) and Evidence Based Medicine (EBM) processes combining health system domain knowledge, knowledge of professional data processes and – last but not least – mathematical modelling & simulation will be vital to transform Big Data into Deep Data: Evidence based and reproducible knowledge.

Bringing together these technologies is an enormous challenge. Data Based Demographic models have to be combined with models for the spread of diseases. Time dependent treatment paths have to be parametrized with data sets from clinical routine joined with large-scale health system data. For system simulation an important aspect is the possibility to implement changes inside the system, like interventions within the computer model, and to analyse their effects. On basis of experiences of the Austrian DEXHELPP Competence Centre for Decision Support in Health Policy and Planning, the contribution points out how big, interdisciplinary teams can handle these complex processing future and what are similarities and differences to other complex manmade systems. Analysis is supported by an innovative research infrastructure – the DEXHELPP Research Server - developed to enable researchers and other stakeholders to share data and methods for research and decision making.

Keywords: Complex Systems, System Simulation, Big Data, Deep Data, Health Care

A CRITICAL OVERVIEW OF DATA MINING FOR BUSINESS APPLICATIONS

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Abstract. Everybody looks to a world that does not remain the same. Furthermore no one can deny that the world is changing, and changing very fast.

Technology, education, science, environment, health, communicating habits, entertainment, eating habits, dress - there is hardly anything in life that is not changing. Some changes we like, while others create fear and anxiety around us. Everywhere there is a feeling of insecurity. What will happen to us tomorrow, or what will happen to our children, are questions we keep frequently asking. One thing, however, is clear.

It is no more possible to live in the way we have been living so far. It seems that now the entire fabric of life will have to be changed. Life will have to be redesigned. The life of the individual, the social structure, the working conditions and governance all will have to be re-planned.

Furthermore over the past 2-3 decades there has been a huge increase in the amount of data being stored in databases as well as the number of database applications in business and the scientific domain. This explosion in the amount of electronically stored data was accelerated by the success of the relational model for storing data and the development and maturing of data retrieval and manipulation technologies. While technology for storing the data developed fast to keep up with the demand, little stress was paid to developing software for analysing the data until recently when companies realized that hidden within these masses of data was a resource that was being ignored. The huge amounts of stored data contains knowledge on a good number of aspects of their business waiting to be harnessed and used for more effective business decision support. Database Management Systems (DMS) used to manage these data sets at present only allow the user to access information explicitly present in the databases i.e. the data. The data stored in the database is only a small part of the 'iceberg of information' available from it. Contained implicitly within this data is knowledge about a number of aspects of their business waiting to be harnessed and used for more effective business decision support. This extraction of knowledge from large data sets is called Data Mining or Knowledge Discovery in Databases and is defined as the non-trivial extraction of implicit, previously unknown and potentially useful information from data. Almost in parallel with the developments in the database field, machine learning research was maturing with the development of a number of sophisticated techniques based on different models of human learning.

Learning by example, case-based reasoning, learning by observation and neural networks are some of the most popular learning techniques that were being used to create the ultimate thinking machine.

Keywords: 5G, small cells, massiveMIMO, mmWave, network slicing, beamforming, full duplex, IoT, C-RAN, SDN/NfV, new radio, xHaul etc

How Machine Learning is shaping the e-commerce trends

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Abstract. Machine Learning has had its impact on the online world ever since PageRank and has been further more used for generating recommendations, for predictive analysis, which analyzes user purchase patterns, product attributes, and the performance of different products. This data helps generate the most relevant product recommendations that also have the highest probability of generating a sale from a particular customer. The premise is much simpler than the types of machine learning at work today.

This paper aims to explain how the usage of machine learning is driving the trends of e-commerce websites and apps from a technological and economic perspective. It will provide cases of new features, new functionalities and what is the impact that will drive the trend of such an important commodity that is gaining more and more share in the channels of business.

Keywords: Machine learning, E.commerce, Predictive Analysis, patterns, chatbot

The integration of e-Health system in National healthcare – The case of Kosova

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Abstract. The importance of health information is inevitable. Information, respectively structured data are of high importance in decision making process, especially when diagnosing and treating the patients' process from different perspectives. With the advancement of information technology, e-Health has been steadily increasing in recent years, aiming to improve fundamentally the healthcare by enabling more quality access to health care, beneficial effects on the daily work of staff medical, transparency of patient data, to name a few. Currently, the health systems are lack of enough data, or even they are reported with considerable delays and their processing yields different results.

In order to avoid these situations, Health Information System (HIS) is intended to be a structured system that should be understood as a series of formal actions and methods that apply to the collection, personalization, organization, management and distribution of information within the health sector. These actions raise the credibility of information and at the same time enable this information to be available to the right people/institutions in a timely manner, useful for improving healthcare and managing scarce resources in the health sector. Within this paper, is discussed the implementation process of the Health Information System, namely AviCenna, and the procedures and challenges that are being faced while tending to implement in the health sector of Kosovo.

Keyword: e-Health, AviCenna, healthcare, Kosovo

Decision making based on data analyses using data warehouses

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Abstract. Data warehouses are a collection of several databases, whose goal is to help different companies and corporations make important decisions about their activities. These decisions are taken from the analyses that are made to the data within the data warehouse. These data are taken from data that companies and corporations collect on daily basis from their branches that may be located in different cities, regions, states and continents. Data that are entered to data warehouses are historical data and they represent that part of data that is important for making decisions. These data go under a transformation process in order to accommodate with the structure of the objects within the databases in the data warehouse. This is done because the structure of the relational databases is not similar with the structure of the databases (multidimensional databases) within the data warehouse. The first ones are optimized for transactions on daily basis like: entering, changing, deleting and retrieving data through simple queries, the second ones are optimized for retrieving data through multidimensional queries, which enable us to extract important information. This information helps to make important decisions by learning which are the weak points and the strong points of the company, in order to invest more on the weak points and to strengthen the strong points, increasing the profits of the company. The goal of this paper is to treat data analyses for decision making from a data warehouse by using OLAP (online analytical processing) analysis. For this treatment we used the Analysis Services of Microsoft SQL Server 2016 platform. We analyzed the data of an IT Store with branches in different cities in Kosovo and came to a conclusion for some sales trends. This paper emphasizes the role of data warehouses in decision making.

Keywords: multidimensional databases, multidimensional queries, business intelligence, OLTP, OLAP, fact table, cube, dimension

Synchronization and High Availability of Data by Using Technology of SQLServer 2012 Always On

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Abstract. The development of online technology and the use of various banking transaction applications as well as the use of networked information in background, are dealing today with the basis of records that should be accessible, up-to-date and available to users throughout all the time. This are few challenge in itself that requires a lot of resources, time and energy. However, the implementation and configuration of High Availability and Always On Group in SQL Server 2012 greatly increases the availability, accessibility, disaster recovery and maintenance of the database while the database is in used. Through this configuration, the SQL server supports up to four NODE's (secondary servers) that are primary database copy and, at any time, they can be replaced with the server that maintains the primary database automatically and without interruption of the work process. The security level has increased greatly due to the fact that the NODE's can be within the same or various data centers. They also can be located in different geographical locations with the primary database, which automatically increases system security issues, such as the risks that are encountered from disasters. Therefore the aim of this research paper is to test the use of High Availability and Always ON technologies in SQL server databases and ascertaining the increased availability, accessibility and maintainability of databases. With the implementation of Always ON availability in SQL server, security, updating information as well as system maintenance has improved greatly. Furthermore, the challenges of current times have been overcome in terms of availability of access and maintenance of the database.

Keywords: data synchronization, high availability, accessibility, node, always on group, SQL

Mobile Cloud Computing: A new way of Cloud Computing

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Abstract. Cloud Computing seems to be the most promising technology of the century we are living. It provides a new manner of sharing distributed resources and services that may be part of different organizations, geographically located in different places and different time zones. Mobile Cloud Computing offers partially the same functionality, with the only additional requirement that, at least, some of the devices are mobile. In this paper, we will try to provide a detailed explanation of Mobile Cloud Computing concept by providing different examples, figures and charts showing usage, accessibility, pros and cons and comparison of different cloud platforms.

Keywords: Cloud Computing, Mobile Cloud Computing, Smartphones, IaaS

Mobile Applications vs Privacy

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Abstract. Today we have billions of smartphone users and millions of mobile applications (apps), the Apple App store boasts close to 2 million of these apps while Google play has more than 2.2 million Apps. Number of mobile apps is increased each day, also usage and downloads of mobile apps has doubled reaching – 197 billion (a forecast) downloads in 2017.

Does mobile application collect data of smartphone user? Where do they have access? Do we, as user, need to have concern regarding our Privacy?

We have analyzed more than 30.000 mobile apps from Google Play and Apple Store, to find out which data they collect?

This paper will give answer which data of user are collected, and scary result regarding privacy!

Keywords: Mobile Apps, Apple Store, Google Store, Privacy

Permission-based Privacy Analysis for Android Applications

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Abstract. While Information and Communication Technology (ICT) trends are moving towards the Internet of Things (IoT), mobile applications are becoming more and more popular. Mostly due to their pervasiveness and the level of interaction with the users, along with the great number of advantages, the mobile applications bring up a great number of privacy related issues as well. These platforms can gather our very sensitive private data by only granting them a list of permissions during the installation process. Additionally, most of the users can find it difficult, or even useless, to analyze system permissions. Thus, their guess of app's safety mostly relies on the features like rating and popularity, rather than in understanding context of listed permissions.

In this paper we investigate the relationship between the features collected from Android Market API 23 (such as Popularity, Total Number of Permissions, Number of Dangerous Permissions, Rating and Package Size) to app's privacy violation. To show the influence of each feature we use linear regression and R squared statistics. The conducted research can contribute to the classification of mobile applications with regards to the threat on user's privacy.

Keywords: android, applications, permission, privacy.

A raise of hydropower using technology and IoT

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Abstract. As time passes by, we barely see how much time it costs people to stay at work, fixing problems that happen every day. As people we should do more about humanity and technology is the door that opens opportunities for us to do this. Technology today is transforming every human daily life routine and it's only the beginning of what technology can bring. By 2020 we know that technology will connect the unconnected by introducing the real idea of Internet of Things. Every little, tiny thing all over the world will be connected, but also big and important projects like hydropower system in industry revolution. Hydropower is the key of all great revolutionary machines that are produced. They give us energy to live by. Hydropower is the route to accomplish every process we start every day. Every country has at least a single hydropower. So why don't we make them more reliable and efficient at low cost? Technology is the future so we should invest more in the future of light. We will see a chronological list of the impact of technology in hydropower. So we will see some main examples what is practically done about information technology application in dams. What is the future holding for technology application in hydropower systems?

Keywords: Hydropower, technology, humanity

Characteristics and Temporal Behavior of Internet Backbone Traffic

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Abstract. With the rapid increase demand for data usage, Internet has become complex and harder to analyze. Characterizing the Internet traffic might reveal information that are important for Network Operators to formulate policy decisions, develop techniques to detect network anomalies, help better provision network resources (capacity, buffers) and use workload characteristics for simulations (typical packet sizes, flow durations, common protocols).

In this paper, using passive monitoring and measurements, we show collected data traffic at Internet backbone routers. First, we reveal main observations on patterns and characteristics of this dataset including packet sizes, traffic volume for inter and intra domain and protocol composition. Second, we further investigate independence structure of packet size arrivals using both visual and computational statistics. Finally, we show the temporal behavior of most active destination IP and Port addresses.

Keywords: Internet, traffic, dataset, characteristics, Network Operator.

Enabling technologies for 5G: Small Cells, massiveMIMO, mmWave, Network Slicing and Beamforming

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Abstract. With 5G is expected to be the most promising and probably the most complex technology in the market that has raised the hopes of a number of industries, standards bodies and vertical markets. The full development and deployment of 5G will be possible only after the development of a number of wireless and wireline-based technologies that are crucial and can be considered to be the enablers of 5G. These enabling technologies are Small Cells, massiveMIMO, mmWave, Network Slicing and Beamforming.

These technologies will help 5G meet its requirements and expectation to integrate several old and new technologies, scenarios and use cases within an ecosystem with the sole purpose to enhance user experience by achieving shorter latency, more capacity and improved energy and frequency efficiency.

The focus of this paper is on these enabling technologies, methods and approaches used to address the needs and requirements of 5G and the challenges ahead that stakeholders will be faced with.

Keywords: 5G, small cells, massiveMIMO, mmWave, network slicing, beamforming, full duplex, IoT, C-RAN, SDN/NfV, new radio, xHaul etc

Study of the Power Consumption of Pseudo Random Bit Generator Circuits Implemented on FPGA

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Abstract. Pseudo Random Bit and Number Generator (PRB/NG) circuits being very widely used for security, compressive sensing and diverse other applications in telecommunications are studied in different aspects in the laboratory of Computer-aided Design in Telecommunications in Technical University-Sofia. Some results of this study are published in [1] where tests for randomness from the National Institute of Standards and Technology (NIST) suite are applied on commonly used PRB/NGs. Other aspects of the PRB/NG circuits study is their power consumption in the aim of green communications as noticed in [2,3] and the concern about low power consuming devices for Internet of Things' (IoT) applications. A recent research, described in [4] has confirmed the strong influence of VHDL codes of a circuit design from a given specification and it's illustrated for a 4-bit comparator circuit.

This paper considers power consumption estimation results for a set of PRB/NG circuits in the aim to add power consumption constraints at the design stage for such circuits and to help optimal design selection with minimal power consumption for a given application. The PRB/NG circuits are implemented on XILINX FPGA devices and they are simulated with the Power analyzer option of VIVADO tool and XPE. The approach proposed can be useful for other classes of communication circuits.

IoT Solution: A Mobile Application for Public Transport QoE Improvement

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Abstract. Public transportation in Kosovo has shown to have frequent delays. The delay intervals can be unpredictable, especially in busy hours and regarding the intercity lines. So far, not a substantial effort has been done in order to improve the system's performance. This paper presents an Internet of Things (IoT) solution for improving the public transport Quality of Experience (QoE). The main goal of the proposed information system is to remotely (and precisely) inform the citizens on real arrival times of the busses at respective stations. Through GPS localization and GSM/3G connectivity, the system enables for web based real time bus tracking. From their smart phones, users can select a specific bus line, and can be visually (on the map) informed on the position of the bus at any time. The arrival time at specific station is also estimated.

The system has been tested in public transport in the city of Prishtina and the test results have confirmed its functionality and applicability. Besides its main goal that is focused on the user's experience, we expect for the data collected from the system to be used in improving the overall public transport system quality in Kosovo

Keywords: IoT, GPS, transport, prediction

Review of artificial intelligence development, its impact and its challenges

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Abstract. The field of Artificial Intelligence, which started roughly half a century ago, has a turbulent history. In the 1980s there has been a major paradigm shift towards embodiment. While embodied artificial intelligence is still highly diverse, changing, and far from “theoretically stable”, a certain consensus about the important issues and methods has been achieved or is rapidly emerging. In this paper we briefly characterize the field, summarize its achievements, and identify important issues for future research.

With the popularization of the Internet, permeation of sensor networks, emergence of big data, increase in size of the information community, and interlinking and fusion of data and information throughout human society, physical space, and cyberspace, the information environment related to the current development of artificial intelligence (AI) has profoundly changed. AI faces important adjustments, and scientific foundations are confronted with new breakthroughs, as AI enters a new stage: AI 2.0. This paper briefly reviews the 60-year developmental history of AI, analyzes the external environment promoting the formation of AI 2.0 along with changes in goals, and describes both the beginning of the technology and the core idea behind AI 2.0 development.

The goals of this research article are to review and synthesize the literature about service quality delivery through Artificial intelligence, describe what is known about the topic, and develop an agenda for needed research.

Keywords Artificial intelligence 2.0, Big, Human-machine hybrid-augmented intelligence, Autonomous-intelligent system, Industry.

The importance of professional certifications within ICT institutions

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Abstract. Today, the sector of information and communication technology in Kosova is one of the areas with rapid development. In public and private intuitions are debating the impact of IT professional certificates to their employees performance and in the overall acquiring of the knowledge during the transition process in their work environment. Therefore, the aim of this research paper is to emphasize the needs of professional employees to obtain IT professional certificates which in background contributes to validate the applied skills throughout the challenges arise. In order to accomplish the aim of this paper, a cross methodology is used to obtain the opinion of the ICT industries and institutions, in order to emphasize the needs of IT professional certifications for employees with various level of education.

Keywords: ICT certification, importance, Kosovo, ICT industry, outsource, services

The effects of Security mechanisms on VoIP communication

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Abstract. Voice over Internet Protocol (VoIP), is being deployed in many companies and institutions. The main factors luring these companies to transition to VoIP are the flexibilities and the cost efficiency. This transition resulted with the new situation were voice and data traffic are being integrated on exiting network infrastructure. However with the deployment of VoIP in the existing networks, the security enforcement of the network directly, has an impact in the quality of the overall VoIP technology. Therefore, in order to ensure the QoS of VoIP there is a need to prioritize the VoIP packets, so the packets do not experience delays or lost during the transmission phase. Based on the problem raised, this paper is targeting various security challenges that are affecting the QoS of VoIP. Further, throughout an experimental approach, the situations are simulated using the OPNET simulation tool, were the results are analyzed aiming to compare various security mechanisms and their impact in QoS for VoIP according to international telecommunication union (ITU) standards.

Keywords: VoIP, OPNET, VoIP QoS, Security mechanisms

SMIA: Improving Kosovo's education management system

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Abstract. Successful management of today's education systems requires effective policy-making and system monitoring through data and information. To this end, countries around the world have invested significant resources into collecting, processing, and managing more and better data through education management information systems (EMIS). SMIA is a modern EMIS, which offers easier management of educational process in Kosovo. It facilitates decision-making, resource planning, strategy building, monitoring and evaluation of educational system through a rich set of analytical and statistical tools. For over six years of activity, the system has efficiently tracked and thus helped the development of the educational process for every institution including kindergarten, preprimary, primary and middle school. This paper will describe the system tools and features, which has enabled real-time monitoring of pupils and teachers performance. This information has provided a timely intervention from the high management to make balanced dissemination of didactic resources.

Keywords: Education, Emis, Real-time monitoring, Smia

The principle of execution procedure and digital system/communication impact of court enforcement cases.

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Abstract. This work aim is to describe processes of enforcement cases system, focused in public court, before and after digitalization of the system and communication between relevant institutions. Furthermore, technical and legal solutions, advantages and disadvantages on case load removal as well as education of society towards legal system and their debt. System is developed to connect legal and financial institutions, by exchanging information between each other in order to finish enforcement process. Therefore it meet legal system requirement due to law and internal processes, where are included different institutions as public courts, tax office, private enforcement agents and municipalities. In other hand it should be compliant with systems of financial institutions, due to communication standard, data as well as internal processes.

Research on system communication by using unified registry model & elements

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Abstract. Trends of Development of Information Society in the Republic of Kosovo must fit the criteria and standards of the EU. The main objective of the paper is the identification of individual IT systems used by the Republic of Kosovo public institutions related to the trade and working out analysis and recommendations for optimizing their communication (interoperability), eventual unification in the hardware & software level and increase the efficiency of the entire economic system information. The analytical analysis outlined these points, as it follows: current technologies used by public administration of the Republic of Kosovo, risk analysis, analysis of data structures and interfaces of Information Systems. For the synthetic analysis is outlined the points, as it follows: conceptual proposals technology integration.

Keywords: Information System, data model, electronic registry, communication

Comparing Contemporary Infrastructure Services: Cloud and on-Premise

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Abstract. The purpose of this research is comparing contemporary infrastructure services tailored to a specific higher education institution. UBT which has variety of ICT services for students and academic staff, is chosen as the case study. Considering the growth of the organization, a reliable and secure environment for the current services and for the future purposes too should be designed. Building an infrastructure with such requirements is complex, therefore analyzing and deciding on which type of infrastructure will these services be based is highly challenging.

Considering the importance of services and data sensitivity that UBT holds on as a higher education institution, several criteria were addressed: availability, data security, data privacy, accessibility, and cost-effectiveness. This research focuses on comprehensive comparing of cloud and on-premise infrastructure services in order to build the most adaptive environment. Both types of infrastructure solutions have different advantages and disadvantages, therefore combining services is preferable for this case study.

The designed environment has proved that combining cloud and on-premise infrastructure services increases the level of services and efficiency. Insights and implementation details are provided.

Keywords: ICT Environment, Virtualization, IaaS, Cloud, on-Premise, Datacenter, Education, Compute Engine, App Engine

Question answering enhanced with a window function

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Abstract. Question answering (QA) can be generally defined as an automatic process capable to understand questions formulated in a natural language and responding exactly with the requested information [1]. However, this simple definition turns to be very complex when the characteristics and functionalities of the “ideal” QA system are analyzed. The knowledge from several research areas, such as, Natural Language Processing, Information Extraction, Information Retrieval, Knowledge Representation, are required to design the “ideal” QA system. Researchers have experimented with different approaches in every stage of the QA system. Some studies focus on utilizing question keywords density distribution to enhance retrieval of relevant information snippets [2]. It is evident that the distances between the sequence of words indicating the correct answer and the keywords extracted from the question are especially important for QA systems [3].

This study presents the results from the final stage of the several years developing Question answering system for Macedonian language. A window function is implemented in the process of selecting the correct answer by assigning higher weights to keywords from the question and the evaluated answer that appear densely in a particular window [4]. So, the aim of this study is to assess the influence of keywords proximity in the process of selecting the correct answer for a given multiple-choice question posed in Macedonian language. The preliminary experimental results show that the Hanning window function can be effectively used for that purpose.

Keywords: Question answering, keyword proximity, density distribution, Hanning window

Comparison of Computer Execution Time of Determinant Calculation

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Abstract. Based on the fact that determinants and matrices have extensive application in scientific researches, and based on the fact that at the time of technology almost all different researches and simulations are made using computer systems. Therefore, within this paper, we have presented the comparison of the duration of calculating determinants through computer systems. In this paper, we have developed the computer function of calculating determinants using the Laplace expansion method, as well as the computational function for calculating determinants using the Salihu's method. Within this paper, we have compared the duration of the execution of these functions of the calculation of the final result of the determinant. The duration analysis is done for different orders and the duration of both methods is compared.

Keywords: Determinants, computer function, determinant calculation, time comparison.

Comparison of Web Development Technologies ASP.NET vs. PHP

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Abstract. The use of e-businesses (electronic business) is increasing rapidly. The processes involved in e-Commerce domain, such as purchasing and selling products, supplies and services, customer services, payments and processing, product control management, information exchange requires a sustainable application that could cope with the number of users and its activities. This paper elaborates the technologies used in these applications and their impact in the overall process performances. Further, a cross methodology is used to compare two major web technologies, the .NET versus PHP, by measuring the performance, userfriendliness attributes. Further, a list of security mechanisms used within these applications are identified, and their direct effect to referred attributes. Furthermore, the paper concludes a suggestion list that could be followed throughout decision making process by emphasizing which of the services to integrate when implementing within e-Commerce application. Finally, a test case is followed using a prototype product, following the CRUD processes and relevant activities in front and back-end of the application.

Keywords: e-Commerce, e-Business, Usability, Performance, Security, .NET, PHP

**IC - INFORMATION SYSTEMS AND
SECURITY**

Learning Management Systems in Higher Education

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Abstract. Learning Management Systems (LMSs) are improving learning processes and are widely used in higher education institutions. There are available various types of LMSs used by pedagogues to manage eLearning and to deliver course materials to students. Nowadays, LMSs have become essential tools that affect the quality of learning and teaching in higher education. In this article, we introduce LMSs and we choose Moodle as a tool to present an information system that is used in our university. Moodle is an online learning environment that supports classroom teaching. We will focus on the advantages of LMSs and why we choose Moodle as the best open source LMSs.

Keywords: LMSs, eLearning, Moodle, information system, open source

An approach to Information Security for SMEs based on the Resource-Based View theory

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Abstract. The main focus of this proposal is to analyze implementation challenges, benefits and requirements in implementation of Information Systems and managing information security in small and medium size companies in Western Balkans countries. In relation to the study, the proposal will focus in the following questions to investigate: What are the benefits that companies mostly find after the implementation of Information Systems has been implemented, efficiency, how to they manage security of the information's, competitive advantage, return of investments etc. The study should give a clear approach to Information Systems implementation, information security, maintenance, measurable benefits, challenges companies have gone through and a model how to approach Information Systems as a general guide utilizing best practices by the companies that are also supported by the available literature review. A very important place on the research will have also the Information security threats, security management measures and proposed alternatives for organizations to network vulnerabilities from malicious attacks. Since there are several security management frameworks which encompasses also the security management models, my research could be starting with an analyze of the security management, current situation and will end with a proposal for the new approach to information security.

Keywords: Information security, technology, infrastructure, small-medium enterprises, system

Open Data Opportunities and Privacy Issues

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Abstract. In this paper, we describe open data goals, opportunities and privacy problems. Open data presents many opportunities to benefit society. Open data presents opportunities to develop the economy, increase government effectiveness through information-based policies, and promote civic engagement and democratic accountability. The aim of this study is to discuss that despite these benefits, widespread use of open data poses privacy, security, and civil rights challenges. Specific, detailed, and granular data enable businesses, policy-makers, researchers, and the public to conduct rich analysis, and to apply evidence-based decision-making. However, this detailed data can be used to identify individuals, posing a threat to their privacy. We conclude this paper, that there is a big challenge of striking an appropriate balance between the utility of open data and the privacy of the data subjects.

Keywords: Open data, opportunities, privacy, security

Implications of EU-GDPR in Low-Grade Social, Activist and NGO Settings

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Abstract. Social support services are becoming popular among the citizens of every country and every age. Though, social support services easily accessible on mobile phones are used in different contexts, ranging from extending your presence and connectivity to friends, family and colleagues to using social media services for being a social activist seeking to help individuals confined in miserable situations such as homeless community, drug addicts or even revolutionists fighting against dictatorships etc. However, a very recent development in the European Parliament's law (2016/679) on the processing and free movement of personal data in terms of EU-GDPR (General data protection rules) considers the low funded social service development efforts unsafe. This article analyses a case study conducted at a shelter for homeless mothers in the United States to conceptualize the future similar development efforts from low end public activist groups within European union. This article aims to raise awareness on this issue and also puts forth a conceptual model to envision the possibilities of mitigating the risks attached to such development efforts under the light of EU-GDPR which will be implemented in may 2018.

Keywords: GDPR, social services, information security, public activist

Towards Secure Data Flow Oriented Multi-Vendor ICT Governance Model

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Abstract. Today, still, ICT Governance is being regarded as a departmental concern, not an overall organizational concern. History has shown us that implementation strategies, which are based on departments, results in fractional implementations leading to ad hoc solutions with no central control and stagnation for the in-house ICT strategy. Further, this recently has created an opinion trend; many are talking about the ICT department as being redundant, a dying out breed, which should be replaced by on-demand specialized external services. Clearly, the evermore changing surroundings do force organizations to accelerate the pace of new adaptations within their ICT plans, more vivacious than most organizations currently is able to. This leads to that ICT departments tend to be reactive rather than acting proactively and take the lead in the increased transformation pace in which organizations find themselves. Simultaneously, the monolithic systems of the 1980ies/1990ies is often very dominating in an organization, consume too much of the yearly IT budget, leaving healthy system development behind. These systems were designed before data became an organizational all-encompassing resource; the systems were designed more or less in isolation in regards to the surrounding environment. These solutions make data sharing costly and not at all optimal. Additionally, in strives to adapt to the organization's evolution, the initial architecture has become disrupted and built up in shreds. Adding to this, on May 25, 2018, an upgraded EU Privacy Regulation on General Data Protection Regulation (GDPR) will be activated. This upgraded privacy regulation includes a substantial strengthening of 1994's data privacy regulation, which will profoundly affect EU organizations. This regulation will, among other things, limit the right to collect and process personal data and will give the data subject all rights to his/her data sets, independent of where this data is/has been collected and by whom. Such regulation force data collecting and processing organizations to have total control over any personal data collected and processed. This includes detailed understanding of data flows, including who did what and when and under who's authorization, and how data is transported and stored. Concerning data/information flows, maps are a mandatory part of the system documentation. This encompasses all systems, including outsourced such as cloud services. Hence, individual departments cannot any longer claim they "own" data. Further, since mid-2000, we have seen a global inter-organizational data integration, independent of organizations, public or private. If this integration ceases to exist, the result will be a threat to the survival of the organization. Additionally, if the organization fails to provide a transparent documentation according to the GDPR, substantial economic risk is at stake. So, the discussion about the ICT departments' demise is inapt. Any organizational change will require costly and time-consuming ICT development efforts to adapt to the legislation of today's situation. Further, since data nowadays is interconnected and transformed at all levels, interacting at multiple intersections all over the organization, and becoming a unified base of all operative decisions, an ICT governance model for the organization is required.

Keywords: ICT Governance, Privacy, IT, GDPR, Data flow, Data integration

Implementation of the “Information Management System” in Education, in the Municipality of Gjakova

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Abstract. The collection and data listing into the data system positively affects the quality of data, not only in a single school but in the whole educational institutions such as: schools, Directorate for Education, Regional inspectorate for Education, up to the Ministry of Education, Science and Technology. As of nowadays all the schools in the Republic of Kosovo are obligated to collect, process and input data into the system. The data can be read by the municipality directorates and the Ministry of Education (which then uses the data and draws comparisons between different schools). The introduction of all data in the system by school administrators, is divided into periods of time for the school year and this helps the school's plan to improve the quality in different fields, such as school budget, school spacial planning and its future. This research aims to fully understand the systematic work done by the administrators in order to strengthen the partnerity between the schools and the Directorate for Education. This can be done best by decent planning by the Directorate for Education for advanced technology equipment and quality internet extensions as a prerequisite for boosting job motivation.

Keywords: Information management system, Education, Advanced technology

E-Commerce Implementation in Kosovo

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Abstract. In this paper, author had analyzed journal articles that were published by Alemayehu & Heeks, (2007) and Hwang, Jung, & Selvendy (2006). Both articles are about e-commerce and in first article (Alemayehu & Heeks, 2007) authors had analyzed impact of cultural differences, telecommunication infrastructure and local market. In addition, authors of this research paper were focused on consumers that are purchasing through e-commerce companies. Second analyzed article (Hwang, Jung, & Selvendy, 2006) is about exploring e-commerce benefits in developing countries and developing countries are home to more than 80% of the world's population, and are the site for growing use of e-commerce. In this article authors were focused on e-commerce companies.

Last part of this paper is about possibilities and opportunities for e-commerce implementation in author's country, Kosovo.

Kosovo is relatively new country, and Kosovo had declared independence on 2008. In addition Kosovo was occupied by Serbia from 1912 until 1999 when it was liberated after the war. From 1999 Kosovo was managed by United Nations Mission in Kosovo (UNMIK) and first banks were opened in 2001. Furthermore until year 2004 there was not internet connection for general population. In addition, Kosovo is poorest country in Europe and level of corruption is also highest in Europe. Kosovo is still not recognized by five countries of European Union (Greece, Spain, Slovakia, Cyprus and Romania), and Kosovars are only nation in Europe that need visa to travel within European Union.

Keywords: E-commerce, Developing countries, Telecommunication infrastructure

Moodle for Every School

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Abstract. Moodle is a well known and mature LMS (Learning Management System) that is used widely throughout the world. The benefits of using Moodle to support the educational process are obvious, and best of all, Moodle is free and open source. However this does not mean that using Moodle does not have any costs. These costs are mainly related to the server where Moodle is installed, but also to the IT expert that has to install and maintain it. Moodle is a fairly complex application and it needs an experienced administrator to install and manage it properly. A solution to this is to purchase online Moodle services (Software As A Service), but this also has its own costs which sometimes may be even higher than maintaining your own Moodle server. In this paper I will present and describe a set of shell scripts that facilitate the installation and maintenance of Moodle, up to the point that even novice administrators can manage it easily. However making things easy is quite difficult, so these scripts make use of cutting edge technologies in current server administration, like Docker, cloud services, etc., in order to facilitate the process. The end result is that every school or university should be able to install and use its own Moodle server quite easily, and this paper describes how.

Keywords: Moodle, LMS, IT, Software As A System

Security Assessment of Web Applications

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Abstract. A web application is an application that is accessed by users over a network such as the internet or intranet. The term also refers to an application that is coded in a browser-supported programming language and relies on a common web browser to render the application executable. Web applications are vulnerable to various exploits, from those which manipulate the application via its graphical web interface (HTTP exploits), to tampering with the Uniform Resource Identifier (URI) or tampering with HTTPS elements not contained in the URI. Getting started from the accessibility and the variety of exploits, the security assessment is a necessity for providing protected data and secure navigation through the web application. In this paper, we will present a case study for the security assessment of a web application and also will insert our script to a web application as an example of a cross-site scripting exploitation.

Keywords: Security, Web application, Exploit, Cross site

Same Property of Beta-expansion

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Abstract. Peoples over the ages use different counting systems. Applying that to cryptography, we use to represent numbers with a small number of non-zero digits. The problem of finding representations with minimal numbers of digits has been solved for integer bases. In this paper, we consider numeration systems with respect to a real base which is a Pisot numbers. The theory of beta-expansion create a link between symbolic dynamics and a part of number theory. On this papers we give a Pisot numbers with the finiteness property (F) and with weak finiteness property (W). The set of numbers with finite greedy expansion defined by Frougny and Solomyak is exactly $Z[\beta^{-1}] \cap [0,1)$. Same examples with finetnes propety is given in the end of this work with beta -expansion of numbers 1.

Keywords: Counting systems, Pisot number, Beta-expansion, Cryptography

Application of Big Data Concept in Foreign Trade Analysis

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Abstract. The need for handling, analysis and interpretation of large, interrelated datasets in various scientific fields, together with the rapid development of information-technology tools, have resulted in newly emerging data-related scientific fields. The overwhelming majority of publications, based on big data analysis had been born in developed states, because the level of sophistication of informatics in this regions of the world offers a favourable precondition of collection and analysis of this data. Much lesser experiences and pieces of information do we have from relatively lesser developed countries, in which group is also Kosovo. There is a lack of modern trade, agricultural and food logistics. Considerable discrepancy between the market demand and supply. Lack of modern trading facilities even in the large states. If the producers are unable to sell their products on the place of production, there is a considerable danger of loss. That's why the improvement of logistical infrastructure of marketing and the market-building is essential.

Keywords: Datasets, Big data, Foreign trade, Data analysis.

Self Service Business Intelligence: An Analysis of Tourists Preferences in Kosovo

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Abstract. The purpose of this paper is to analyze the preferences of tourists in Kosovo through the data from TripAdvisor.com. Top things to do in Kosovo, will be analyzed through the comments of tourists in TripAdvisor.com. By analyzing the data with PowerBI, will be analyzed what are the most preferred things to do and what the tourists like the most in Kosovo. This paper will contribute on defining the preferences of tourists in Kosovo, it also can help tourism to invest and attract more tourists in specific areas or improve and invest in places less preferred by tourists.

Keywords: Self Service Business Intelligence, Data Analysis, PowerBI

Web Scrapping and Self Service Business Intelligence: Analysis of Preferences of Tourists in Albania

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Abstract. The purpose of this paper is to analyze the preferences of tourists in Albania through the data web scrapped from TripAdvisor.com. Top things to do in Albania, will be analyzed through the comments of tourists in TripAdvisor.com. By using tools for web scrapping and analyzing of data with nVivo and PowerBI, will be analyzed what are the most preferred things to do and what the tourists like doing the most in Albania. This paper will contribute on defining the preferences of tourists in Albania, also can help tourism to invest and attract more tourists in specific areas or improve and invest in places less preferred by tourists.

Keywords: Self Service Business Intelligence, Data Analysis, PowerBI

**IC - MANAGEMENT, BUSINESS AND
ECONOMICS**

Unions and Professional Organizations

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Abstract. This paper discusses the role of unions, professional organizations and the place business should take in society. In addition, this paper also is about how the company policy should be with regard to the environment, or on dealing with evil regimes. For this paper, academic journals have been used and in a last part is provided conclusion.

Keywords: Unions, Professional organizations, Social responsibility, Employee rights.

Corporate Social Responsibility

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Abstract: This paper is about appropriate ethical relations with “stakeholders”, considering customers, consumers, owners and employees. In addition, this assignment discusses question do “stakeholders” and “stockholders” have the same moral rights on the corporation and if yes should they have same moral rights. In addition, author had discussed also the proper relationship with employees and conclusion is made based on literature review

Keywords: Shareholders, Stakeholders, Social Responsibility

The role moderated of some Firms' Characteristics, on the catering theory: MENA Zone Evidence

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Abstract. This article investigates the impact of some firms' characteristics variables in the catering theory of dividend on the MENA Zone context. Baker and Wurgler (2004) established the new catering theory of dividend, when they used a proxy to define this theory named the dividend premium is measured by the difference between the logarithm average market to book payers and non payers. Baker and Wurgler (2004) conclude that a negative dividend premium can explain the phenomenon of disappearing dividend in the USA. This study show that profitability, liquidity and cycle life of firms present an important firm characteristics affect the dividend policy of the firms. The catering theory plays an important role to encourage managers to initiate (continue) distribute dividend. The high dividend premium encourages managers to increase the level of dividend payment and can help to introduce more number of firms' payers and reduce the number of dividend non-payers. The investors should increase their prevailing demand of dividend to push managers to accept their request. The investor preference for dividend is driving by different factors such as the profitability, cycle life, liquidity and size explained the firms' characteristics. To test this prediction we use the panel data from in the period from 2004 to 2013 in 600 non financial firms from 6 countries (Tunisia, Egypt, Morocco, UAE, Saudi Arabia and Kuwait).

Keywords: Dividend premium, Firms characteristics, Panel logistic model, catering theory.

Foreign Direct Investments In Kosovo Opportunities, Challenges And Promotion

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Abstract. Foreign direct investments in Kosovo are the basis for a genuine development, especially in the case of Kosovo that is in the transition phase from a former centralist system to the free market economy system. Investments are the most efficient way for a country's economic and political development, consolidation, economic growth, development and strengthening of the private sector.

The treatment and sensitization of foreign direct investment in Kosovo is a matter related to foreign direct investment (FDI), their importance, factors that influence the rise or fall of the level of foreign direct investment in Kosovo, potentials, opportunities and the challenges facing Kosovo in the transition period of state-building and government attempts for the country's economic development.

In the context of attempts by central institutions, the Kosovo Government is making continuous efforts to create development policies and other important actions to create a better environment for foreign direct investment, creating a climate that is most appropriate for investment, simultaneously for business development. To encourage developed countries that have interest and motive for FDI in Kosovo, the Republic of Kosovo has built a legal infrastructure and has approved the Law on Foreign Investments No. 04/220.

In addition to the legislative sphere, the institutions of the Republic of Kosovo also pay special attention to the promotion of these opportunities through the establishment of the Investment Promotion Agency (IPA-KIESA), in order to further promote Kosovo's potentials abroad, the climate of which Kosovo owns and the benefits it has if it invests in such a market as Kosovo.

Keywords: foreign direct investment, Kosovo, opportunities, challenges, promotion, economic development

Polish foreign trade in live geese and the goose's meat in the years 2012-2016

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Abstract. The main aim of the article is to present the Polish goose market in 2012-2016 in the context of changes in foreign trade of selected goose products. During the considered period Poland was a net exporter of goose meat and offal, a net importer of live geese and the world's largest exporter of goose (meat). In 2016, livestock of geese fell by more than 29% as compared to 2012, slaughter and exports increased. Consumption of this kind of meat influenced favorably on development of market, in Poland we can observe the fashion to consumption of goose meat. Although the production of geese in Poland is small, it is one of the largest producers of this species in the world. A significant portion of domestic goose production is exported, primarily to Germany. Both in the export and import of goose products dominated the goose meat and offal.

Diversification of Polish agri-food trade

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Abstract. The embargo introduced in August 2014 by Russia on the food products imported from the European Union caused a strong decline in sales of food from Poland in this country. The aim of the article is to analyse the current trends and prospects of development of Polish agri-food trade with the EU and non-EU countries in 2013-2016. A special attention was paid on changes in geographical structure and the level of diversification of Polish food exports as a result of the export restriction. The analysis shows that the situation on the Russian market influenced the growth of the food exports from Poland both to the EU and non-UE markets. In the recent years, the role of third countries in Polish exports of agri-food products has steadily increased, however the trade with these countries is still relatively low and concentrated on selected products. It is expected, that activities undertaken to adapt to the new external condition will increase the flexibility of Polish food producers in international market.

Keywords: food industry, foreign trade, diversification, concentration, Herfindahl-Hirschman Index

Strategic management in the field of public services in the Republic of Macedonia

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Abstract. The modern trends of the 21st century are aimed at improving the performance of the public administration functions. The goals that are pursued to be achieved through the application of the strategic management in this area are the achievement of an efficient and effective administration that will satisfy the needs of the citizens. This trend began at the end of the 20th century and the transformation is on the rise around the world, and it is expected to continue after the year 2020.

The Republic of Macedonia cannot isolate itself from such tendencies, and as a result, maximal efforts are being made new strategic components to be introduced in the public service as it would keep the pace with the modern trends in the world. In this paper the concepts used in the application of strategic management in public administration will be reviewed. Furthermore, the main objectives and the focus of strategic management in terms of their incorporation in the public administration's own principles will be stated.

A strategic framework will be presented for effective implementation of reforms in the public administration. In this respect, the environment, the influence of internal and external factors will be considered, in an attempt to provide a framework in which more options will be inserted, since each segment of the public service has its own specific characteristics.

An overview of human resource management in the public sector will also be made with strategic indicators for measuring the performance of employees and guidelines will be given for improvement of the efficiency and effectiveness of the employees pointed out by the strategic management.

As a part of this paper several indicators regarding the management of human resources in the Republic of Macedonia, from my doctorate, will be listed.

Keywords: Strategic Management, Strategic Components, Public Service, Strategic Framework, Factors, Human Resources Management, Republic of Macedonia

Trade in value added: the case of the Central and Eastern European Countries

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Abstract. Although the impact of the production fragmentation on trade flows has been examined many times since the 1990s, the research was not comprehensive because of the limitations in traditional trade statistics. Early 2010s the complex databases containing world input-output tables (or indicators calculated on their basis) has made available. It increased the possibilities of examining the production sharing in the world. The trade statistic in value-added terms enables us better to estimate trade changes resulted from the internationalisation and globalisation as well as benefits of the countries from international trade.

In the literature there are many research studies to this topic. Unfortunately, trade in value added of the Central and Eastern European Countries (CEEC) has been so far insufficiently studied. Thus, the aim of the paper is to present changes in value added trade of the CEEC (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) in the period of 2000-2014. The concept “trade in value added” or “value added trade” is defined as the value added of a country which is directly and indirectly embodied in final consumption of another country. The typical question would be: “How much value added is created in a country due to final consumption in the other countries?” The data will be download from the World Input-Output Database (WIOD).

The structure of this paper is as follows. First, theoretical and methodological aspects related to the application of the input-output tables in the trade analysis will be studied. Second, a brief survey of the empirical literature to this topic will be presented. Third, changes in exports and imports in value added of the CEEC will be analysed. A special attention will be paid to the differences in bilateral trade balances using traditional trade statistics (in gross terms) on one side and value added statistics on the other. Next, in order to identify factors influencing value added exports and value added imports of the CEEC the generalised gravity model, based on panel data, will be used.

The initial research results show that the CEEC have joined the fragmentation processes to a different extent. The most involved in this process were the Central European Countries (the Czech Republic, Poland, Slovakia, Hungary and also Slovenia), and the least – the Baltic States (Estonia, Lithuania and Latvia) as well as Bulgaria and Romania.

The effects of the Global Financial Crisis on Kosovo's Remittances

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Abstract: Kosova's nearly half of the population lives outside of its territory, making its diaspora have an epic impact on Kosova's development through remittances. Remittances affect Kosova's Gross Domestic Product (GDP) through their impact on GDP's main factor which is consumption. Since remittances constitute nearly 13% of Kosova's GDP, this research is important because its focus is to understand the effect that Western Europe Countries have on Kosovo through remittances – especially through unemployment and household income. This research aims to understand the impact of Global Financial Crisis on remittances of Kosovo. This is a quantitative research based on numerical data. Analyzes of this research are done through statistical methods and SPSS Statistics Software.

Keywords: Kosovo's Remittances, Financial Crisis, GDP, Western Europe.

The Evolution of CRM from the Perspective of an Emerging Country: Past, Present and Future

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Abstract. From traditional groceries to mobile commerce, marketing has passed through several ages in its history, and so has the relationship between the seller and the customer. The CRM evolution process differs according to the history of different countries. This study offers a perspective on CRM from an emerging country, Turkey, and will demonstrate the stages of customer relationship management (CRM) in that country. In Turkey's collective culture in the 80s, grocery stores existed with a strong relationship between the seller and the store. The owner was called "uncle grocery" and usually came from the same quarter as the customers. In this era, which we will call "CRM 1.0," sellers knew their customers well. They knew their needs and the problems they were having in their homes, and they even knew about their family lives. Over time, supermarkets were introduced at the beginning of the 90s, and shopping malls were built after that. We can call this era "CRM 2.0." These large stores offered products cheap, as they bought them from their suppliers in huge quantities. As a result of the development of technology, it's now possible to talk about "CRM 3.0," in which the Internet has become the focus of customers' shopping lives. This era began in Turkey in the 90s, and online commerce soared in the last decade, paralleling the development of mobile commerce. The evolution of technology continues at a great pace. The next step is said to be the Internet of Things. Maybe in the future we will talk about an evolving customer, from "humans" to "objects".

Keywords: Customer Relationship Management, Big Data

Factors Affecting Customer Loyalty in Retail Chain in Kosovo

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Abstract. Customer loyalty is at the core of human experience, which enables companies to gain competitive edge in currently tight markets. Customers aren't always easy to please, and now more than ever, they look for satisfactory services. When customers know that their needs are paramount to company's employees, returning to the retail is an easy decision. Satisfied customers are more likely to share their praise with others, thereby increasing the number of referrals the company receives. This article takes into account the theoretical review of customer loyalty and its benefits.

This article examines the applicability of customer's loyalty over a supermarket chain in Kosovo, Viva Fresh. This paper applies quantitative research to one hundred Viva's customers and analyzes were done with SPSS Statistics. The article concludes that customer satisfaction, switching cost and quality of products are main factors that affect customer loyalty in retail markets.

Keywords: Customer Loyalty, Supermarkets, Current Customers.

Immigration Law and Border Studies

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Abstract. Immigration should be seen as one of modern societies great success stories because known progressive countries as France , Italy , Germany , Greece , US etc have welcomed for the last half century a large number of immigrants , found productive employment for them , and successfully integrated them into their population . These high levels of immigration have always maintained the population of the welcoming countries young and have completely eliminated what otherwise would have been pointed out, as a shrinking population of working-age adults. Countries which have shared a rich tradition as welcoming immigrant nations always have had an orderly and efficient legal system for the mere reason that inadequacies of the immigration policies bring a continued failure in economy; jeopardize diplomacy and as a result threaten national security. From one hand we have Syrian migrants and other middle east countries and from the other hand we have Germany, as the first country in Europe welcoming the migrants. This kind of actions is considered part of solidarity of European Union Members. However, there is still a predominant belief that rich countries are helping the poorest countries, and in such situation solidarity as a notion seem to be in vain. **The solidarity concept among countries, seem always to be 'I want my money back' and the aid given to weak countries is a zero sum transaction.** Although legislation is important, no legislative reform will succeed without a commitment to improve significantly the current system for handling legal immigration and enforce laws against illegal immigration . Like any rationing system , enforcing immigration legal system is extremely difficult particularly in the face of rapid population growth , ease of travel and a more closely integrated global economy . Efforts at immigration reform must acknowledge the limits of any government ability to control such large demographic and economic forces and immigration laws should be much better but given the scale of the task they will always be imperfect.

Keywords: immigration policies, financial solidarity, Syrian migrants

Advancing Kosovo national competitiveness – A resource-based strategy

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Abstract. National Competitiveness is often viewed as an essential holistic approach to economic performance. Scholars have advanced the competitiveness model to calibrate growth strategies of developed economies in Western Europe, Americas and East Asia. However, it has not found any comprehensive application to less developed economies like Kosovo. Located in Western Balkans, it has often received more in attention in the discourse of its contentious political status settlement. Kosovo is a resource rich economy but a more integrated approach to advance its competitiveness. The article uses the National Competitiveness Model to analyse the gap between the existing situation and future development. The methodological framework relies on the resource-based strategy and integrates perspectives from economy, technology, human resources and productivity to explain the incongruence between national resources and economic performance. The study reveals that Kosovo is still in the nascent stage of economic development and needs to enforce a concerted strategy of national competitiveness improvement. The article also offers a national economic roadmap for resource exploitation to enhance the prospect of economic convergence with advanced European economies.

Keywords: Kosovo, National Competitiveness, Resource-based strategy

Performance Measurement System Based on Process Approach

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Abstract. This paper addresses issues met when designing, implementing, using and continuously updating performance measurement system based on process approach. Process approach in managing is necessary since it provides a new perspective to the company's management in terms of identifying problematic, inefficient processes and activities that have negative impact on the overall efficiency and competitive position of the company. Such business management which includes adoption and implementation of the process approach requires consideration of the issues related to performance measurement system based on business process approach as a key control and management instrument. Therefore, the aim of this paper is to shed light on the key moments in the design and implementation of the performance measurement systems in a process-oriented company. In order to look at the above mentioned issues, the attention is given to the important moments and phases in developing a system to measure the performance characteristics of the business processes in a process-oriented company.

Keywords: business processes, measurement system, processes performances

Perception of Customers on Electronic Banking Services Problems, and their improvements

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Abstract. The use of technology in banking services has facilitated many daily banking operations. However, the use of technology in electronic banking services has its problems as well. The aim of this research is to look at the effect of security and ease of use in the problems of electronic banking services. After the comprehensive literature review, this research presents a statistical analysis through a distributed questionnaire to look at the effect of security and ease of use in reducing the problems of electronic banking services. Regression analysis shows that security and ease of use of electronic banking services have a negative effect on problems of electronic banking services, which means that with the increase of security and/or ease of use, their problems are reduced.

Keywords: Electronic Banking, Security, Easy Banking.

Project Management for Enterprise Architecture Evaluation

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Abstract. The Enterprise Architecture (EA) describes overarching designs of individual physical and logical components, so that they assembly results in a complete and working product. The designs are developed within any projects. The designs concern computer systems and network implementation, software development and installation, data migration and business processes reengineering. The paper supports the thesis that EA is a complex of information communication technology (ICT) projects and as such should be evaluated by deployment of cost-benefit investment evaluation methods usually applied for project management. The main goal of the paper is to present opportunities of enterprise architecture evaluation by project evaluations. In the paper, different projects, i.e., multiproject, project portfolio, project programme, roll-out projects, large project, are discussed in the aspect of their value creation in the Enterprise Architecture development process.

The Impact of Remittances on Labor Supply: Case of Kosovo

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Abstract. This paper examines the impact of remittances on labor force participation in Kosovo using propensity score matching. Investigating whether remittances have any impact on labor force participation is of utmost importance for the case of Kosovo since still today the rate of unemployment and dependency on remittances are very high. Using the Household Budget Survey 2011, this paper applies the propensity score matching techniques to identify the matching group. Through nearest neighbor matching method, this study obtains the matching results, showing the difference in labor force participation between the remittance recipient and non-recipient household members. Covariates used in the model contain information about household and household members characteristics including age, gender, marital status, education, area of living, etc. Empirical findings of the study are in line with a growing body of literature and economic that the presence of remittances leads to a reduction in the rate of labor force participation

Keywords: Remittances, Labor force participation, Propensity score matching, Kosovo

Three Cost-plus Methods to Determine the Selling Price

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Abstract. The most difficult decisions a company faces is the pricing of goods and services. Looking at the role and importance of such a decision in decision-making we decided to consider this issue through this paper. Three cost-plus methods will be considered to determine sales prices. These three methods include the Total cost concept, product cost concept, and variable cost concept. The practical working side will analyze cost effects in determining competitive prices in two textile manufacturing companies by means of a comparison method using the three cost-plus methods.

Challenges to Internal Audit in Public Sector Organizations

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Abstract. The report addresses the problems and challenges of internal audit, particularly in public sector organizations. Attention is drawn to the ten-year experience of its implementation, its weaknesses and suggestions for overcoming it, as well as the reporting problems, stages and levels to preserve the independence of the internal audit. Considerations have already been made in this direction, as well as expected ones, incl. and developing a strategy for the development and improvement of internal auditing in the future, along with the so-called three lines of protection and the expected benefits of this.

Keywords: Internal audit, Public sector, Independence, Financial management, Control

Leadership Styles And The Impact Of Performance In The Banking Sector

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Abstract. The paper analyzes the leadership styles and the performance of 5 banks of the second level in Albania. The study used mixed methods, qualitative and quantitative methods. In addition to the surveys conducted with the employees and with the directors of the banks, a series of in depth interviews were conducted with the employees to identify the factors that affect the performance of the organization, the effectiveness and the relationship between leadership styles and bank performance. The study found that banks' directors use different leadership styles. Given many challenges and demands faced by bank leaders, the study found that it is necessary to develop managerial and leadership skills to leaders.

Keywords: leadership, banking sector, performance, Albania

Importance of adequate monetary policy in time dynamic of being a new member of European Union - case of Republic of Serbia

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Abstract. In order to become a new European Union (EU) member, many countries have subordinated their own monetary policy and accepted the main objectives of EU monetary policy. Although it is quite clear that the defined goals and instruments of EU monetary policy can not equally match to the national objectives of the member countries, there is a common view that a unique monetary policy has more advantages than disadvantages. For those countries that are in the negotiation process, it is very important the time period of harmonization of monetary policy and realization of the set goals. That dynamic is more important than the formal time of accession to the EU. This paper explores monetary policy in Serbia, with reference to the main macroeconomic indicators, in order to determine the optimal moment of Serbia's accession to the EU from the economic aspect, i.e. reaching the numerical values of key macroeconomic data that were singled out as the most important indicators in this process.

Keywords: European Union, monetary policy, macroeconomic indicators, Republic of Serbia

Poverty and income inequality in the Republic of Macedonia

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Abstract. Low economic growth and job creation remain among the most serious problems in the R. Macedonia. Past Governments have failed to resolve these issues despite several interventions. Consequently, the country is still challenged by alarmingly high poverty and inequality in the distribution of income. The aim of this study is therefore to examine trends in poverty and income inequality in the R. Macedonia for the period 2010-2015 using official data from the State Statistical Office based on the Survey on Income and Living Conditions.

Findings show that the at-risk-of-poverty rate in the R. Macedonia has decreased 5.8 p.p. in the study period reaching 21.5% in 2015. The study furthermore shows that the most vulnerable groups in this context are multi-member households and the unemployed when observing poverty by economic activity. Observing inequality in the income distribution in R. Macedonia, the study shows a positive trend, but still at an alarmingly high level. The Gini coefficient has decreased by 7.1 p.p. in the study period; registering a coefficient of 33.7% in 2015. Furthermore, according to findings, the top 1% share of income in the country hold 14% of the total income while one percent have a monthly income of over 1.523 euros, while 50% are below 212 euros per month.

Reducing the poverty in the country and the income inequality calls for a serious commitment including increased efforts to attract more foreign investments, increase of the minimum wage and reforms in tax policy, which should be oriented towards direct taxes rather than indirect taxes, and the introduction of a progressive tax system.

Key words: poverty, income inequality, Gini coefficient

Organization of professional training and retraining of unemployed persons on the basis of regional business incubators

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Abstract. Problem concerning occupation and unemployment of persons become an integral component of modern life in Russia thus making significant impact not only on social and economic but political situation in the country as well. Unemployment is closely related to ongoing structural changes in domestic and world economy. As a complex and controversial macroeconomic phenomenon, it remains to be in a focus of people and scientific community's attention. Issues concerning organization of professional training and retraining of unemployed persons on the basis of business incubators are considered in the article. List of programs that can be implemented on the basis of business incubators is provided.

Keywords: unemployed, employment service, business incubator, professional training

“Opportunities For Foreign Direct Investments In Kosovo”

Besmir Krapic

Abstract. Kosovo is one of the newest countries in the world. Located in southeastern Europe, Kosovo has immense untapped potential, making it an increasingly attractive country in the region and the whole Europe. Given its current state of transition, Kosovo’s economy is considered one of the poorest economies in the region requiring an increase in its foreign direct investments. Such growth will facilitate a developing curve to overcome its many socioeconomic limitations. Foreign direct investments are an important tool for economic development and growth. As part of the early stages of state building, Kosovo is facing many challenges to create a stable and attractive environment for foreign investments. On the other hand, Kosovo possesses natural and human resources which create a suitable environment and need for foreign investments. As a result of this dynamic, this study will provide a strategic approach to highlight and analyze the opportunities of foreign direct investments in Kosovo and the severe challenges it is currently facing.

The purpose of this study is to examine the interaction between foreign direct investment (FDI) and the main obstacles that Kosovo is facing in the process of economic development. The examination is based on the comparison of previous reports related to the same issue and the new findings from the primary data collected specifically for this study. The research will also act as a platform for changing Kosovo’s external image, in attempts to rebrand its economic perception regionally and globally.

Challenges and prospects of hydropower options in Albania. Can Albania lead the region.

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Abstract. With world electricity demand increasing, exploitation of the considerable potential for hydropower generation in many developing countries is an attractive prospect. Even Albania looks to have a high potential in this sector. In general, electricity generation in Albania mainly depends on hydropower, as about 90% of electricity is generated by it. For this reason, we aim to identify and explore challenges and prospects of hydropower sector in our country regarding the economic and social aspects. Also, is important to see if Albania can be the leader of the Western Balkans. To get the results we used secondary data, collected from different reports and publications. This study shows us that Albania, despite of non-favorable political and technology developments, has done a big step to create a stable source of energy. This thing impacts economic growth in the long run.

Keywords: Hydropower, Albania, Western Balkans, Prosperity, Development

Leadership Styles: A Review

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Abstract. For each organization, leaders are the one who keep the soul, inspire and lead the organization to go up. Leadership literature reveals that theories have been refined and modified with passage of time and none of the theory is completely irrelevant. Substantial effort has gone in to classify and clarify different dimensions of active leadership thus, generating considerable organizational and social research of leadership styles and behaviors. The purpose of this literature review is to analyze the issues of defining leadership styles. The literature review comprises peer-reviewed journal articles, white papers, conference proceedings and the topic of leadership styles.

Keywords: Leadership, Theories, Styles

The Role of Business Environment for Entrepreneurship in Transition Countries: The Case of Kosovo and Macedonia

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Abstract. This study gives an overview of firm capability and environmental characteristics on the SME's growth at different stages of transition economies. The establishment and growth of new enterprises is central to the transition process (Olson, 1992). The development of the entrepreneurial sector is sensitive to the institutional environment with a sharp distinction between the more market-oriented economies. Successful entrepreneurship depends not only on initial conditions in the transition economies but also on the speed and consistency with which the reform process has been applied (Estrin, 2005).

The aim of the proposed research is to analyze further the features of SMEs growth and Entrepreneurship in Kosovo and Macedonia using the Business Environment and Enterprise Performance Survey (BEEPS) conducted by the World Bank/EBRD in 2013 for (n=202) firms in Kosovo and (n=360) in Macedonia to test a number of hypotheses regarding the nature and the main characteristics of firm growth and the key business environment indicators in two countries and comparison of them. Holcombe (1998) argues that more rapid advancement brings more entrepreneurial opportunities, and more entrepreneurial opportunities produce greater incentives for potential entrepreneurs to become more alert to them. Entrepreneurship generates more entrepreneurship. In contrast, a stagnant economy blunts the incentives for entrepreneurial activity, and can remain stagnant because of the lack of entrepreneurial opportunities. The countries in transition economies developed SMEs mainly because of necessity for employment opportunity, rather than catching an opportunity.

Keywords: Entrepreneurship, Transition Countries, Firm and Institutional Environment, Economic Growth

Risks as credit factors

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Abstract. Credit is one of the main functions in the banking sectors, because it includes 80% of the bank assets. The main purpose of the banks it's to achieve profitability and to discover it, the controlling and managing of the risks that appear during work. The banks encounter with various types of risks like internal risks that have to do more with the bank and can be controlled by the bank, also there are the external risks which are uncontrolled from the bank in which they depend. We understand the risk as uncertainty of the cash flow.

This is one of the main parts that will be analyzed on our paper, because it has to do with the concrete banking risk, the risk assessment system, managing with the risk. We will analyze the credit risk as one of the biggest problem that the bank could face.

The credit risk is analyzed based on the risk assessment system, that has to do with that type of risk that depends on the credit repayment, also the managing of the risk from the bank during the credit application, the bank among its criteria accepts or rejects the credit application.

We will take four cases in which the credit was accepted or rejected with a purpose to discover the factors which affect on the credit of the bank. Also in this paper will be analyzed the bad credits and their variation over the years.

Keywords: banking risk, credit, factors, cash flow.

The Effect of the Organizational Culture, Organizational Structure and Usage of Social Media on Corporate Governance

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Abstract. This study tries to understand the relationship among corporate performance, organizational structure, organizational culture and usage of social media in the third (NGO) sector. The dependent variable of the study is corporate performance which is conceptualized as satisfying the expectations of different stakeholders varying from volunteers to board members. The first independent variable, organizational structure, stand stands for having either mechanistic or organic design within the organization. Organizational culture is comprehended as motivational climate within the organization, the atmosphere that relies on trust and confidence and willingness of members to take responsibility and the leadership is analyzed in terms of being democratic, respecting others, being participative in decision making and taking risks when necessary. Usage of social media indicates the how active the social media accounts of NGOs are.

The results of regression analysis indicate that, organizational structure and organizational culture have positive effects on corporate performance in non-governmental organizations while usage of social media does not have a significant effect on the corporate performance of the non-governmental organizations.

Keywords: Corporate Performance, Organizational Structure, Organizational Culture, Social Media

Fiscal Policy as a tool of Economic Stabilization - the case of Albania

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Abstract. Processes such as globalization and integration, individuals' increasing reliance upon technology, limited vital resources in order to ensure normal life increase the complexity of our world and make the State's economic involvement compulsory. The theory of the use of fiscal policy for promoting economic stability is by now about forty years old. It may be time to ask to what extent fiscal policy has been used in practice as a tool for economic stabilization in Albania; how useful fiscal policy has proven to be, and finally what have been the main obstacles to fiscal policy as a means of economic stabilization. Currently Albania is facing enormous financial problems due to extremely low rates of employment, high levels of undeclared work, low financial discipline and a lack of equity and efficiency in tax matters. In the case of Albania, fiscal policy helps to accelerate the rate of economic growth by raising the rate of investment in public as well as private sectors and the aim of this paper is to analyze various tools of fiscal policy, which should be used to do not affect the consumption, production and distribution of wealth.

Keywords: Fiscal policy, fiscal system, tax policy, economic growth, public sector.

Credit Rating of Independent Catalonia

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Abstract. This paper aims at estimating the sovereign credit rating, which an international credit rating agency might grant to an independent Catalonia. For the international markets, such a qualification is very vital to determine the role of an independent Catalonia as a potential debtor. These qualifications are essential to establish the capacity of financial obligations of the independence of Catalonia and the conditions under which Catalonia will have access to financial sources in the international financial markets. The sovereign risk is the risk assumed by the international creditors in order to lend funds to an independent state considering the legal actions taken against the debtor. An independent Catalonia will entail different mechanisms to finance its activities and influence its growth: taxes (fiscal policy), money creation and regulation of interest rates (monetary policy), and public debt issuance (economic and financial policy). This paper evaluates political, economic, and financial state of independent Catalonia and its potential implications in relation to European Union (EU) to assess Catalonia's sovereign risk; hence it gives independent Catalonia BB credit rating.

Keywords: Catalonia Independence, Spain, Credit Rating, European Union, Sovereign Risk

Volunteers` Performance in Non-Governmental Organizations

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Abstract. Volunteers are the most important human resources of non-governmental organizations. This study tries to understand the relationship among volunteer`s performance, organizational culture, and transparency within the non-governmental organizations. The dependent variable of the study, volunteers` performance is conceptualized as organizations ability towards achieving the previously set objectives of the volunteers. Transparency stands for visibility or accessibility of information within the institution. Organizational culture is comprehended as motivational climate within the organization, the atmosphere that relies on trust and confidence and willingness of members to take responsibility and the leadership is analyzed in terms of being democratic, respecting others, being participative in decision making and taking risks when necessary. The results of regression analysis indicate that, both transparency and organizational culture have positive effects on volunteers` performance in non-governmental organizations.

Keywords: Performance, Volunteerism, Organizational Culture, Transparency

Migration Characteristics In Albania And Its Impact On Social Economic Life.

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Abstract. After the collapse of communism, Albanians gained the right to move freely within and outside the country after Parliament passed the basic human rights law in 1991. Thus, the first mass immigration in Albania began (the so-called "embassy migration") as a process where thousands of Albanians began to seek refuge in Western embassies in Tirana in the hope of leaving behind the poverty, and the beginning of a better life in the more developed neighboring countries. Below we briefly describe trends in years of emigration since 1990, chronologically: this period was characterized by an economic growth. Figures show that around 400,000 migrants have had Greece as their main destination during the mid-1990s.

Keywords: according to the international migration, internal population movements, Immigrants split-off, remittances, employment, employment informal, informality.

The exchange rate EUR-USD pass-through to US import Prices

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Abstract. In the second period of 2014 and the beginning of 2015, USD strengthened against EUR by 25%. In this paper I measure the impact that this change in USD's value has on US import prices. Prior to year 2000, there have been many currencies in Europe, and the literature lacks publications focusing especially on EUR/USD impact in US import prices.

This paper answers questions regarding the magnitude of exchange rate pass-through to import prices. It employs OLS and it finds a low exchange rates pass-through to US import prices. This paper is of high interest for government officials when deciding on the stance of monetary policies. The findings in this paper are also important in the decision-making process of trading organizations as well as to US consumers, as it affects them directly.

Keywords: Exchange Rate, Imports, Euro, Dolar, Monetary Policy

Challenges of ICT Approval in Small And Medium Enterprises in the Republic of Albania

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Abstract. The process of globalization and digitalization have fundamentally changed the way of doing business and competition in the market. Information and Communication Technology is the cornerstone of this drastic change, bringing revolutionary changes to social and economic life.

The purpose of this paper is to analyze the benefits, challenges and strategies for minimizing the barriers of the adoption of information and communication technology, and to provide an overview of ICT in Albania by studying SME beliefs and attitudes regarding this issue. In addition to information on the current situation, the needs and difficulties of SMEs in identifying and using ICT will be identified and analyzed.

In this paper we will use quantitative research, online questionnaire for gathering data, and through comparative analysis we will draw a conclusion for ICT impact on the growth and competitiveness of SMEs.

Keywords: Information and Communication Technologies (ICT), Business process, small and medium enterprises (SMEs)

Problems and Challenges in Application Cost-Benefit Analysis– Case Study of Resen Municipality–

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Abstract. In the framework of public sector, government has an obligation to take care of the rational use of the funds intended for investment. In order to determine the degree of rationality of individual programs or projects, or to make a choice between potential programs and projects, government should apply a methodology for their mutual comparison. Cost-benefit analysis is such a methodological approach for social optimization of policies, programs and projects. The project for improvement of energy efficiency and environmental protection in the case of secondary school in Resen municipality, Republic of Macedonia, is a relevant example for applying this kind of tools for economic analysis.

Key words: cost-benefit analysis, project, Republic of Macedonia, Resen municipality.

Tourism Capacity Building Market Growth in Albania. Efforts for Quality

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Abstract. In this paper the goal of the research on the local capacity development service environment and the tourism value chains is to define the current state of the supply and demand of and for semi-professional and professional services in the tourism sector and related capacity development service environment.

This study refers to the market of service providers in tourism sector, its actual development in Albania with refer to the size, actors and factors that affect its development, its importance in the development of tourism sector in Albania, etc. In this study are included the most important market actors which operate in the tourism sector in Albania and also sustain this activity. They are divided in two major groups: clients of the capacity building (CB) services offered and service providers (SP) of these services.

Methodology is best described as a comprehensive market survey included Interviews with both parties, clients and service provider according to the supposed market size. There have been 152 interviews in total, from which 77 on the client party and 75 on the provider party. These number include also interviews from local government, which in turn, is compound by local government leaders and managers as clients or purchasers of SP as well as semi-professionals who operate through tourism offices. The number of interviews in local and central government is 24 in total.

Geographical coverage of the study includes the most resourced areas for developing different types of tourism, as well as most developed areas regarding the tourism sector: Vlora, Durres, Tirana, Saranda, Berat, Gjirokaster, Pogradec and Korca.

Keywords: Capacity building, tourism, quality

High-Growth Aspiration Entrepreneurship: A Multi-Country Analysis Using GEM Data

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Abstract: High-growth aspiration entrepreneurship has attracted significant attention in the literature (Hermans et al., 2015; Lim et al., 2015). This paper examines the impact of individual characteristics, institutional factors and country-level control variables on high-growth aspiration entrepreneurship. The focus is on the employment growth aspirations of newly established ventures in both developed and developing economies. The individual characteristics data are obtained from the Global Entrepreneurship Monitor (GEM), covering 62 countries (divided into innovation-driven and efficiency-driven economies) over a nine-year period (2005-2013). Multilevel estimation technique, which accounts for the hierarchical nature of the data, is used to examine employment growth aspirations. As an alternative method, a dichotomous choice model (probit) is also applied to estimate factors influencing firms' high job growth aspirations. The results indicate that most of the individual characteristics have a positive and significant effect on employment growth aspiration. Specifically, entrepreneur's education, household income, social networks, perceived capabilities and opportunities are significant determinants of growth aspirations. The paper also finds that employment growth aspiration is gender sensitive, with male entrepreneurs being more likely to have high growth aspiration. Small-size governments, ease of doing business and sound 'rule of law' are found to influence growth aspirations of young firms positively, while higher levels of corruption have a negative impact on growth aspirations. Entrepreneurial growth aspirations are also found to benefit from specifically designed government programmes. Finally, the study suggests that the effect of both individual characteristics and the institutional settings varies according to the stage of a country's economic development and that the individual characteristics moderate the impact of institutional quality.

Keywords: High-growth entrepreneurship, young firms, institutions; multilevel modeling, GEM

Internal Rate of Return and Corresponding Effective Interest Rate for Loans

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Abstract. In this paper some techniques for calculating the internal rate of return (IRR) for several types of loans offered by banks and other micro financial institutions, and their respective effective interest rates are shown. Some examples of calculating the internal rate of return for loans without a fee, and those with fees are given and the effective interest rate for those loans is calculated. The mathematical model for calculation of the internal rate of return and the effective interest rate is shown. For accurate calculations the financial consultant CASIO FC -100V is used.

Keywords: nominal interest rate, periodical interest rate, internal rate of return (IRR), effective interest rate, fee.

The effectiveness of ALMPs in reducing unemployment in the EU countries with particular reference to the role and size of the informal sector

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Abstract. This paper investigates the efficiency of Active Labour Market Policies (ALMP) in European labour markets by applying two different methodological approaches. The first approach is a matching function using country-level annual data from 2010 to 2015 and a sample of 14 EU countries. Matching efficiency is analysed via a panel Fixed and Random Effects estimation. The second empirical approach uses annual data in a larger sample of 27 EU countries for the period 2005 to 2015 time period and applies Generalised Methods of Moments (GMM). The results from the first empirical approach suggest that the ALMPs have a statistically significant effect in increasing matching efficiency; however, the economic impact is quite small. Additionally, the estimation also finds evidence to suggest that the labour markets in the EU countries might exhibit increasing returns to scale. In such case, the positive externalities of the search intensity of unemployed workers and vacancies might prevail creating multiple equilibria in the labour market. Estimations also suggest that this result is more likely driven by labour markets in the transition economies and not by those of Western economies. The results from the second empirical approach do not suggest a significant effect of ALMPs. Overall, the study provides limited evidence supporting the significant role of ALMPs in reducing unemployment and offers insightful findings for the policy-making community.

Keywords: ALMPs, unemployment, matching function, multiple equilibria, GMM

Evaluation of business strategy implementation at Production Companies in Kosovo and Albania

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Abstract. The main purpose of this research is to investigate and evaluate the implementation of business strategy in private sector in Kosovo and Albania. The survey was focused mainly at the manufacturing sector such as Metal Industry, Wooden, Agricultural sector, food production, ICT companies etc. The survey included respondents through online forms. The research is focused in a quantitative research based by collecting primary data where questioner was based on previous framework addressing business strategy questions as an independent variable and performance variable as a dependable variable. The survey is focused on measuring the level of strategy implementation, employee participation in decision making process as well as updates to the strategy and what importance companies see in practices organization strategy. The results show that the majority of the managers participating in the survey are highly open towards cooperating and working teams to develop, share ideas and open to opinions to reach shared goals. Employee participation in the building business strategy received a positive feedback. The research reveals that there is a relationship between business strategy and performance.

Keywords: evaluate, business, strategy, performance, process, share, participation etc.

Foreign Direct Investments in Kosovo

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Abstract. The main purpose of this study is to understand the linear relation among foreign direct investment, growth in import, growth in export and Gross Domestic Product Growth of countries. This paper discusses foreign investment policies for the development of host countries, and its purpose is to highlight the interactions and accommodations that may exist between multinationals and host governments. Although foreign investments are constantly assessed as indispensable tools for economic development, in the last decade, mainly after Kosovo's declaration of independence in 2008, there has been a huge fluctuation in the value of foreign direct investment.

Keywords: Foreign Direct Investment, Growth, Import, Export

Challenges for Trade Liberalization and WTO Rules: The Case of Macedonia

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Abstract. The collapse of communist systems in the Former Soviet Union and the former Yugoslavia, led the way for the states of these systems to the democratic systems of governance and market liberalization. Through this research, we aim to highlight the challenges with which it was faced the Macedonian state and government during the process of market liberalization, with particular emphasis on the costs associated with and during the World Trade Organization (WTO) membership process. Following the analysis of the official reports of the WTO and the Macedonian Statistical Office, as well as the interviews with Macedonian officials, we conclude that the WTO rules and principles have had an impact on: reduction of revenues from customs, domestic businesses and legislative changes in terms of foreign trade.

Keywords: Liberalization, Trade, WTO, Costs

Performance Management and Evaluation in the Service Sector in Kosovo: Where are we?

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Abstract: This study empirically investigates the state of implementation and use of performance management and evaluation tools and techniques in the service sector in Kosovo. The focus of the paper is on the service sector which still faces greater challenges in terms of managing and evaluating performance. Performance management is considered as one of the key issues an organization has to deal with, regardless of the market it operates or the client category it offers its products or services. This study offers a comprehensive introduction and an in-depth literature review to the theory of “Performance Management”. It also elaborates the tools and techniques commonly used (special focus is devoted to “Key Performance Indicators (KPIs) and “BSC – Balanced Scorecard”) in managing performance especially in the service sector, helping organizations achieve their targets by attaining good performance standards. Moreover, the paper discusses theories that enable firms to achieve business excellence by improving employee turnover rates, Customer Lifetime Value, customer and employee satisfaction, customer base, customer complaints, innovation rate, etc. The data used for the empirical part of the paper were collected using a questionnaire that was electronically distributed to a random sample of firms in the service sector. The investigation includes 30 service companies in Kosovo (including banks, microfinance, tourism, hotels, etc.) and the questionnaires address most of the aspects of firms’ performance management systems. The empirical part of the paper stresses the importance of well-defined and transparent performance indicators and clear performance management and evaluation policies, which was also investigated through a questionnaire that included 63 respondents of the service sector, focusing on management.

Keywords: Performance Management Systems, Key Performance Indicators, Business Excellence, BSC – Balanced Scorecard

The Economic Explanation of Customer Behavior

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Abstract. The economic explanation of customer behavior in the purchasing process starts from the assumption that buying represents a process of choosing products between different alternatives, even under the influence of rational motives. Economic theory, which has given the consumer economic explanation, assumes that homogeneous buyers are present on the market and they behave in a foreseeable manner. The consumer person is seen as a rational buyer who has general information about the market and tries to maximize the expected value of money, time and spent effort. The customer is determined to purchase those products and services that will bring greater satisfaction by taking the price as one of the most important factors in the decision making process for purchasing. Thus, the customer, based on the information they possess, distinguishes between homogeneous products and decides on the lowest-price. In addition to the price in consumer behavior, other factors such as income and factors as quality, service, promotion etc. However, the explanation of economic theory is mostly oriented towards the product, rather than to the consumer, paying particular attention to price and income.

Keywords: consumer behavior, products, factors, revenue, quality, price.

**IC - POLITICAL SCIENCE &
INTERNATIONAL RELATIONS**

THE GOVERNMENT OF FAN NOLI AND GREAT BRITAIN

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Abstract. Since after the First World War in internal political scene of Albania prevailed instability and political struggle between parties; such situation reached its peak in June 1924 when a rebellion was followed by seizure of power by opposition. This event attracted attention of all powers, especially of Great Britain, who was concerned about her oil concessions in Albania. Therefore this work aims to elaborate the attitude of Great Britain towards to Government of Noli. At the same time this work pretends to give a reflection to international and national circumstances which lead to failure of Government Noli to be recognized internationally. A particular emphasize will be given to the influences of British consuls on High Majesty Government in relation to the issue of recognition of Noli's Government. This work was mainly based on British archival sources.

Keywords: Fan Noli, H. Aires, R. Parr, Zog, Foreign Office, etc.

Process of State-building in Kosovo

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Abstract. The topic of state-building is a subject that has been continuously studied. To be fully understood, a case study should be included. Therefore, we have selected the case of Kosovo and the challenges of the process of state-building that Kosovo has had in the past. The purpose of this paper is to highlight the challenges that Kosovo's policy-making has faced along the road to state-building. The materials included in this scientific paper are from official documents from local and international institutions, as well as international and local authors from the field of state-building. The methodology used in this paper includes the descriptive method of events, analyzing them step by step to the stage of state-building, a process that continues to this day. The expected results from this paper are intended to reveal the challenging points that Kosovo politics has had, how it has faced them and how it has overcome these challenges. The role of the international factor in the process of state-building is also to be shown. In the case of Kosovo, we had big challenges both abroad and internally. Internally, the unification of Kosovo policy and harmonization with the international factor are included. Internationally, it was the achievement of internationalization of Kosovo's case and achievement of recognition as a state.

Keywords: Kosovo, state-building, challenges, internal factor, international factor

Aspects of Islamic Revival and Radicalization in the region of Middle East

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Abstract: The main objective of this topic is to provide a detailed panorama of the causes of Islamic Revival and radicalization of Islam, particularly in the region of Middle East. In this perspective, it's somehow puzzling to at the first sight that Arab World used to be a leader in the science, military and science, is now paradoxically a region characterized by unrest and turmoil. Contrary to the past decades where peace was a distinctive peculiarity of the region and economy flourished, now is overwhelmed by the phenomena of the Radicalization of Islam for political purposes and to come to power. The Arab world blames the western powers for their stagnation, poverty, and lack of improvement in a wide range of fields. This may be considered only some of the causes of Islamic Revival and radicalization. Lack of proper education illiteracy is an underlying factor that leads to extremism. As a result there have been founded numerous fundamentalist groups such as Al-Shaabab, Boko Haram, Hamas, Hezbollah and Islamic State which pose a potential threat to peace and democracy and have caused many victims as a result of terrorist attacks.

Keywords: Islamic Radicalization, radicalism, Middle East, fundamentalist organizations

Security and Western Balkans countries: challenges and opportunities

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Abstract. The aim of the paper is to analyze security challenges with which Balkan countries are faced. The study focuses on the analytical viewpoint of regional security as a subsystem of international security. The paper consists of three main parts. The first part deals with the theoretical and conceptual change of security in the Western Balkans by focusing on the key security challenges with which these countries are faced. By identifying the main contemporary threats, the intention of the study is focused on the two most important: organized crime and its transnational character and in terrorism. In the third part the paper examines alternative approaches that these countries can use in order to overcome these security challenges by placing the focus in regional cooperation as the *antidote* to the insecurity. The study concludes with the assumption that the main challenge of each Western Balkan country is their lack of internal state consolidation.

Keywords: International, regional and national security, security challenges, transnational crime, terrorism, threats.

The impact of party system in the creation of government in Kosovo

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Abstract. This paper will analyze the party system in Kosovo and its impact in the formation of the government. In order to have a comprehensive view of the political system in Kosovo, it is required to have an in depth study of political system, party system and electoral system applied in Kosovo since 1999, when the UNMIK Administration started to function, with particular emphasis on the parliamentary elections of June 2014 and 2017. Due to the socio-political circumstances in Kosovo and the post war circumstances, the transition and the process of building democratic institution was slow and conditioned, among other factors, by international administration. After the independence of Kosovo (2008), UNMIK legacy continued to have its impact also. The party system continues to be instable, both in the ideological sense and as a fundamental tool the formation of post-election governments. The proportional electoral system does not produce a majority. On the other hand, reserved seats (20) for minorities in Kosovo makes impossible to have a majority. Political parties are urged to do post electoral coalitions in order to establish a government. The paper concludes that Kosovo has an unstable party system. This comes for the following reasons: due to the electoral system; the lack of trust among political parties and the lack of ideological profiling of political parties. This reflects negatively on the country's governance.

Keywords: Political party, electoral system, ideological profile, government, stability.

Social Policies in Kosovo: institutional reforms in the context of globalization and international administration

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Abstract. Social policy broadly focuses on pensions system, health insurance, education, family policies, disability and injury insurance, unemployment benefits, war victims' benefits and other aid to the poor. The main features of Western Balkans' welfare system during communism can be characterized by three pillars: full employment and quasi-obligatory employment; broad and universalistic social insurance; and a highly developed typically company-based, system of services and fringe benefits. This system was eliminated after the fall of communism, as it became impossible for the state to provide the necessary funds to cover new social costs associated with transformation. The welfare system reform in the form of introduction of choice and marketization was delayed and implemented unevenly due to protracted conflicts, internal and external determinants. The paper initially will comparatively examine the similarities and differences in social policy in Western Balkans taking into account different initial conditions, legacy, political systems and the influence of international actors. Secondly, it details the case of social policy in Kosovo explaining resulting institutional set-up and policies adopted in the context of international administration and globalisation.

Keywords: Kosovo Social Policy, Marketization, institutional reforms, globalization

Dialogue in function of the normalization of relations between Kosovo and Serbia or for factorization of Serbia in Kosovo?!

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Abstract. Throughout the doctrine of humanitarian intervention the international actors through NATO intervention by air and with the KLA ground resistance forced the apparatus of the repressive state of Serbia to withdraw from Kosovo. The international factors made the political plan for the creation of the state of Kosovo which declared the independence on 17 February 2008 and so far is recognized by 114 countries. In 2011 started the process of dialogue with the aim to normalize the relations between Kosovo and Serbia. After six years of dialogue, the process is at the most important crossroads. Instead of normalizing Serbia's relations with Kosovo as intended, Serbia was successful toward European integrations and its impact on Kosovo started to become increasingly unavoidable because they created "ListaSrpska". As much as the Serbian element will be factorized in Kosovo the closer Serbia will be to EU whereas NATO to Serbia.

Keywords: Kosovo, Serbia, Dialogue, Factorization

Gauging the European Union Message Against the Death Penalty: Lessons from an Experimental Public Opinion Survey

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Abstract. While many studies indicate that citizens are not responsive to EU policy messages, we argue that citizens are receptive to the EU's support of the abolition of the death penalty. We expect that citizens adjust their attitudes about death penalty, when given an EU frame of abolition. In an original experimental survey conducted in Albania, we find that respondents who received an EU framing of the death penalty exhibited lower levels of personal support for the death penalty. However, this result did hold in regards to levels of support for the reinstatement of the death penalty in Albania, which remained similar among respondents who received and did not receive the EU frame treatment.

Keywords: death penalty, public opinion, EU membership conditions, EU enlargement, experimental survey

Catalonia's referendum for independence and the "Kosovo precedent"

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Abstract. It has been more than ten years that the disputed notion "Kosovo precedent" has been circulating in political, diplomatic and some "academic" centers. Catalonia's referendum on independence, on October 1st 2017, gave rise to this concept's returning, much more actively, than before, especially in Serbia and Russia, trying to explain the last developments in the Spanish region, as a consequence of "Kosovo precedent". This paper's main hypothesis is that Kosovo's independence is not a case of secessionism, based on the right of self-determination and as such, there is no "Kosovo precedent" for secessionist movements neither in the region and Europe, nor in the world.

Support for the Reinstatement of the Death Penalty as a Protest Attitude Against the Judiciary: The Role of Social Context

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Abstract Whereas the dominant literature related to people's attitudes toward the death penalty connect the variability of those attitudes with either fear of crime or fear/distrust toward the judicial system, we test our argument that high support for the death penalty and its reinstatement might reflect protest attitude against an untrustworthy judiciary, and more so when people state their attitudes toward the reinstatement of the death penalty than when they state their principled attitudes toward the death penalty. We frame this as a protest attitude. We replicate two sets of ordered probit models on data from a probability sample of 1414 respondents in Albania collected in 2015 via a cell phone random digit dialing technique (RDD). We found respondents' support for the reinstatement of the death penalty reflects people's lack of trust in the judiciary, but not necessarily them prioritizing fight against crime.

Keywords: death penalty reinstatement; distrust toward the judiciary; prioritizing fight against crime; protest attitude; normative statement; policy preference

Different tools and methods used by international diplomacy to present and resolve conflicts

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ABSTRACT. In international relations, there are some "tools" if we can define this, which are rather some agreements or treaties that the state or states sign in the framework of cooperation between them in different fields, while maintaining a certain attitude. International relations are so complicated that alternatives and methods of getting out of a given problem are often used for the solution, or even building a strategy for punishing a country that in some way or another conflicts with the right international. These tools have been used for a long time and in many cases have had a positive impact on resolving many disputed issues between people and states, or between a state and the international community represented by powerful international organizations such as the UN, NATO, the EU or any other. Relief or relaxation of relations between the two countries, the organization of closed conferences, the holding of secret talks, the naval blockade are some of the tools that international diplomacy has used to achieve positive results in solving many conflicting situations around the world with different motives including political, economic, territorial or even human rights.

When talking about these tools then it should be mentioned that the Balkan region is one of the rarest region in the world where foreign diplomats from various international organizations have found the space to use these tools to solve the many problems that had gripped the region especially the former Yugoslavia

Keywords: Balkans, the international community, diplomacy, the former Yugoslavia

Enlargement Policy in the Context of Growing Populism in the European Union

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Abstract. In the 2016 and 2017 elections, 55.8 million Europeans voted for a populist party, that is one in five Europeans, according to a recent study by the European Policy Information Center. This means that populism “has now established itself as the third ideological force in European politics” (Ibid). Populist movements are challenging the liberal-democratic model and, more importantly, long standing norms in the EU. Populist far-right parties are exerting influence in the public discourse and national decision-making processes, which can lead to serious consequences for the European integration process. This wave of populism has been closely associated with elements of nationalism and mercantilism that we haven’t seen in Europe embraced so openly since before the WWII. European integration has been the primary target of attacks from the populist leaders, especially from the far-right. Considering the quintessential significance of the European perspective for the six countries of the Western Balkans this paper considers how the rise of populism and the growing support for the far-right parties in the EU can affect the region?

Keywords: European integration, Enlargement policy, populism, corruption and organized crime, regional cooperation.

Syrian Refugee Crisis and European Migration Policies: Rise in Xenophobic Rhetoric in Europe

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Abstract: Syrian immigration crisis has been ignored by advanced European countries and the heaviest burden is left to developing border countries. However this ignorance has resulted in more mass influx of immigrants illegally to the borders of European Union with a target of advanced Northern countries. To evaluate the European ignorance to this humanitarian crisis, first Turkey is evaluated as a transition point for all Asian and Middle Eastern immigrants dreaming to live in Europe. By a shocking extend of sea arrivals, Europe have noticed the humanitarian crisis and made a deal with main transition point for immigrants, Turkey. However this deal is a symbol of violation human rights and vaporisation of all European values. So refugee crisis and policy changes in Europe are covered briefly. In conclusion, this position of European countries is argued as related with accelerating social support to xenophobic and Islamophobic rhetoric in politics as to elective results in advanced EU countries.

Keywords: refugee crisis, anti-immigrant policies, human rights, xenophobia in Europe

The core values in the European Union

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Abstract: The European integration was primarily about economic cooperation, but the European Union's role in protecting the core values in its member states. EU values were first mentioned in the 1992 Maastricht Treaty on European Union, and since the Amsterdam Treaty the community law has a sufficiently precise description of these values, which should be respected not only by countries aspiring to the EU but also by the Member States themselves. The Lisbon Treaty defines EU values as "respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail." Nowadays the EU has to face the phenomenon when some government apparently violate these values. In recent years, defiance of core EU principles by the Polish and Hungarian governments is turning into a political debate. The European Commission has taken legal action against both governments, and the European Parliament supports this course. The lecture would like to address what the European institutions can do in these cases? Is the current treaty of the EU effective to address these phenomena?

Keywords: European integration, European Union, freedom, democracy

IC - LAW

DECENTRALIZATION PROCESS IN THE REPUBLIC OF KOSOVO

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Abstract. The subject of the study in this paper is the process of decentralization in the Republic of Kosovo and the obstacles faced by this process. The Republic of Kosovo is one of the world's newest states, so it is natural to face a numerous complex problems in local government in general, while special attention should be paid to the process of decentralization. The decentralization process should be well analyzed by comparing with some notions such as: Local Governance and its Basic Characteristics, Democracy, Centralization, Non-concentration, etc. This process implies the transfer of competencies from central government to a certain degree local government bodies. Taking into consideration the scope of activities in local government, the Republic of Kosovo as a New State should, through a proper strategy, make decentralization (transfer of competencies) from central government to local government bodies, especially in the areas that belongs to local governance.

The process of decentralization in the Republic of Kosovo faces a lot of difficulties, such as: the lack of a strategy for the implementation of this process, the lack of financial means, the lack of administrative staff, the lack of modern information technology tools, and finally the lack of a proper political situation, etc. .

Keywords: Local government Democracy, Decentralization, Centralization, Non-concentration.

The right of use of Albanian language as official language in Macedonia: The new draft law, its content, advancement and comparison

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Abstract. The use of Albanian language as official language in Macedonia has been a challenge especially after the Ohrid Framework Agreement (OFA) in 2001. Before 2001, Albanian language was defined as an official language and was used only in private matters as well in primary and secondary education. With the OFA and Constitutional changes in 2002, the language that is spoken by 20% of the population in the country was defined as an official language, but it's application in practice was left to be regulated by a specific law. The law was adopted in 2008, 6 years after the constitutional changes.

Now there is a new law proposed, which is supposed to regulate in more efficient way the use of Albanian language as official language in Macedonia. With this paper the authors are trying to answer some legal questions that has been debated in the country: firstly, is Albanian language official language and whether it is of a same level of application as Macedonian language; secondly, what are the novelties of the new draft law, and how the use of Albanian language is improved and advanced; thirdly, what are the practical challenges for the implementation of the new draft law. The authors of the paper will refer to international standards on use of languages as well as to relevant national legislation, as a tool to compare the new draft law in Macedonia.

Keywords: Human rights, use of language, Albanian language.

The Functioning of Local Governance: The State Building Challenge

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Abstract: Recently, the tendency of the political, economic and social developments across the world has been running in two opposite directions, towards the globalization on the one hand and towards localization on the other hand. This overall movement of the human society has greatly influenced into the changes in governance systems, in particular to the local governance.

The foundation of the political concepts for the protection and affirmation of human rights and in particular the creation of a competitive democratic market systems in the service of the prosperity of citizens in a country, has created the main preconditions for the recent political and administrative systems to bring the public power closer to its citizens. The European system is making unification of the local government by relying on the European Charter for Local Governance.

The main focus of this paper will be the analyze of the gaps and the factors, which influence in the process of implementation of the charter among the central and local instructions of the transition countries.

Keywords: decentralization, government, ECLG, transition countries

CYBERBULLYING AND PRIVACY CANCELLATION THROUGH COMPUTER SYSTEMS

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Abstract. Information technology has been developing in the last two decades and has been rapidly absorbed by younger generations, given the curiosity that social networks provide, but there are also no negative aspects that may be due to lack of information. One of the forms of cybercrime is cyber-bullying. Therefore, the rapid development of technology and the specific features of computer networks and the Internet have made this form of criminality a problem for society because e-mails in some cases may have offensive content and derogatory comments. They address specific individuals with disabilities, for example, regarding their gender, race, religion, nationality, sexual orientation and insults, and other harassment by slandering and spreading falsehood through social networks.

Also, in everyday life happens that through a computer network (social networks, e-mails) a person blackmails or harasses another person. For example: by asking for money when a person throw technological means harasses another, by asking for intimate photos, video, or throw persistent messaging from unknown demand end to meet in specific locations. Fortunately there is a protection of personal.

Protection of personal data in Kosovo is regulated by a special law, while there are legal provisions that sanction criminal offenses committed through computer systems and sanction the violation of privacy in the digital age. In the more developed countries of the technology industry, special laws have been adopted for sanctioning cyber-bullying.

Keywords: Cyber-bullying, computer networks, privacy, legal acts, penalties, etc.

THE ACTUAL PARADIGM OF FREEDOM OF MOVEMENT IN THE CONTEXT OF EU MIGRANTS RIGHTS

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Abstract. The purpose of this paper is examination of the current dimensions of the freedom of movement of persons in the EU, which is a milestone in the construction of the European space. The refugee wave in the last decade, following the onset of the "Arab spring", has raised new questions about the rights and status of persons, who had left their countries because of military conflicts or civil wars and sought asylum in EU countries. Bulgaria has been unprepared to respond adequately to the protection of the EU's external border from illegal immigration and has rethought key issues such as securing national sovereignty, legal respect for refugee rights and financial provision of resource support for them by state institutions.

Keywords: freedom of movement, protection of EU' external border, migrants rights.

An overview of the Province of Ontario Health Insurance Plan: What are the lessons that Kosovo can learn from Canada?

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Abstract. As a newly established country, Kosovo has passed different laws that govern main areas and one of the recent law is the one on Health Insurance approved on 2014, aiming to establish universal access to health care services for the citizens and residents of the Republic of Kosovo by making it affordable, and establishing and regulating the public health insurance system.

The complexity of the post war has made the road to pass the law on the Health Insurance in Kosovo very long, and even with the law approved, the Government of Kosovo, hasn't started yet on the application of the law, as it faces multiple challenges. First there isn't yet a functional health insurance system, there is lack of funds, and furthermore there is a lack of expertise on how to make health care system viable, and how to integrate the private sector in supplementary health care services.

As it is the first time since the declaration of Independence in 2008, that Kosovo is engaging to establish a health insurance system, therefore, in my view, it would be a great help, to offer an overview on Canada's health care system, with a slight focus on Ontario Health Insurance Plan. How this program is organized and governed, what are the main problems that are faced for holders of OHIP, how does the supplementary care functions?

Having in mind that Kosovo is on its first footsteps to establish a universal health care system, taking a glimpse on how Canada and its province of Ontario have regulated this system, will be of great worth to different stakeholders.

University for Business and Technology the host of the conference, and a newly operator in health higher education in Kosovo, has strong interests on getting to know more about Canadian perspective, therefore, my aim is to deliver a presentation (poster) on this need, by examining the use of the health care service in Kosovo and a comparison to Canadian Health Care system with focus the province of Ontario.

Keywords: Health Insurance Plan, Health System, Canada, Ontario, Kosovo, Health Care System, OHIP

The impact of public interest in the information privacy: Analyze of the ECHR Decisions

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Abstract The main object of this paper is the tender balance that exists and arises even more between the use of personal information that people provide in the course of most public security actions and privacy. This study analyze the most famous and strong related decision of the European Court of Human Rights, with the aim to give our opinion how has to be understand the barrier between the power of individuals over information and the power of public institutions to guaranties security.

The protection of personal data is of fundamental importance to a person's enjoyment of his or her right to respect for private and family life, and how law allocates power over information in different countries, will give us the possibility to define the most important criteria's which define the existence of abuse or not over personal data and information.

Keywords: personal information, public security, impact and barriers, ECHR

Problems and perspectives of medical aid in emergency in Republic of Bulgaria

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Abstract. The Health act defines emergency as an acute or sudden change of human health, which requires urgent medical aid. Medical aid in emergency shall be aimed at preventing death, severe or irreversible morphological and functional damage to vital organs and systems, and complications in women at childbirth, which threaten the health and life of the mother or the foetus. The government organizes and finances a system of emergency medical aid. The reforms which were made in the last 25 years completely changed the structure, organization and the way of financing the healthcare system. Because of this, a lot of problems occurred including a lack of connection between the medical aid in emergency and other structures of healthcare system.

Keywords: medical aid in emergency, system of emergency medical aid, Health act.

NEW STAGE RENDERING SUPPORT TO ENTREPRENEURSHIPS IN UZBEKISTAN

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Abstract. The article deals with the issue of private property and giving more freedom to small businesses and private entrepreneurship. It is noted that in order to strengthen the forms of parliamentary control over the implementation of laws in the sphere of protection of rights and legitimate interests of business entities on the establishment of the institution of the Commissioner for the protection of rights and legal interests of business entities. Also in the article the tasks and directions of the business ombudsman's activity are determined, participation in the formation and implementation of the state policy in the field of business development is determined.

Keywords: Property, law, decree, law, small business, protection.

Associations of Municipalities in the Republic of Kosovo

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Abstract. The subject of this paper are the forms of cooperation and partnerships of municipalities, respectively the establishment of associations of municipalities in the Republic of Kosovo. Currently in Kosovo is the Association of Kosovo Municipalities and it is expected that the Association of Serb-majority Municipalities will soon be established the result of the Brussels Agreement, reached in the negotiations between the delegations of the republic of Kosovo and Serbia. In addition, the legal and constitutional basis for the establishment and functioning of these associations and their position in the legal system of Kosovo is analyzed and treated. Municipal Associations, their legal status, responsibilities and competencies are sanctioned by the laws that regulate the system of local self-government in the Republic of Kosovo, namely the organization, scope and functioning of municipalities as units of local self-government.

Keywords: Association, municipality, local self-government, agreement, partnership

“The Relationships of the Constitution of the Republic of Kosovo with the European Convention of Human Rights: Implementation of ECtHR Case-Law in Kosovo”

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Abstract: The European Convention on Human Rights is one of the most important international human rights documents with an effective mechanism for the protection of human rights, such as the European Court of Human Rights. Kosovo is not a party to this convention neither part of the European Court of Human Rights.

Therefore, this article will address the way of implementation and the "constitutionalization" of this Convention in the Constitution, which represents a step forward in approach to the integration of the international instruments into the domestic protection of human. An important part of this study is also Article 53 of the Constitution, regarding the implementation of the Strasbourg case-law, by our institutions in the case of the interpretation of human rights. This is because our citizens have no right to appeal cases to the ECtHR. While such a practice is quite challenging for our competent institutions to implement it, these provisions enable parties to have legal protection by international instruments without being a party of this Conventions. A greater enforcement of this right would facilitate the parties' to appeal for their rights based on the practice of Strasbourg. However, as far as Kosovo will not become member of the Council of Europe and part of the Convention, solutions will be limited.

Keywords: Constitution, Conventions, Human Rights, Council of Europe, Courts.

Features of VCLT Article 31 and OECD MC Article 3(2) in Tax Treaty interpretation

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Abstract. The jurisdiction to tax is based on the connection of either the person or the income namely the concept of residence and the source taxation. The residence principle is based on the presumption that a state will tax its residents on their global income, while the source taxation is based on the connection of a particular income earned to the other state. Jurisdictions, for decades now enter into tax treaties to reduce or eliminate double taxation by relinquishing completely or partly their taxing rights. Yet, in international taxation when two or more states impose taxes on the same taxpayer for the same income double taxation occurs. Interpretation of tax treaties is the cornerstone on reaching the real objective and purpose of the treaties itself. Therefore, it is vital to know, how to approach the intricate world of tax treaty interpretation. This paper will shed some light on the interaction of Vienna Convention on the Law of Treaties Article 31 and the OECD Model Convention Article 3(2) on interpreting tax treaties.

Keywords: Jurisdictions, tax treaty, double taxation, OECD MC, VCLT, taxing rights.

The Role of Information, New Technologies and National Security

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Abstract. This proposal-paper aims to indicate the current and future situation regarded to the information and technology security that public safety requires. As widely accepted, information has broaden its meaning, and is generally equalized to a control or power. A country (state), institution or even a citizen that possesses wide range of information, no matter the issue, this information is related to give him/her a special self-confidence, that special feeling of assisting everyday needs. In overall picture, the same happens to a country (state). The possession of information, obviously helps it to develop and progress each day further more. As the possession of information implies power in itself, it somehow can be considered as a very delicate matter or in special cases even dangerous. It is very important for a country (state) to undertake very high security measures (mechanisms) in order to prevent criminals, groups of criminals or terrorism by receiving official important information on different government's areas such as use of technology (software of programs), national system of monitoring land including border lines; public transport and traffic roads; banking system; electricity transmission; health security etc.

This proposal-paper aims to present the need that our country (state) has about implementation of models of the NATO member states. These models will help institutions not only create a compact structure on information technology and electronic communications; but also to give the opportunity of furthering development on this as a need of security matter.

Aware enough, with the importance of the topic especially with focus of the history of electronic attacks and their classification; problem of information security; information technologies; models of communication technologies in the field of national security; legal acts on electronic communications; would be beneficiary to future students, lecturers, senior officers of institutions and other interested persons. Furthermore, this proposal-paper will also make obvious to what extend changes have been made by public administration and security institutions. Surely enough, there are figures of differences observed not only by institutions but also by think-tanks, citizens etc.

Human Rights

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Abstract. The aim of this paper is to look into the topic of human rights; consequently showing that the fight for recognizing the cultural identity develops through the system of human rights. Specifically speaking, the latter is achieved through civil and political rights, individual rights, and I generation. The collective practices of the cultural self-identification of the individual develop exactly through the civil rights, namely speaking the right of self-determination. The collective practices also influence and determine the political system. Therefore, in this paper I direct the tone towards the democratic form of the political system of the segmented or the plural multicultural societies and countries. The implication of this paper is that the consociational democracy (or consensual according to some authors) as a democratic and political system in multi-cultural societies and cultural difference in the politics are tightly intertwined with the source of their rights—meaning the system of human rights.

Keywords: Human Rights, civil and political rights, collective rights and practices, plural multicultural societies, consociational democracy (consensual), international law on human rights.

COPYRIGHT IN THE REPUBLIC OF ALBANI

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Abstract: Copyright and other rights associated with it, as objects of law arranged and guaranteed by legal norms, are relatively new, not only in Albania but also in the world. Copyright as part of wider legislation called intellectual property, is guaranteed by the Constitution of the Republic of Albania in its Article 58. This paper will speak about the history of the protection of copyright in Albania, its origin and development; copyright as civil legal relationship; objects of copyright and the exceptions from that right; the term of protection of copyright, etc.; all in the context of harmonization of national legislation with the EU. Below we will explain what prevents law enforcement in the field of copyright? In the material among the other are mentioned: insufficient administrative capacity in the Albanian Office for Copyright, impossible to cover the territory of the Republic of Albania market inspection for the detection of violations, the market inspection for ascertain the violations, lack of qualified judges and prosecutors in the field of copyright, poor cooperation between the state police, tax and customs etc. Methods used in the analysis are the description, comparison, historical, logical analysis and synthesis.

Keywords: Copyright, Legislation, SAA, Directives, Intellectual Property, Progress Report.

In the EU's waiting room: good neighborhood conditionality for Kosovo and Serbia on their integration process

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Abstract. The EU facilitated dialogue between Belgrade and Pristina, popularly known as the Brussels negotiations, undoubtedly represents one of the most important contemporary political processes in the Western Balkans. First, it represents an attempt to normalize relations between Serbia and Kosovo and find a solution to a long-standing dispute over the status of Kosovo, which in itself represents probably one of the major territorial disputes in Europe today. Second, it aims to advance the European integration process of the Western Balkans by resolving disputes that have blocked this process for a significant amount of time and to allow Serbia and Kosovo to move forward with their European integration agendas. However, almost seven years since the dialogue officially started, a limited progress have been accomplished. In fact, the implementation of agreements reached in Brussels is the most problematic issue so far, which has characterized the whole process. This paper intends to address two main questions in this regard: is the dialogue helping Kosovo and Serbia in their European integration agendas; and is this process conditioned in one way or another by the legal instruments of EU? Moreover, by analyzing EU legal framework and accession instruments, this paper will provide with an explanation whether the Brussels dialogue is legally binding for both states aiming to become members of EU. In the end, the paper will conclude that conditionality is a tool which EU uses in regular basis to keep potential candidate states for accession on the right track of their EU integration process.

Keywords: Kosovo, Serbia, dialogue, EU, implementation, conditionality, accession.

Common Foreign Policy of the European Union, From Maastricht to Lisbon – Legal Analysis

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Abstract. Since the creation of EU, many attempts were made for a closer political union, Common Foreign Policy and Common Defence Policy. However, until 1992 member states didn't decide to equip themselves with an instrument, Common Foreign and Security Policy (CFSP) that would facilitate their actions to face new challenges on international relations. This study examines the EU International Relations Law, more precisely the role, function, and development of CFSP, since the Treaty of Maastricht (Treaty Establishing the European Union) till the Treaty of Lisbon (Reform Treaty). This study focuses on some important legal issues that arise within CFSP, and gives answers to these issues, covers in general most of the provisions dealing with CFSP, in Treaty of Maastricht, changes and new provisions foreseen with the Treaty of Lisbon. Also, provisions from both Treaties will be presented in a comparative manner followed with opinions, practical examples and when applicable case law.

Keywords: European, Union, Foreign Policy, Treaty, Security

**IC - JOURNALISM, MEDIA AND
COMMUNICATION**

Reflection on Ideology Confusion of Kosovo's Political Parties in Media

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Abstract: Kosovo's political scene has some specifics that have influenced the physiognomy of political configuration. This configuration has had an impact on media coverage. This scene was influenced by the former self-governing socialist system. Socialism dissolution as a "world process" brought political pluralism; nevertheless the impact of monist politics is present today. It was the beginning of the first pluralist set-ups without any experience but with a strong will to oppose, more or less, everything that was build until then. During this process media had, and still has, a key role. Critics regarding the past were elaborated lacking adequate ideological criteria. This in turn created a situation where some political parties' reflection was criticized by media for their ideological and functional confusion, meanwhile journalists didn't have professional knowledge. This discrepancy was helped from the consequences of the conflict and imposition of the international factors. Limited political professional and medial capacity, didn't really explain the system of political ideas.

Keywords: Ideology, Confusion, Political parties, Media

The Youth, Their Viewership and Trustworthiness Towards Kosovo's Televisions

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Abstract. National and private televisions in Kosovo pay a great importance to informative programs with the aim to increase the viewership and trustworthiness of television programs. This paperwork estimates the viewership and trustworthiness of a wide range of Kosovo televisions. In the framework of this paperwork is use the method of carrying out questionnaires, where 25 young boys and girls aged between 19-25 have answered the respective questions. From this questionnaire it was analysed a wide range of National and private commercial televisions. It was concluded that at the vast majority of youngsters follow different informative TV channels, as well as news, interviews and documentaries.

Keywords: Trustworthiness, Informative program, Television, Viewership

New Media in Kosovo – The Subliminal Megaphone of Deliberate Political Messages

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Abstract. The new media are the newest platform serving the creation of a pseudo-environment that is desirable by the political factors in Kosovo. This paper elaborates the impact on the quality of political news of such reporting model that substitutes the principles of impartiality, objectivity, accuracy and so on, with the ready-made news by the political actors. As the content analyses and semi-structured interviews with journalists indicates, the traditional principles of journalism in covering politics have been reduced to transmitting in full the political statements, thus straying from the quest for the truth and from reporting on the political realities. By conveying unedited content generated by politics, the role of the new media is reduced to passive transmitters of political messages, lacking the gatekeepers and the relevance of the news.

Keywords: Kosovo, New media, Politics, Gatekeepers

Power-Broking From Brussels: Serbia, Kosovo Tensions Flex The EU's Foreign Policy Prowess

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Abstract. The attractiveness of being a member of the EU for countries outside the Union has enabled the Union to begin demanding from candidate countries that they solve the problems they have with others, in particular their neighbours. Thanks to the appeal of its enlargement and conditionality as its main tool, the EU has started to play the role of a power broker in the rest of non-EU Europe. Particularly the Brussels-guided dialogue between Kosovo and Serbia since March 2011 with the main goal of “normalizing” relations between the two has seen the EU shift to an authentic peacemaker. By applying a comparative study as well as deductive, partial analysis of official documents, the paper will argue that had it not been for the conditionality that the EU exercises towards Kosovo and Serbia, the relations between these two countries today would constitute a deep and frozen crisis. It will prove that the enlargement possesses in itself an extremely high potential not only to force candidate and aspiring countries for EU membership to implement European values, but also to constrain them in solving the problems and crises of bilateral and regional nature before getting a ticket for entry into the Union.

Keywords: EU, Enlargement, Kosovo, Serbia

Facebook as a New Media - Cultural and Communication Phenomenon of Globalization

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Abstract. The Internet social communication is a supplement and extension of the traditional social behavior. It has been proven that the more individuals in communicative realities are connected, communicate tete-a-tete, they more commonly use other media for mutual communication, including Internet social communication. In fact, the new media, or social networks, upgrade traditional social behavior without having to increase or decrease it. The term "reality" is increasingly virtualized and falls under the influence of the media that is expressing the multifunctionality that gives dimension, shape and transforms the public. The theoretical reorganization of space and time generalizes the communication content and atomizes the audience through a dual approach that sets unwritten rules of communication culture. The consequences of the "Internet present" or "cyber reality" do not remain impressive and captured solely in such a virtual world, but also manifest themselves in the realms of communication in the real life.

Keywords: Facebook, Virtual, Reality, Internet, Social, Communication

Social Media, their Platform, Respectively the Users, Ethics, Advantages and Disadvantages

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Abstract: Social Media and their social platform, respectively, the users, advantages and disadvantages, comprises an actual and meaningful topic. We have witnessed the underlying evolution of that is brought about from social media. Undoubtedly these developments have also effected the online journalists. The network of social media provide the public with a wide range of services. In this framework, in this paper are carefully elaborated the development, organization, and the extension of the social media. Particularly, the main focus is on the essential issues such as ;when were the social networks created for the first time as source of information, which are the types of social media, the effect of social media in journalism, the harassment and denigrating language used in internet, the addiction to social media, affiliations through internet and deconcentration.

Keywords: Online Journalism, Social Media, audience (public), social media, users

Ideal Model of Online Journalism, not Followed in Kosovo and Region

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Abstract. In the process of seeking to fulfill the audience needs from online journalism, the World's most important medias have managed to perform and finalize the experiment "eye-follower". As a result, reader's areas of interest while they are browsing the internet while using information technology equipment are obtained. Therefore, CCN, BBC and The Guardian used the data from this experiment in order to design their online portals, and also in the way how they are going to write articles, together with the illustration of other elements. Moreover, this paper covers the research of using the approach of this experiment also in online portals in our country and also in the region. Subject of analysis are five portals from Republic of Kosovo: "koha.net"; "gazetaexpress.com"; "indeksonline.net"; "telegrafi.com" and "zeri.info"; two from Albania: "shekulli.com" and "top-channel.tv"; two from Macedonia: "zhurnal.mk" and "lajmpress"; one from Croatia: "jutarnji.hr", one from Serbia: "b92.net"; one from Bosnia and Hercegovina: "dnevni avaz"; and one from Montenegro: "vijesti.me". Analysis of the similarities (a few) and differences of the "other" elements, which were chosen by these media in order to gain the interest of the readers' of the online journalism area.

Keywords: Journalism, Internet, "Eye-follower", Design

The Communication With Public of Party's Leadership Through the Social Media

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Abstract: This study aims to analyze the aspects related to communication of Kosovo leaders in social media. Being aware that politicians are very fond of social media such as "Facebook", "twitter", "Instagram", we have decided to carry out an empirical study, concerning what Kosovo politicians write in the social media. In the framework of this inquiry it will be concluded whom of the Kosovo leaders and politicians are more active in the public. Whom of them has more followers, and whom of them attracts more audience?

This study is mainly empirical, and all the posts are gathered within 2016. All the selected persons are political leaders who belong to certain political parties. The main political parties are also part of this empirical inquiry.

Keywords: Kosovo, Politicians, Facebook, Social media and media

Universal design, Inclusive Design and Design for all (Eco design)

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Abstract. Design for All is design which one respects human rights, diversity, which enables social inclusion and equality for all." This is a holistic and innovative model to create an environment that respects ethnic, age and other characteristics, is aimed at, Designers, developers, contractors, builders, political leaders? Decision makers! Across Europe, age, cultural development and people skills are higher than ever? It is much cheaper when from the beginning builds accessibility standards than everyone when adapting to new environments and new customers. Significantly, the business sector is "Money talks," which they understand well, because DFA can only incDesign for All and Jobs for all! "Design for all creates opportunities for everyone to be active, productive participants in economic development, and therefore the DFA to reduce social exclusion and improve economic benefit. Design for All and tourism, with employment, is also a major source of income for many countries.

Keywords: Design, Inclusion, Universal, Respect

Leader's Communication in Medium Enterprises in Peja

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Abstract. Leader communication is fundamental for the enterprise to succeed. Achieving communication skills is necessary to obtain transformational leader within the enterprise. Often, leaders have lack of communication skills. The research aims is to identify the leaders' forms and methods of communication in medium enterprises in Peja and to identify transformational leaders. The research includes 20 commercial, production and service enterprises, data collection instrument is the questionnaire and SPSS software is used to have statistical analysis. The research objective is to have an overlook on leaders' profile in medium enterprises in Peja. The researches offer a clear picture about fundamental communication characteristics of leaders in ME and the possibilities of their transformation from leading manager to transformational leader.

Keywords: Leadership, Transformational leader, Effective communication, Medium enterprises

The Impact of Television Debates in Persuasion

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Abstract: The media have a significant impact on the process of changing attitudes (Persuasion). This research measures the impact of political television debates on the audience of Kosovo. The first phase includes the identification and monitoring of the most-watched political debates on the most influential televisions in Kosovo such as: RTK1, KTV, RTV21 and Klan Kosova. The second phase involves the survey of 100 respondents of different ages and places, thus ensuring diversity in age and residence. Data collection and analysis is done through the Statistical Package for Social Sciences (SPSS). The outcomes did not support the first hypothesis that 'TV debates will affect persuasion for all ages and both genders', while in measuring two other hypotheses the results are significant, so we can conclude that 'Moderators and guests are not credible, therefore, television debates do not affect persuasion 'and' Television debates affect the change of impression but not persuasion.

Keywords: television, debates, persuasion

Fake News

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Abstract. The phenomenon of fake news is present in the media even in Kosovo. This is a global and word phenomenon that is being discussed more and more, and measures and solutions are required, given the implications that such a phenomenon of false information reveals, which is different from propaganda and misinformation. We are often witnessing misinformation cases, false information, announcement of news in the context of any agenda or news created by any other center, or simply received information is not controlled and as such is advertised in the media. One of the possible measures would be to raise the level of media education to citizens. Serious journalism is the foundation for free and liberal democracy, whereas fake news are the opposite. Fake news has nothing in common with journalism and media freedom.

Keywords: Fake news, Media in digital age, Media freedom, Democracy, Social networks

Insulting and Denigrating Language in Media

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Abstract. The Internet is a network that consists of millions of private, public, academic, business and government networks, both local and global, linked by a wide array of electronic, wireless, and optical networking technologies. By increasing the use of the Internet and the creation of computer networks has increased the significance of what is called "internet language". Since the internet gives space for free expression to everyone, this working paper aims to give examples and to reveal the fact that this freedom has been misused in the name of freedom of expression through hate speech, defamation and prejudice expressed through comments. Although there is not yet a mechanism that identifies hate speech and forbids its use, laws and institutions should be taken more seriously with the language used in social networks by creating a mechanism that helps prevent and identify this language.

Keywords: Internet, Hate speech, Slander, Comments, Social networks

MEDIA RESPONSIBILITY AND INFLUENZA IN KOSOVA SOCIETY

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Abstract. The issue of media and their impact on the course of society in particular of those of Kosova has now become a matter that has undeniable influence on public opinion. Through the field and comparative research method, we will focus on their responsibility and compare them to the diacronic and synchronous prisms, from where to derive relevant data and their level of impact on the follow-up audience. The internet has left print and audiovisual media plans, and has taken the lead in bringing information, in particular the portrayal of portals. Based on the results achieved we will bring relevant findings from the research and give ideas for concrete solutions to come out of this vicious circle of informal information, which recently dominated the information ethics especially of Kosova.

Keywords: Kosova, Responsibility, Influence, Media

Kosovo Nation Branding: Limitations and Possibilities

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Abstract. This paper seeks to explore and analyze commitment of Kosovo state and non-state actors in nation branding program, the level of understanding as concept and practice by relevant stakeholders. In addition, aim to uncover the interactions between the Kosovo, as emerging country and nation branding in wider context. Moreover, it aims to describe and analyze the experience of Kosovo in branding processes by compare and contrast to small countries and in post-independent framework. The impact of globalization and nationalism are two out of many components that this paper seeks to critically evaluate in the case of Kosovo. Meanwhile, the paper examines advantages and disadvantages of first branding campaign of Kosovo in 2009 *Kosovo: The Young Europeans*. Hence, the paper discusses the small branding project of *digital diplomacy* to brand Kosovo online.

Keywords: Nation branding, Kosovo, Globalization, Post-independent, Nationalism

IC - FOOD SCIENCE AND TECHNOLOGY

THE INFLUENCE OF STORAGE TIME AND TEMPERATURE ON THE QUALITY PARAMETERS OF EGGS FOR CONSUMPTION IN KOSOVO

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Abstract: Eggs are a good source of protein they contain vitamins and minerals. To maintain their quality parameters, they are stored in controlled environments. The purpose of this study was to evaluate the qualitative parameters of the eggs. Assessment was made on days 7, 14, 21, 28, 35 and 42 at 4 and 22 ° C. The lost weight of eggs on day 42 was 9.13% at 22 °C and 3.09% at 4 °C. The air cell size on day 42 from 3.83 mm at 4 °C to 9.52 mm at 22 °C. The specific weight of eggs (g / cm³) decreased on day 42 to 1,055 at 22 °C and 1,061 at 4 °C. Haugh units were 56.80, 22 0C and 61.19 at 4 0C on day 42. The results show that quality parameters of eggs are affected by the temperature and storage period.

Keywords: Storage time, temperature, egg weight, specific weight, Haugh units, air cell size.

Indication of Temperature and Time during Storage in Shelf Life of Pasteurized Milk, by using Response Surface Methodology

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Abstract. Milk is a complex food product, with a high nutritional value. Milk produced from healthy cow is considered to be sterile, even though this is highly dependent on the environment of farm. Milk is processed to bring a cured with extend shelf life product. Pasteurization, is a curing process for milk based on thermal treatment, this process mostly inhibit the microbial growth but it does not destroy total microorganisms. Consequently, its shelf life is dependent on the storage parameter as temperature and time. Hence, the aim of our study was to analyze and prove indication of temperature and time by using statistical method called Response Surface Methodology (RSM). Experiments are designed with to independent variable temperature and time while as dependent variable is considered the total number of microorganisms (standard plate count). Results showed that storage temperature is the main factor that can extend the shelf life of the product, while for the predication of the shelf life of the product by using build equation by RSM, remains to be seen in future studies.

Keywords: Pasteurization, Milk, RSM, Temperature

Determination of Optimal Kieselguhr Doses to Improve Beer Filtration

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Abstract. Beer production passes through those steps: malting, wort production, fermentation, and filtration. Filtration is used to remove yeast, proteins and other unwanted substances. Filtration is carried out by candle filters with kieselguhr, diatomaceous earth in a form of silica. In this study there are used three types of kieselguhr (DIF, CBL, and CBL3). There are used different kieselguhr quantities for the same beer volume and is measured filtration time, turbidity and beer color. Experiments showed that a good filtration is ensured by using all three types of kieselguhr. It is important to set a sufficient first layer from 800 to 1000 g/m² kieselguhr and continues dosage depending on beer quality and quantity. Based on level of beer turbidity and color after filtration results that optimal doses of kieselguhr for first layer and optimal doses during dosage process are: DIF 67%, CBR 16.5%, CBL3 16.5% and CBR 40%, CBL3 60%, respectively.

Keywords: kieselguhr, optimal doses, beer, filtration

Farm typology and economic efficiency of agricultural farms in the Prizren region of the Republic of Kosovo

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Abstract: The agriculture sector faces a lack of studies across the fields starting from the types of the farm, size, structural, organizational forms and economic efficiency, etc. This phenomenon has brought and brings many problems in the development of agriculture throughout the food chain, such as production, food processing, planning and drafting of agricultural policies for the development of this sector.

The purpose of this study was to analyze and identify typology of farms, to construct a typology of farms especially for commercial farms that have economic efficiency and higher competitiveness. For our case, the most appropriate method for identifying typology was considered Cluster method.

The selection of farms surveyed relied on the Farm Accounting Network (FADN) method as an instrument for estimating income on farms. The research was conducted as sample for analysis only those farms that have an economic value. As a result of the research we have identified six types of farms that have higher effectiveness and positively affect the entire food chain.

Keywords: farm, typology, economy, cluster.

HEAVY METAL CONTAMINATION OF ROADSIDE SOILS AND THEIR INFLUENCE ON VASCULAR BUNDLES TO *MEDICAGO SATIVA L.*

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Abstract: Alfalfa, also called lucerne (*Medicago sativa*) is an important forage crop in many countries throughout the world. Alfalfa belongs to the plant family Leguminosae, also known as Fabaceae and, like all legumes; it has the ability to fix nitrogen from the air. As a result, alfalfa is incredibly high in protein. Beyond its use in animal feed, the seeds of alfalfa can be sprouted and eaten by humans.

Alfalfa can be used medicinally to treat a variety of ailments for example, in India and China the plant has been used for centuries to relieve fluid retention and to treat kidney stones.

This study was designed to assess total contents of toxic metals (Pb, Cd) in the soil and plant samples of *Medicago sativa L.* Roadside samples were collected from 6 different sites along highway (Lipjan-Prizren) and analyzed for heavy metals concentration using Atomic Absorption Spectrophotometer. Lead concentration was the highest in the soil and ranged from 13.1 to 102.4 ppm. Cadmium concentration in different distances from the road varied from 1.86 to 2.89 ppm. Statistical analysis showed a significant difference between the elements determined. It was concluded that the results obtained from this research work provide significant reference value for future studies of these areas.

Keywords: Heavy metals, *Medicago sativa L.*, Concentration of Pb and Cd., vascular bundles

Chemical Composition and Nutritional value of fresh strawberry fruit (*Fragaria x ananassa*)

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Abstract. Strawberries are appreciated and important in our diet for their sensory and nutritional characteristics because of their high content of essential nutrients is beneficial for biological activity in human health. The aim of this research was to analysis some chemical parameter of five strawberry fresh samples from plantation in Kosovo area at the ripe stage. The parameters analyzed with different analytical methods (refractometry,spectrophotometry,GC-ECD combined with ultrasonic bath extraction and a Florisil column for samples clean-up) are:pH,soluble solids,titratable acidity,vitamin C,calcium,magnesium,iron and pesticide residues including organochloride, organophosphate and other pesticides in fruit and vegetables. Results showed that the strawberries were in conformity with the relevant legislation and did not contain detectable pesticide residues there are safe and healthier. It is difficult to come to conclusions, but what should be made clear to the consumer is that organic does not automatically equal safe. In the absence of adequate comparative data, additional studies in this area of research are required. All statistical analyses will be performed using the SPSS version 17.0 software packages.

Keywords: Strawberries,nutrients,spectrophotometry UV-VIS, GC-ECD

THE ANTIMICROBIAL RESISTANCE OF THE BACTERIUM SALMONELLA ENTERITIDIS ISOLATED FROM POULTRY FOR THE PRODUCTION OF EGGS IN KOSOVO.

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Abstract: Salmonella Enteritidis represents a group of bacteria known to cause typhoid fever, food poisoning, gastroenteritis, enteric fever, and other diseases in humans. People are mainly infected with contaminated water or foods, especially meat, chicken meat and eggs. Salmonella enteritidis includes over 2300 bacterial serotypes. Salmonella enteritidis and Salmonella typhimurium are responsible for over 50% of all infections caused in people anywhere in the world. The purpose of the study is to determine the sensitivity and resistance to antibiotics of some isolated strains of Salmonella enteritidis in private farms and eggs for egg production in several parts of Kosovo. Isolation and identification is done according to ISO 6579: 2002. The antibiotic test was performed on 13 strains of Salmonella enteritidis with the Kirby-Bauer method. Disk diffusion test method must be in compliance with the standard of CLSI clinical institutes and laboratories. Mueller Hinton agar was used with antibiotic disks of various groups where we obtained these results in sensitivity and resistance: Gentamicin 10mcg-S / 66.2%, I / 12.4% and R / 21.4%, Trimethoprim-sulfamethoxazole Sxt 25 mcg - S / 33.4, I / 48.3% and R / 18.3% Ampicillin Amp 2 mcg S / 15.6%, I / 23.5 And R- 60.9% and Cephalixin CL 30mg-S / 16.4, I / 77 and R / 6.6%.

Keywords: Salmonella, I-intermediate, resistance, strain, sensitivity.

DETERMINATION OF SOME CHEMICAL ELEMENTS AT MILK, AT THREE CITY IN MACEDONIA (KUMANOVO, TETOVO, GOSTIVAR)

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Abstract. The aim of this research was to evaluate the possible contamination by heavy metals of milk from cows in Macedonia. The concentrations of heavy metals were determined in cow milk from the different farms, at three city (Kumanovo, Tetovo, Gotivar) in Macedonia. Each sample, homogenized and powdered, was mineralized in a microwave oven.

Quantitative analyses of Cd, Cr, Cu and Pb were performed using an atomic absorption spectrophotometer with graphite furnace; As was analyzed by hot vapor generation technique and Zn with the flame method.

The concentration of many metals is low (<0.1 mg/kg) such as: As, Co, Cd, Cr, Cu, Fe, Pb, and Zn.

Keywords: chemical elements, milk, Macedonia.

Quality and safety of vegetables based on nitrogen determination and intake

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Abstract.Vegetables are one of the main sources of nitrogen on human diet.Nitrogen content in 30 soil samples and 30 vegetables samples are reported. The results indicate that nitrogen content was low in 33% of soil samples,normal in 50% of the samples, and high in 17% of soil samples. Reportedresults indicate that 47% of vegetables samples had low nitrogen content, 30%of them had normal nitrogen content, and 13% and 10% of them had high andvery high nitrogen content, respectively. Soil nitrogen is also reported asammonium and nitrate, and results indicate that nitrate is the dominant form ofnitrogen. There was a good correlation between soil nitrogen and vegetablesnitrogen, of $R^2 = 0.91$, and also between nitrate and ammonium in soil andvegetables nitrogen.

Keywords: quality, safety, vegetables, nitrogen, intake

Raw material of plant origin: cultivation tomato vegetable plant (*Solanum lycopersicum*) in Kosovo

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Abstract: Tomato (*Solanum lycopersicum*) is one of the most widely cultivated crops in the world. Tomatoes contribute to a healthy, well-balanced diet. They are rich in minerals, vitamins, essential amino acids, sugars and dietary fibers. Tomato contains much vitamin B and C, iron and phosphorus. Tomato fruits are consumed fresh in salads or cooked in sauces, soup and meat or fish dishes. They can be processed into purees, juices and ketchup. Tomato is one of the most important and most spread vegetable plants in Kosovo, which has been planted in about 2000 hectares, annually. Have been five hybrids of tomatoes studied (Jaguar, Arleta, Big Beef, Amati, Marfa) in a commercial farm around the region Prizren, Kosovo, during the vegetation 2015-2016. During the vegetation period in the periodical way, the following have been measured: biometrical indicators of vegetative masses, biometric indicators of the fruit, dynamic and a total production according to the hybrids. The scheme during the process of the experiment was "randomized block" with four replications. In 2014, vegetable production was estimated at 242,490 t: 200,620 t from 14,330 ha of open fields and 12,870 t from 234 ha of greenhouses and plastic tunnels. Average yields for open fields were 14-16 t ha, and for greenhouse 55-65 t ha.

Keywords: vegetable, tomato, cultivation, processed raw material

Research and testing of some physic-chemical parameters of American soft blueberry in vase in agro ecological condition of Kosovo

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Abstract: Aim of the research is searching of the suitability of some cultivars of American soft blueberry in agro ecological condition in Kosovo. In research have been four cultivars of the American soft blueberries (Bluegold, Star, Spartan and Duke). Experiment have been set in agro ecological region of Kosovo in (Arëbnesh, Pejë - Rrafshi i Dukagjini). Experiment have been set according to planting method in vase repeated it three times. In this parcel plants are planted in vase, with available substrate with some collocation. Experiment of these varieties was conduct from planting until taking sampling for analysis. During searching have been test productivity for kg/ha, Organoleptic assessment, acidity level ml 1N.KOH/100 ml (Titrimeter), Brix value (Refract meter), nutrient element mg/100g, water-pH-, water for irrigation (ECmS, TDS mg/l, SAR index), moisture %(SK EN ISO 12099). Based on research the blueberries cultivars are suitable for cultivation in vase in agro ecological condition in Arbresh-Peje region.

Keyword: soft blueberry, moisture, yield, substrate content, Brix value.

DRINKING WATER QUALITY CONTROL FOR SOME CHEMICAL-PHYSICAL PARAMETERS IN THE KOSOVO MARKET

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Abstract: The aim of the paper is to analyze some drinking water samples for some companies such as: Rugova - Water, Good- Water and Water of Alps. The parameters we have focused on determining are: pH, electrical permeability, KMnO₄ expense, chloride ions, dissolved oxygen in the water and oxygen saturation. Samples are taken at the sales' point and we intend to check the quality of drinking water at those retailers, where we have frequent attendance of citizens. From the results achieved we can conclude that there is no overrun of norms in accordance with World Health Organization (WHO) standards and the European Union (EU). Practical work was carried out near the Laboratory of Food Science and Technology at UBT, applying instrumental and volumetric techniques for determination.

Keywords: Water Quality, Citizens Health, Chemical-Physycalparameters.

Comparison of some quality and safety parameters in drinking water in Pollog region

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Abstract .Water is essential for its life, without water the life on Earth would not exist. Water is the main component of the cells comprising from about 70% to about 95% of the cellular mass or organisms. This means that we are made up of about 80% of our bodies by water, and even some special organisms, such as eg, contain up to 96% water. Water contains simultaneously the environment and the outside in which live many live forms, as noted above, about 75% of our planet is covered by water. Water, thanks to some of the above-mentioned properties, has such thermal properties that disintegrate as cell stabilizers and the organism in general.

Keywords: Water, parameters, region, water network.

Agriculture sector in focus of media on Kosovo

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Abstract. In 2017 agriculture sector was focus on media, which is considered as a primary asset of Kosovo's economic development. The media has targeted development objectives based on multi-dimensional co-operation of farmers, local institutions, central and international institutions for the development of agriculture, relying on new technological transfers. Medias devoted themselves to the problems of the frosts that damaged the trees in the early spring of 2017, where different types of pear, apple, plum, berry, suffered from low temperatures, while the orchards were damaged by up to 95% at the country level. The medias contacted experts, but the space of the hectare parcels could not be protected from frosts even though fruit growers experimented with new and old defense methods. The medias sensitized the raspberry problem, which although rated profit-making, however, price drop on market did not discourage farmers, as lack of electricity power which created problems to raspberry collectors, since raspberry had to be raised if we wanted to keep it. Medias also touched the problems of collecting and distributing peppers products, which are considered as opportunities for benefit of preparators, while challenges is considered placements and prices that in most cases do not cover the selling price on the market.

Keywords: media, agro-culture, Kosovo, economic development

The presence of pesticides in certain imported vegetables in Republic of Kosovo

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Abstract. The vegetables represent a food with high nutritional values, especially rich in vitamins, minerals and antioxidants, therefore it is recommended their daily consumption at least once up to twice rations per day. Based on this fact, it is of great importance to take into consideration the safety of consumption of vegetables for human health. Therefore, in this study one analyzed the content (presence) of pesticides in certain vegetables such are fresh tomatoes, fresh pepper, beans, fresh cucumbers and fresh carrots. The results that were obtained indicated that overall presence of pesticides in most of the vegetables that were studied, is minimal and within permitted limits, except for the fresh carrots where the presence of pesticide Phosalone, a chemical organophosphate which is used as insecticide and acaricide, is very high and is within maximal allowed limits of 0.01 mg/kg, as well as the presence of pesticide Buprofezin is 0.04 mg/kg which is much closer to the allowed maximal limit of 0.05 mg/kg.

Keywords: pesticides, vegetables, fresh carrots, Phosalone.

The presence of aflatoxin M₁ on processed milk in the Republic of Kosovo

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Abstract Aflatoxins are mycotoxins of major concern to the dairy industry. Given the fact that aflatoxins M₁ mycotoxins can cause toxic effects called mycotoxicosis. It has been reported that mycotoxins are carcinogenic, tumorigenic, and dermatological in a large number of organisms and cause hepatic carcinoma in humans. This study aims to identify the quantity of mycotoxins M₁ in dairy products used by consumers in the Republic of Kosovo. According to the results obtained from the analyzes of processed milk samples we have come to the conclusion that the content of aflatoxin M₁ in all types of dairy products is not allowed limits according to the regulation in force for the safety of food products.

Keywords: Mycotoxins, Aflatoxins M₁, Carcinogenic, Tumorigenic

Control some quality parameters of the natural juice of blueberry with different fruit content

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Abstract. During the study, were analyzed two natural juice with blueberry juice concentrate, packed in Tetra Pak. At the juice were studied these parameters: the technological process of juice production, the sensory characteristics (color, aroma, taste and homogeneity), physical and chemical (pH degree, refraction index, soluble solids degree ° Brix and turbidity expressed with NTU). The parameters were analyzed in the juice with fruit content of 50% and 25%. From the sensoric aspect the most qualitative fluid resulted with a 50% fruit concentration, from the refractive index content and the degree of ° Brix higher results had 25% fruit juice concentrate, the pH rate was of approximate values while turbidity as a quality juice resulted liquid with fruit percentage 25%. In conclusion we can conclude that the two fluids studied result within the norms for quality regulation, but the above-mentioned changes come from the fruit juice content.

Keywords: juice, blueberry, quality, sensoric, pH, °Bx, NTU.

The changes in colour of biscuits during baking depending on time and different proportion of barley flour

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Abstract. Biscuits hold an important position in food industry due to variety of taste, nutrition, crispiness and digestibility. The nutritional value of biscuits can be enhanced by fortification with a wide variety of protein rich cereal such as barley. Color is essential to the manufacture of biscuits of good quality. During baking, complex chemical reactions take place in the biscuits, such as the Maillard reaction and caramelization. The aim of this study was to evaluate the changes in color of biscuits during baking. Biscuits were produced according to AACC 10-50D method. Wheat flour was replaced with barley flour at varying levels (30, 50, 70 and 100%) in biscuit formulations. Color measurement of biscuits was carried out using a colorimeter on the basis of CIE L*, a*, b* color system. Some of the biscuits were stored in room temperature and change of their color was determined after 6 and 12 months.

Keywords: Biscuits, Baking, Color,

Phytochemical and *In Vitro* Antioxidant Studies of *Calendula Officinalis* (L.) Growing Wild in Kosovo

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Abstract. The antioxidant capacities, total phenolic and flavonoid content of five different extracts (Et₂O, CHCl₃, EtOAc, n-BuOH and H₂O) of *Calendula officinalis* (L.) growing wild in Kosovo were analyzed. Total phenolic and flavonoid content were quantitatively determined to the *Calendula officinalis* (L.) growing wild in North-Western part of Kosovo in altitude levels (780 m). The amount of total phenolics in *Calendula officinalis* (L.) extracts ranged from 7.30 mg GAE/g d.e. to 37.60 mg GAE/g d.e.. The amount of total flavonoids in *Calendula officinalis* (L.) extracts ranged from 10.15 mg RE/g d.e. to 27.52 mg GAE/g d.e. Free radical scavenging capacity (RSC) was evaluated by measuring the scavenging capacity of extracts on DPPH. EtOAc and H₂O extracts of *Calendula officinalis* (L.) expressed very strong scavenger activity. On the other hand, Et₂O and CHCl₃ extracts showed much weaker effect in the neutralization of DPPH. The observed differences in antioxidant activity could be partially explained by the levels of phenolics and flavonoids in extracts of *Calendula officinalis* (L.). Based on these results, this plant can be used to discover bioactive natural products that may serve as leads in the development of new additives for application in Food technology.

Keywords: *Calendula officinalis* L., extracts, phytochemical, antioxidant.

Comparison of quality characteristics of fresh and of dried strawberries

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Abstract. The strawberry is a very important berries fruit. It can be used fresh or for production of different products, available for consumption during the whole year.

The aim of this research was to compare the quality changes of fresh and dried strawberries. For drying were used the strawberries varieties: *elsanta*, *humi grande* and *mesecharka*, from Skopje region. Before drying were applied the following treatments: V0 – not treated, V1 - with vitamin C, V2 - with sugar solution. The drying was performed in Armenian solar dryer. During research were examined the chemical components of fresh and dried strawberries: total dry matter, sugars, total acids, proteins, vitamin C and mineral matter. On solar dried strawberry were performed microbiological analysis according to appropriate regulations. According to this research, the Armenian Solar Dryer is very good in economical and ecological aspect as well as quality properties.

Keywords: strawberries, quality, solar dryer, treatments.

Genealogical Analysis of Bar's Body Activity in Hemophilia at Two Brothers and a Cousin

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Abstract. In this study it is included a sample of the Presevo population and villages of 3771 individuals. During family interviews, we encountered cases in women with hemophilia and hemophiliacs. Predicting that X-sex chromosome is inactive we did not have the case that females are hemophilic. By doing the genealogical analysis of these families, we will present the thoughts about the role of Bari's body when it comes to hemophilia. The genealogical method can be used especially effective in cases of monogenic inheritance. From the cases encountered during the hearing, we did not have any hemophilia in female gender. Considering that if the X chromosome is inactive in women then the dose of the chromosome is equal to the male sex. For this reason, likely to get sick of hemophilia would be equal, but in reality this does not stand. So with this study we will give our thoughts about the Bar's body or the gender heterochromatin regarding the dilemma of this case.

Keywords: Kromosom X, Barr body, hamophyli, genealogy.

HABITAT OF FRUITS PLANT AND SMALL FRUITS IN MAQITEVA AREA

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Abstract.Our country has a geographic position that enables a combination of climates, dominated by the continental climate with the influence of the Mediterranean climate that penetrates the Drini i Bardhë river.

The purpose of the paper is to inform and motivate citizens to find fruit trees and their importance in our health as they are very rich in vitamins and minerals that enhance our biological immunity. The fruit trees of the forest have been used since ancient times especially to survive, but consuming it has been proven that some of them have relieved them during various diseases or have healed them. The most commonly used fruit plants are from the families: Rosaceae, Vaccinaceae, Corylaceae, Moraceae, etc.

After surveying and herbaceous fruit plants we conclude that their harvest is quite large and that the condition of some of the future herbs is not good due to improper collection.

Keywords: Fruits of the forest, vitamins, minerals, fruit harvesting.

THE USAGE OF EDIBLE ADDITIVES WITH DIFFERENT GLUTEN QUALITY IN BAKING PRODUCTS

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Abstract. One of the dominating factors in the foods quality besides the wheat quality, grinding and baking technology, is also the impact of edible additives in these products. These agents are nothing but chemical base products, that change the physical and rheological properties of baking products with the help of oxidation and reduction reactions placed in dough. The structures and quantitative formations of gluten proteins define dough qualities for cakes, biscuits and wafers. Reductants are substances, which soften gluten, weakening its links. Reductants react with disulfide SS in dough. Their impact is the reduction of the general molecular weight of the gluten proteins aggregates. The usage of reductants leads in the incensement of dough volume. The fixed gas inside the dough can develop a soft dough. The first scale of the reaction is the interaction of reductants with the gluten proteins. This reaction is an exchange SH/SS that releases a protein unit and leaves a SS link between protein and reductant. This SS part can interact with the reductant, leaving the second protein group free and giving the oxidized form to it. The most used reductants are L-Cysteins and Metabisulfite of Sodium. From the evidences made, results that the usage of these reductants leads to an advanced incensement of the dough and to a great form of the ultimate product. Based on our research for produced wheat's in our country and those which are imported, for a certain flour radius and choice, the research is done among the evolution of redox agents interaction based upon the production of products like cakes, biscuits, wafers etc.

Keywords: The quality of products, edible additives, dough rheology

Control of Vitamin C (ascorbic acid) in non-alcoholic and fresh drinks

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Abstract. This paper deals with the method of determining vitamin C in non-alcoholic and fresh drinks, also deals with its importance in the human body and elaborates the problematic consumption of vitamin C in the daily dose of adult people. Lack of vitamin C manifests itself with: pain and rapid muscle fatigue, increased infections, anemia, osteoporosis, hemorrhage, etc. According to the highest amount of vitamin C in 100 g, there are: pepper 128 mg, 113 mg cabbage, 90 mg kiwi, 59 mg strawberries, 53 mg lemon, 51 mg spinach, 38 mg grapefruit, 23 mg tomatoes. Ascorbic acid and its sodium, potassium and calcium salts are widely used as an antioxidant food additive. Relevant food additives from ascorbic acid (E-numbers) are: E300 - ascorbic acid, E301 - sodium ascorbate, E302 - calcium ascorbate, E303 - potassium ascorbate.

Keywords: vitamin C, daily need, lack of vitamin C, ascorbic acid, food additives, E-numbers

CULTIVATION OF THE POTATO IN KOSOVO AND ANALYSIS OF SOME QUALITY PARAMETERS

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Abstract: Potatoes in Kosovo are cultivated in about 10,000 ha with a low average production of 10-12 t /ha and represent one of the main agricultural crops, both for agro-economic, physiological and productive importance, as well as in feeding the population. The purpose of the study was to research the level of potato cultivation in Kosovo and to determine some toxic elements of potato cultivated in some localities of Kosovo and comparing this level with the standards allowed by the World Health Organization regulation ,also comparing it with the standards allowed by Codex Stan 193-1995, for fruits and vegetables. Based on the results obtained for elements Zn, Cu, Pb and Cd, there was an increase of heavy metal concentrations in potato compared to the level allowed by the World Health Organization (WHO).

Keywords: Potato cultivation in Kosovo, potato quality and its importance.

The qualities of the type 500 flours for the production of bread imported in the republic of Kosovo

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Abstract. The quality of baking products is dependent on wheat respectively flour. During the grinding process there are produced many types of flour which can be divided into different types according to the mineral content. The typical flour for making bread is from the type 500 flour so its quality has a special place in the industry of bread production.

The analyzed flour is an import to Republic of Kosovo. From the results that we have gotten we can see that the humidity level of the flour is in between the allowed boundaries at $13.238 \pm 1.08\%$, the acidity degree is also in between the allowed boundaries at $1.765 \pm 0.087\%$, the mineral matter content is characteristic to the type 500 flour at 0.48 ± 0.02 of which we have iron at $40.49 \pm 14.67\%$. The proteins as a key factor to the baking technology are at a lower content at $11.016 \pm 0.33\%$ but the content of wet gluten is at an average of $25.675 \pm 0.47\%$, also the sediment value as a factor on bread quality is at an average of $35.85 \pm 1.5 \text{cm}^3$.

Keywords: type 500 flour, proteins, mineral matters, wet gluten.

Microbiological analysis of the *Aspergillus carbonarius* and *Penicillium verrucosum* in Kosovo vineyards

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Abstract. Through the use of the microbiological semi-selective media (MEA-B and DYSG) for the species *Aspergillus carbonarius* and *Penicillium verrucosum* we have analyzed different varieties of the table and wine grapes in the region of Suhareka, south part of Kosovo. The purpose of this scientific work it was to determine through the microbiological analysis the main species of the fungi that produce the micotoxin known as Ochratoxin A. Analysis of the samples was done in the Department of Microbiology, University of Food and Technology, Plovdiv – Bulgaria.

Keywords: grape, fungi, microbiology, ochratoxin A, mycotoxin

Effects of urban development on water quality of the Llapi River(Kosovo)

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Abstract. The main objective of this study was to perform the effects of urban development on water quality of the Llapi River. Statistical studies have been carried out by calculating of basic statistical parameters, anomalies (extremes and outliers) and correlation coefficients between different pairs of variables. The statistical regression analysis has been found a high positive correlation relationship between turbidity and EC, hardness, Ca^{2+} and SO_4^{2-} . EC showed high significant positive relationship with turbidity, hardness, COD, Ca^{2+} , Mg^{2+} , and SO_4^{2-} . Consumption of KMnO_4 , showed high significant positive relationship with COD, TOC, NO_2^- and PO_4^{3-} (possible sign of waste waters from settlements influence). From the results of fieldwork and laboratory analyses it was found out that river water quality not fulfill the criteria set by the World Health Organization and the distribution of pollutants indicated anthropogenic sources of pollutants mainly from Podujeva's and waste waters.

Keywords: water quality assessment, correlation coefficients, Kosovo, Llapi river, statistical analysis.

Supply and sale of functional foods in the South Mitrovica market

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Abstract. Functional foods are valued as foods that give a positive effect to the health of individuals, with technological advances approaching their effect with some cure that cures and spurs various diseases, especially the intestinal tract and other infections. Given their effect, is done research of supply of functional products in the territory of South Mitrovica. The survey was conducted in the five top selling markets in five different areas of South Mitrovica. Identification of sale and supply of functional food products is done by electoral sales cards for the period 2014, 2015, 2016.

Keywords: functional foods, markets, sales and supply, 2014, 2015, 2016, South Mitrovica.

Extending the processing of cocoa beans into the rainy season and increasing production by application of newly developed drying methods

Global Cocoa Farmers and Processing Firms

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Abstract. The purpose of research paper was to develop on a large and affordable scale new cocoa drying sheds using only locally available hardware at zero cost to the farmer. To duplicate in all cocoa farming locations and processing hamlets, the MEXICATEL drying method which is based on the principles of internal heat generation and equilibrium balance at room temperature using structures based on the mathematical theorems of Parallelograms and Pythagoras. To improve the quality of the cocoa beans by reducing by 99.9% existence of salty beans and unattractive coloration caused by lack of temperature regulation during fermentation and over-exposure to ultra-violet rays of the sun during drying. To improve the taste of the cocoa beans .To increase the quantity of cocoa beans that can be processed and delivered on a monthly basis even during the rainy seasons when it is impossible to process and deliver quality cocoa beans. Cocoa is a major foreign exchange generation commodity whether in beans, powder or chocolate paste form.

The task of drying cocoa is limited to availability of solar heat. The rainy season in cocoa producing countries have recently become longer and thus affect the available sun-drying time. With a bit of elementary geometry and basic physics, I have been able to develop a technique that:

- Dries cocoa 100% indoors
- Producing no salty cocoa beans
- Reducing the bitterness of the beans by 80%
- Can be used 12months in a year for drying cocoa, fruits and vegetables
- Produces cocoa beans with 0.2% salty beans out of five thousand (5,000) beans samples used.

Key words: Maxicatel, cocoa farmers, method, Parallelograms and Pythagoras

The results of testing the quantity of milk fat in milk as raw materials in some of the milk producers in the municipality of Istog

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Abstract. The amount of milk fat plays a direct economic importance in Kosovo because the basic milk price is conditioned by the amount of fat in the milk. The study was conducted by dairy producers in Istog municipality in period of the 12 month of 2016. In total, the study included 1618 milk samples, from average 68 farms per month. The lowest number of farms and samples was 58 during the summer months. Measurement of the amount of milk fat in the milk samples was done by the acidobutiric method according to Gerber. From the analyzes obtained, the amount of milk fat in the average monthly milk samples for all samples ranges from 3.61 % to 3.81 %. The lowest values of 3.61 % of milk fat were during high temperatures in summer due to thermal stress on dairy cows, decreasing the amount of fat and lowering the basic milk price.

Keywords: Milk, milk fat, sample, thermal stress.

Exposure to the natural radioactivity in the areas of Kosovo with high concentration of Rn²²² gas on the soil

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A lot of residents around the world live in locations previously not examined, being exposed to radioactivity from the inner side of the soil as a result of Radon's presence, causing health effects (cancer). Radon is the only radioactive element in gas state in normal condition and according to the World Health Organization (WHO) in 1996 it has been classified into the Group of Cancerous Elements. Radon is formed by the radioactive decomposition of Radium, while the Radium comes from decomposition of Uranium. Uranium is found in different concentrations on the crust of the earth.

The purpose of this research is the awareness of our residents and our institutions about the risk of construction without a prior analysis of soil and the measures to be taken to prevent the introduction of Rn gas into the inside of buildings and especially in the areas of Kosovo where the presence of gas Rn is proven to exceed the allowed limits. Measurements are made in some areas, where are considered Hot spots with the Active Method with CR-39 detectors. The gained results show that the allowed amount of Radon gas in residential buildings often touches the allowed limits. The maximum values are up to 1200 Bq/m³. The largest presence of Radon has been found in older basements and buildings.

Through this paper we recommend that, in our country should be adopted and approved regulations, which will be mandatory for the measurement of this hazardous gas for human health as well as in different residential buildings and to suggest the appropriate precautions prior to construction of facilities, if necessary.

Key words: Radioactivity, radon, radon gas hazard, Rn222.

DETERMINATION OF AEROBIC MESOPHILIC BACTERIA AND COLIFORMS IN RAW MILK IN THE REGION OF PRISHTINA, LIPJAN AND RAHOVEC

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Abstract. The microbiological quality of raw milk is key to the quality production of dairy products.

Alteration is a term that describes the change of composition, taste and smell at those points where it is inedible for the consumer. Microbial alteration of milk often involves degradation of proteins, carbohydrates and fats of organisms and their enzymes. Milk and dairy consumption has increased considerably in Kosovo over the last decade, and a large part of local production comes from small-scale distributors across the country. In this research, 50 milk samples were taken at some of the cumulative sites and from dairy farms in three Kosovo municipalities (Prishtina, Lipjan and Rahovec). The microbiological quality of the milk samples is analysed according to official standards. Further, in raw milk, a number of aerobic mesophilic bacteria and number of coliforms were analyzed. Aerobic mesophilic bacteria in fresh milk, used as raw material, did not show more than 2.0×10^6 cfu / ml, whereas coliforms were presented at 4 cfu / ml.

Keywords: milk, mesophilic, aerobic, coliform, cfu.

Physico-chemical properties of ginger oil, bee wax and black seeds

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Abstract. We investigated to emphasize the physico-chemical properties of these three compounds: ginger oil, bee wax and black butter oil. After the determination we have come to the conclusion that for the ginger oil the values of the acid number, iodine number, soap and ester number have not changed from the standard values that are allowed. Therefore we conclude that this oil is healthy to be used in our daily diets. The bee wax after undergoing the necessary testing has showed that these chemical values, iodine number, soap and ester number have been deviated from the allowed standard values. However the acid number was the same as the allowed standard values. Surprisingly when it came to the black seeds oil, all values starting from the acid number, iodine number, soap up to the ester number, had deviations far greater than allowed standard values. Therefore we concluded that this oil was spoiled.

Keywords: ginger oil, bee wax, black seeds oil, physico-chemical properties.

IC - EDUCATION AND DEVELOPMENT

The impact of subtitled movies on vocabulary development

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Abstract. Learning new vocabulary comprises a significant factor for success within language learning since without the adequate knowledge of words and their meaning, learners are not able to use the target language efficiently. Moreover, vocabulary tends to be forgotten if it is not acquired and used through the right methods that will provide learners with language inputs in genuine target language environment. In this regard, the increasing access to different multimedia and technology resources facilitate spontaneous vocabulary acquisition for the contemporary age learners. In particular, movies with subtitles can be a great tool in bringing students closer to authentic real life communication vocabulary. As a result, previous studies have found out several benefits of using subtitled movies by confirming that subtitles indeed improve vocabulary development.

Keywords: movies, subtitles, vocabulary, incidental acquisition.

The value of inclusive education in Kosovo

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Abstract. Inclusive education is a great deal in all countries around the world which aim to treat everyone the same, have equal opportunities for all children regardless of race, sex, religion or any other diversity. In Kosovo, inclusive education has become a reality as a concept but is facing numerous difficulties in making efforts toward the realization. The purpose of this study is to understand the value and effect of inclusion in students with learning disabilities in general education and its environment. This study is intended to listen to the understanding of the teachers on inclusion and based on that recommend what needs to be done in order to continually encourage inclusion in the regular classroom. So, through this paper we will understand the potential and the value of inclusive education into a regular education! This study contains critical analysis of research, a comprehensive review and a literature review concerning the issue of all inclusive education, some factors that helped the movement to educate students in inclusive classroom, models of how an inclusive classroom should look like, the value of all students, the attitude of regular students and regular teachers when placing students with disabilities into a regular classroom.

Keywords: inclusive education, disability, difficulties

Learning Style and Perception on Hybrid Learning

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Abstract. Learning style is unique. Knowing learning styles helps students and universities to be more effective and efficient. It plays an essential role in selecting the right teaching methodology. The aim of this research is to study the students' perceptions on hybrid learning and learning style. Another objective is analysing the perception on hybrid learning according to their learning. The study sample consists of 89 students of universities in Albania. SPSS 20 and JASP-0.8.1.2 have been used to analyse the data. The statistical analyses used in this research are: the distribution table, contingency tables, Student's T-Test, Pearson's correlation coefficient, Bayesian Independent Samples T-Test and One-Way ANOVA. Results indicated that most students belong to the visual learning style. There were no correlations between the perceptions on hybrid learning and learning styles. Students have a positive perception for hybrid learning.

Keywords: learning styles, hybrid learning, visual learning.

The UBT Knowledge Center: A Collaborative Design Approach.

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Abstract. In setting the institutional vision for University for Business and Technology in 2001, founder Dr. Edmond Hajrizi sought to educate Kosovo students to become active contributors to the society and in the workplace, within the country, the Balkans region, and beyond. The UBT Knowledge Center initiative extends the founding vision of national development through higher education. Since local knowledge, identity, and learning are necessarily situated, Kosovar students, faculty, staff, and administrators serve as topical experts and international educators from Sweden and the United States serve as design facilitators. Participatory design commenced in April 2017 when international faculty from Sweden and the United States co-taught a graduate level course, Information Systems Analysis, Design, and Modelling, at the Pristina campus. Working with UBT administrators, directors, managers, and librarians, students worked in teams to co-design three essential parts of a holistic Knowledge Center ecosystem: a digital environment to advance local knowledge visibility, an organizational environment to enhance boundary crossing collaboration, and a digital academic library environment to enable discovery of and access to published academic scholarship. Following these ‘learn by doing’ instructional activities, exploratory knowledge management discussions produced a Knowledge Center concept paper in July 2017, with funding from the Fulbright Specialist Program. The white paper recognizes the social context of learning – that knowledge is acquired and understood through action, interaction, and sharing with others. It thereby anticipates the social relationships necessary for information exchange and knowledge creation, oftentimes enabled by technology, for knowledge incubation in the university and beyond. This collaborative design approach anticipates continuing to convene multidisciplinary conversations and to integrate interdisciplinary coursework into realization of the University’s founding knowledge vision which recognizes the critical importance of developing new and more complex ways for connecting people, information, and technology in the university and with the society. In response, the UBT Knowledge Center aims to foster knowledge creation which curates and preserves intellectual, cultural, national, and regional resources for future generations.

Note: This international collaboration is funded in part by a 2017 Fulbright Specialist Program award from the J. William Fulbright Foreign Scholarship Board, United States of America.

Keywords: knowledge center, higher education, Fulbright Specialist Program

Emerging Trends of Higher Education in Kosovo: A comparative analysis of higher education funds

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Abstract. Recent developments in globalization have set a perspective where knowledge has become very important for human capital, so has become higher education. These demands have raised the awareness of all countries worldwide that they need to educate more of their young people to a higher standard. In line with this, the quality of knowledge gained in higher education has been the central focus within higher education in the last decades. For developing countries, national competitiveness brought more challenges not only in terms of quality of education but also financial means to obtain this education. It was only in the last couple of years that investment in higher education by international donors in Kosovo was assigned a higher priority as compared to the previous decade. This paper discusses the international support in Kosovo for young people to obtaining higher education abroad. Furthermore, it unveils the position of Kosovo as compared to other neighbouring countries to absorbing higher educational funds. The first part of this study focuses on the theoretical framework of higher education, and the second part discusses the philosophy of the brain-gain in Kosovo and the lessons learned.

Keywords: higher education, scholarships, financial benefits, human capital

The Role of English Language – Connection for all Ethnicities in Kosovo

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Abstract. English Language in Kosovo has expanded from its previous function as a sign of prestige and necessity for people who want to get educated or work abroad, to the main tool of communication between the two ethnicities, Albanian and Serb, still distanced from each other. In this study, the results determine students' preferences, their level of interculturalism and English language proficiency. This study also proves hypothesis that all students from particular communities have low level of intercultural competence, they have similar preferences, but focusing on their ethnicity, furthermore, their level of English language proficiency is similar. This study covers high school students from various cities in Kosovo, 175 Albanian, 89 Serb and 7 Turkish students.

Keywords: multiculturalism, interculturalism, English language, cultural differences

The verbs in Mandarin-Chinese, Albanian and English, seen from the perspective of the Grammatical Tense

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Abstract. Different from English and Albanian, verbs in Chinese-Mandarin, do not conjugate across pronouns which perform the action. They have no inflectional nature and features in none of the grammatical tenses which are in the focus of this paper. The Chinese verbs never go through case and person! This phenomenon, in a way makes life easier for the non-native learner of Chinese, not having to remember all verb particles in order to create the time effect, to express an action. It makes easier for the learners of this ‘mega language’, spoken by more than 1.300.000.000 people, to learn it easily. Given this, the word order in Chinese sentences is, very crucial. This order is the only alternative, to show the foreign learner, the effect of the relationship between the subject and the verb. Furthermore, the word order, changes compared to the one in Albanian and English, especially in cases when we have to deal with actions asking questions of interrogative character, which in a way remain the same as the affirmative or declarative ones. This paper, through a detailed comparative analysis, aims to put in focus the so called irregularities in Chines – Mandarin, or ‘Putonghua’= (普通話)”, as to how tenses, are expressed in this language, using also the Romanized pin-yin letters.

Keywords: verbs, case, tense, comparison, Albanian, English and Chinese

Introduction of famous scientists in Science to pre-school children by demonstration method

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Abstract. In this study, short life stories of famous scientists and their contributions to the field of science were examined by means of demonstration method as a teaching method. For this purpose, three scientists were selected and prepared power point presentation about each one. The application was made with a group of pre-school students attending a private kindergarten under the Ministry of National Education (MEB) at the 2016-2017 Academic Year. This study was designed as a single group pre-test, post-test experimental model. The data obtained from data collection tools was analysed quantitatively. According to this, it can be said that the demonstration method is very effective for pre-school children to learn the short life stories of the scientists and knowing their contributions to the science.

Keywords: Science education, Pre-school, Scientists, Demonstration method.

Shakespeare`s ethos in the spotlight of interpersonal communication and language

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Abstract. Shakespeare is known in the world literature as one of the most influential writer, which the English theatre has ever had. Therefore, the topic of this article aims to delve into the Shakespeare`s ethos and the spotlight of interpersonal communication and language. Furthermore, this study covers the main characteristics of Shakespeare influential works, aiming to illustrate some of the most important features of his masterpieces through a detailed and separated review on Shakespeare, with a critical analysis of their characters, including their performance in the stage, concept of identification with the world, as well as, the communication and relationships; their behavior, habits, and what is the most important his ethos. Respectively, this paper is designed to provide different analysis, comparisons, and elaborations from various authors and literary critics on English literature and wider with the purpose of providing a more colorful view on Shakespeare`s ethos and his interaction to the public.

Keywords: ethos, interpersonal communication, concept of identification, social context.

Impact of Usage of ICT and Performance on Quality in Higher Education Institutions: An Empirical Study

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Abstract. This study presents the relationship among the quality, performance and usage of ICT in higher education. The conceptualization of quality relies on applicable knowledge and accomplishment of goals set in curricula of the subject/program- effective learning. The conceptualization of the performance is participation in active learning, to be able to finalize the tasks on time, getting high test scores, and students' progress in general. Lastly, the usage of ICT is understood as teaching and learning by using technology tools and resources- efficient learning. The results indicate that participation in the active learning, getting high test scores, and students' progress have positive effects on applicable knowledge and accomplishment of goals set in curricula of the subject/ program- effective learning. Moreover, teaching and learning by using technology tools and resources- efficient learning again have positive effects on applicable knowledge and accomplishment of goals set in curricula of the subject/ program- effective learning.

Keywords: ICT, Quality, Performance.

The effect of a professor's attitude on University students' learning motivation. Case study: English Department

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Abstract. Dealing with students from different backgrounds is a very difficult job for University professors. This is seen in many instances when teaching them. The article in question gives a deeper insight into a very sensitive and a very detailed aspect of teaching: the effect of a professor's attitude on students' learning motivation. It is based, though, on the experience of the professors who use only English in the classroom. Special emphasis was given to the students from the Department of English which is a part of the International Business College located in Mitrovica (a town North of Kosovo). Despite being one of the main and the most sensitive issues in teaching, the article manages to tackle it in a very careful manner. It finds a balance between other elements of teaching on one hand and a professor's attitude on the other. However, a lot of effort had to be made for what is written herein be as more accurate as possible. The article further goes on giving examples of different attitudes and to what extent professors should pay attention to their attitude. Even though a lot has been written about the attitude, the study is still ongoing due to the high importance of the issue and the necessity of going deeper into the very minor elements that influence students' motivation. These might go unnoticed if the issue is dealt with otherwise and given insufficient time. Based on this all, the greatest efforts were put to reveal the true effect that a professor's attitude may have on pupils overall learning motivation at the International Business College located in Mitrovica town. The decision on writing this article has been made after a long time of experience with the students from different backgrounds.

Keywords: motivation, attitude, professor, role, relation.

Whiteboard, Book and Web – an Alternative Approach for Teaching Mathematics and Modelling and Simulation

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Abstract. This contribution presents plans for development of the blended-learning environment for engineering mathematics education at universities. TU Wien – Technical University Vienna - has introduced courses on mathematics based on two main concepts, theoretical understanding and practical application – lecturing and exercising supported by a web-based e-learning environment, and practicing and testing in this environment (Maple TA with symbolic math kernel).

‘Moebius ‘ - an extension of Maple TA environment, the offers an integration of lecturing into the system. The challenging future is an electronic math text book with two main options. One is guided learning: the lecturer moderates the textbook in ‘open’ lectures with integrated electronic exercises – commenting the textbook eventually with whiteboard annotations (which are integrated in the electronic textbook. And the other option is self-reliant e-learning: the electronic textbook guides the students through the content, and step by step with feedback loops, the mathematical knowledge is placed and trained.

The MMS group at TU Wien has experiences with the first option in using a web-based math training environment (MMT server) – which is basis for the plans in the Moebius environment. The present system and the planned future implementation work also for courses in modelling and simulation for engineering and business informatics.

Keywords: E-learning, engineering mathematics, symbolic computation

How to develop the critical use of the web: A practical example

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Abstract. Juveniles born after the year 2000 are defined as digital natives due to the ease with which they use the Web. They have, indeed, been able to constantly relate to digital tools since birth and have reached an optimum level of technical ability. Contemporary neuroscience highlights how new media have strongly conditioned the way in which learning takes place and modifies the time taken, styles used and how we understand and analyse the phenomena. Schools have the task, not only of raising awareness, but also that of the ethical and critical use of these media. This means that every student must understand that the Internet is a powerful tool, which provides information, opinions and thoughts, broadening its range to cover the whole world. The ethical use of the Web consists of the distribution of documented and non-confidential information, which respects the privacy and dignity of each single individual. In order to develop these skills, a simple yet extremely effective study unit in the scientific subjects was planned in two countries: in Italy and in Albania. A video was shown to the Italian pupils about tumours, while Albanian children were shown a video about iron. The pupils of both countries were asked to research the topic using the ‘WebQuest’ method, also to create a digital product (video, poster) which summarized the results obtained and to present the information both in English and their native language during a “Teen Conference” attended by a group of experts, their teachers and their peers. Furthermore, they were asked to reflect on the work done. The project was evaluated by a team of teachers. The activity was efficient because it brought into play many key skills and takes advantage of multiple methods.

Keywords: critical use competencies, project-based learning, teen, WebQuest

The Effect of a Professor's Attitude on University Students' Learning Motivation Case study: English Department-International Business College, Mitrovica - Kosovo

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Abstract. Dealing with students from different backgrounds is a very difficult job for University professors. This is seen in many instances when teaching them. The article in question gives a deeper insight into a very sensitive and a very detailed aspect of teaching: the effect of a professor's attitude on students' learning motivation. It is based, though, on the experience of the professors who use only English in the classroom. Special emphasis was given to the students from the Department of English which is a part of the International Business College located in Mitrovica (a town North of Kosovo). Despite being one of the main and the most sensitive issues in teaching, the article manages to tackle it in a very careful manner. It finds a balance between other elements of teaching on one hand and a professor's attitude on the other. However, a lot of effort had to be made for what is written herein to be as more accurate as possible. The article further goes on giving examples of different attitudes and to what extent professors should pay attention to their attitude. Even though a lot has been written about the attitude, the study is still ongoing due to the high importance of the issue and the necessity of going deeper into the very minor elements that influence students' motivation. These might go unnoticed if the issue is dealt with otherwise and given insufficient time. Based on this all, the greatest efforts were put to reveal the true effect that a professor's attitude may have on pupils overall learning motivation at the International Business College located in Mitrovica town. The decision on writing this article has been made after a long time of experience with the students from different backgrounds.

Keywords: motivation, attitude, professor, role, relation.

**Aspects of Translation Theory, and Comparison to
translation English-Albanian from the author G. R.
Berridge, Diplomacy Theory and Practice and Albanian
version G. R. Berridge Teoria dhe Praktika**

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Abstract. The main aim of this topic is to provide a full-fledged analysis of the terminology used in the diplomatic field and to achieve this an in-depth analysis of two chapters from two books is elaborated, one is in Albanian Language and the other in English Language. The author of the book is the renowned scholar of diplomacy G. R. Berridge, Diplomacy Theory and Practice and the version in Albanian “Diplomacia, Teoria dhe Praktika”. To achieve a comparison of translation between the Albanian and English version it was necessary to carefully scrutinize and carry out a detailed analysis of translation aspects such as the Importance of Equivalence, Methods of Analysis, Grammatical Structure, Synchronic Approach and Diachronic Approach to the text and to draw the difference between the Political and Administrative Style. In addition to this it was of significant importance to make an ample lexical analysis of the key words and expressions. The misinterpretations of certain words in the diplomatic terminology may aggravate and take the shape of a conflict. So, contribution in this aspect of translation appears to be essential and in relevance to contemporary problematic.

Keywords: Importance of Equivalence, Methods of Analysis, Grammatical Structure, Synchronic Approach, Diachronic Approach.

Thinking styles through the elements of contemporary methods

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Abstract. In a fast-changing world, knowing one's strengths is a definite advantage. It is one's thinking style that provides such an edge. Knowing about thinking styles not only helps universities to be more effective and efficient, but also assists students in improving their academic performance. The scope of this paper is to study the correlation that exists between thinking styles and the elements of contemporary methods. Another objective of this research is analyzing the thinking styles of students. The study sample consists of 186 students of universities in Albania. The statistical analyses adopted in this study are: Pearson's correlation coefficient, the distribution table, and the One-Way ANOVA test. In order to analyze the data, SPSS 20 and JASP-8.0.1.2 have been used. It ensues from the study that thinking styles affect two elements of contemporary methods. Most students belong to the concrete-sequential thinking style. The element which students prefer the most is brainstorming. Further, the way in which the elements are assessed changes from one thinking style to the other.

Keywords: thinking styles, concrete-sequential thinking style, brainstorming

Comparison of library service before and after their digitalization at the University of Prishtina "Hasan Prishtina"

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Abstract. Libraries always have served as a portal to provide new knowledge, information and to spend the free time. The library of the University "Hasan Prishtina" in Prishtina is moving from a traditional service to a digitized service. The challenges for the need of digitalization of this service are evident but is presented as an immediate need to improve the conditions of teachers and students. In this paper, we will consider the comparison from the traditional system to the e-Library as well as the level of security, comfort offered in the service and the impact on teaching and learning in the context of the University "Hasan Prishtina". The digital library management system aims to preserve all of its daily work and other features that we do not have in the traditional library system, project implementation aspects, e-libraries, and the use of this platform by the staff and students.

Keywords: library, digitalization, security.

Pedagogical dilemmas in the process of education of the young generation

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Abstract. Not intentionally I do start with the teachers. We look at the basis of the study and the reaction at the core of psychology, with the need to apply its norms not only to regulate teacher relations with students but even to organize our consciousness. Inside the protective activity against aggression in psychic behaviour, "we must give the possibility of existence and safe development". We are the ones who have to appreciate the matter, because in our hands and minds the nation's future passes.

Then: Have we found the right line of human behaviour in harmony with our social life and are we able to persuade this delicate age to recognize and accept their mistakes and beyond, to tell them which are the ways that harmonize individual relationships with the social environment?

Here we try to give some explanation of possible ways for teens and youngsters, announcing a discussion invitation for all those who think they should give advice and recall in any case that "the golden word - take care" does not mean distrust on a generation that is experiencing the fluctuation of changing phenomena, it is not about ignoring their age, skills and intellect, it is not about depersonalization but is a "defensive step" towards "anti-virus screen" against the "amorous" fog. Throughout this dynamic way of living without realizing there arrives to "cool" the desire to learn, the desire for knowledge and a productive personal life and social interest.

Because of their age, why should they stay away from the challenges and not try to succeed. Mistakes in practical study may results costly and that is just a pity, but the mistakes in choosing the way of life "can result risky for human life and future." Our goal should be persistent to achievement.

Keywords: Psychological dilemma, safe development, youngster nature

Higher Education in Algeria: Achievements and challenges- 1963 to 2017

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Abstract. This paper is based on the case study of the higher education sector in Algeria. Around the world higher education is under pressure to change. It is growing fast and its contribution to economic growth is vital. Universities are mainly expected to create knowledge; improve equity among population; and respond to students. Furthermore, it has been largely documented that in developing countries, higher education is recognized as a key force for modernization and development. Consequently, this has caused an increase in the demand for its access, accompanied by several challenges: students are asking more and more for quality education and decent jobs; the labor market is also looking for adapted and new skills more in line with the evolution of the production process. Government is, currently, faced with less resources to allocate to the sector which has been a top priority in the public policies implemented since independence in 1963. Broadly speaking, Algeria's higher education sector has been marked by two major policy reforms since its independence. The most recent of these – the adoption of the three-cycle degree higher - education framework known as the “LMD System” (License / Bachelor -Master - Doctorate) – has been in place since 2004 / 2005. “Massification” was a core part of both reforms, in part motivated by the demographic reality of a large youth population, but also by explicit policy choices undertaken by the government. The application of massification policies in Algeria led to a trend of favoring quantity over quality. To accommodate what is called in Algeria – democratization of Higher Education – that is the increased number of registered students, there has been major achievements, particularly in terms of infrastructure. In imitating European policies for higher education, policy makers in Algeria have focused on form and ignored substance. The plan of the paper is organized as follows: the next section gives the legal framework of the tertiary education. The second section discusses an overview of the different stages of the development of higher education through the various policies during the period 1963 to 2017, followed by a comment on the major indicators of the sector in terms of infrastructure and human resources allocated to support the policies. The sources of funding will be reviewed to determine how important has been the policy of higher education in the development process. And the final part will deal with the main challenges of higher education in Algeria. How globalization is affecting the sector? Can the public policy of higher education continue as it is with many subsidies or education expenditures? Do they need to be reviewed to make them more efficient and in line with the current financial constraints. And finally, a conclusion will be offered at the end of this paper.

Keywords: Higher Education, Algeria, Education Policy, Tertiary Education.

Changing pedagogy and driving innovation in emerging economies: The role of national development strategy, policy and innovation instruments – Case Study Kosovo

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Abstract. This paper examines the link between national development strategies, educational policy and innovation lab instruments in emerging economies. Innovations lab instruments are synonymous here for innovation processes and coordination. Using Kosovo, the youngest state in Europe as a case (53% youth), this research employed document analysis, surveys and key actor interviews as methods to examine why national development strategies and policy drive social and development innovation, particularly through activities of international agents like UNICEF and its Innovations lab in Kosovo. Based on initial results of a comprehensive study of innovation activities developed and facilitated by UNICEF's Innovations lab, it concludes that strategic plans and policies are important contingent factors fostering pedagogical change and innovative processes, whilst making instruments of innovations labs effective; allowing innovation to occur. Effective is here synonymous for successful.

Keywords: National development strategies, educational policies, development innovation, innovation labs, social innovation and processes, Kosovo, UNICEF

Analysis of Professional Education in Kosovo, Case Study: Agriculture High and Secondary Schools

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Abstract. This research discusses and explores the challenges of professional agricultural education in Kosovo, the achievements and disadvantages of this sector. The assumption is that professional education in Kosovo is not well appreciated by most members as competent authorities, citizens themselves, and as well as entrepreneurs. There is evidence that the government in Kosovo does not offer proper conditions, nor does it improve the curricula of existing professional schools in order to create new opportunities and suitable jobs for young talented people and to orient them toward more effective and productive careers. The case studied in this research is about conditions and opportunities offered by the agricultural secondary schools in Kosovo. Particular focus has been given to schools in Prishtina, Ferizaj and Vushtri areas, as it is concluded that they have a significant number of students. Geographic research is limited to Kosovo, and in terms of time, it analyzes the learning process in the aforementioned schools since their foundation up to this time. Based on the different factors studied, different potential scenarios for the future are also provided. The research utilizes comparison methodology, statistical method, and quantitative method accomplished through survey. From the results obtained, the realistic situation was verified, which was essentially validated by the basic hypothesis of this research that the situation in the aspect of professional education in the Agriculture branch is in a sad condition. The final result of this project provides with a reasonable strategic planning framework projected support decision makers used in finding more sustainable solution to the problem identified. In the literature view, this study provides with information which in turn is supposed to gain more knowledge concerned with the study topic.

Keywords: professional schools, agriculture, education, strategy, decision-making

The importance of differentiated instruction in EFL learning

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Abstract. Differentiated instructions in learning is based in the appropriate methods for learning but in fact this is the way how teachers exploit the teaching opportunities in order to provide better learning environment within their instruction. English as a foreign language learning in Kosovo has been overwhelming and in addition to the importance of English Language Learning, is also the importance of increasing the interest in more effective teaching. The most difficult challenge, that EFL teachers consider to overcome, is teaching in mixed ability classes. Mixed ability EFL classes are a composition of students with different English language level proficiency in the same class. This paper aims to explore the techniques and strategies which avoid the implementation of teaching instruction “the one-size-fits-all” and focus more on students’ learning styles and their individual preferences. In order to achieve the foreseen objectives, English foreign language teacher is oriented towards choosing the right strategies, always adapting to the students’ needs. It also examines the factors which cause different instructions of learning based on students' English language proficiency. Among the most controversial factors that cause diversity in the mixed ability EFL classes are: Social and cultural background, Learning ability, Previous teaching, and student’s personality and Learning styles. Nevertheless, although differentiated instructions are attributed to students and learning, it seems like teachers and teaching is being challenged along this process.

Keywords: differentiated instructions, EFL learning, mixed ability classes, students’ level proficiency

Academic staff performance evaluation, using decision analyses method and application.

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Abstract. Performance evaluation of academic staff, departments, faculties, within a university is a very important matter. Performance evaluation include academic achievement, publications and projects, scientific research, teaching process, students evaluations, and other activities, inside and outside the university area, which will create and form the academic figures. The impact of university activities through everyday life and work and more is part of university duties. The process of academic staff evaluation will help faculties and universities in having important and useful information about the academic activities, qualifications and projects, guiding students, teaching process, achievements and problems. It will help academic ambitions to build relations and cooperation with more successful and higher ranking universities, to estimate and learn from them, to follow and participate in common projects. There have been many methodologies that have definitive methods of evaluation, and all are useful and practical. The criteria and factors will be evaluated in this study through decision analyses method of weighting, by using pairwise comparison. Some important criteria are contributing to activities that benefit the university, innovations, publishing, lecturing in European universities, international conferences, projects, participating in European projects, students' evaluations, community trainings, etc.

Keywords: academic, evaluation, performance, research, teaching.

An overview for handwriting and typing with digital devices for children

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Abstract: The classic process of writing evolved over the years, started wobbling in recent decades toward typing by having its own specifications between digital native and other layers of the population in developed countries but also to a lesser extent in developing countries. Now this process is facing intersections and alternatives that are being consolidated more and more and that should not exclude each other. The topic addresses the viewpoint of authors regarding new developments in the field of ICT that are related to writing and typing. It analyzes not only the achievements but also the negative aspects of technology involvement in this process and relies on contemporary literature, new ones in these areas, research and opinions. It tries to address the problem that began with some layers of children, who begin to use tablets or smart phones before learning to write by hand and have grown accustomed to typing with digital devices. This paper is also based on the opinions that have been issued by structured interviews conducted at different age levels and qualifications, from pre-school teachers, teachers of first grade, primary school, pre-university education in urban and rural areas, lecturers and scholars in universities and writers for their thoughts as well as their experiences, but without excluding scientists. Conclusions and recommendations will contribute not only to a layer wider than opinions were taken, but also to the broad mass of teachers and the population, in order to raise awareness for the issues which need to be resolved or overcome at this stage of development of our society.

Keywords: children, digital devices handwriting, ICT, typing

IC - PSYCHOLOGY SCIENCES

Investigation of Kosovar, Albanian, Bosnian and Turk Adolescents' Attitudes Toward Violence

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Abstract. This research investigates the attitudes towards violence of three ethnic groups in Kosovo and adolescents' cultural aspects. The aim of the research is to investigate whether the attitude of violence of Kosovo Albanian, Bosnian and Turk adolescents show a significant difference according to ethnic group and gender. The sample of the research was recorded separately from each ethnic group. From the Albanian ethnic group, a total of 300 adolescents, from the Bosnian ethnic group a total of 200 adolescents, and from the Turkish ethnic group a total of 200 adolescents, in total 700 adolescents participated in the research. For data collection the "Attitudes towards Violence" scale was adapted in the three languages. The number of adolescents that took place during this application in total is 359. The findings of the research showed a significant difference between the attitudes towards violence and ethnic groups, where the Albanian ethnic group manifested more violent attitudes than the other two ethnic groups. In addition, it was found that Bosnian adolescents confirm more violent attitudes than Turkish adolescents. In many of the researches that have been done among ethnic groups, minority groups seem to be more aggressive than majority groups. However, this study showed that, despite being a majority group, Albanians approved a higher level of violence and the situation was discussed by the literature supporter. The findings are similar to the survey results, and significantly higher level of difference were found in attitudes towards violence by gender in male adolescents than female adolescents in all ethnic groups. These findings suggest that gender is an important risk factor of violence. Lastly, the interaction of common influence of the ethnic group and gender in attitudes toward violence has not been found significant.

Keywords: Attitudes towards violence, Kosovo's Albanian Bosnian Turks, ethnic group, adolescents, gender.

Family cohesion as important factor for attitudes towards psychoactive drugs in adolescence

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Abstract. Adolescence is a fragile period in which the person passes from the childhood to the adulthood. During this period the adolescent passes through different challenges. Adolescent has to deal with physical, physiological, emotional, cognitive, social and other changes, and during his journey family as a social factor has the most important part, because with their support they help the adolescent to overcome all the difficulties on his way. Because of the function and the importance that family has over the adolescent, in this research we have measured the correlation between family cohesion and the attitudes towards psychoactive drugs, because as we know adolescents are usually more likely to use psychoactive drugs. The research has been applied to 116 subjects, whose age is between 17 and 18 years old. As a measure instruments for the research are used Kobi test for family cohesion, and a questionnaire that measures the attitudes towards psychoactive drugs. The obtained results has shown that exists a negative correlation between family cohesion and positive attitudes towards psychoactive drugs, which means that the adolescents that have high family cohesion, don't have positive attitudes towards psychoactive drugs.

Keywords: family cohesion, attitudes, adolescent, psychoactive drugs.

Challenges faced by people living with HIV and AIDS in Kosovo: qualitative analyses

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Abstract. The aim of the paper is to investigate challenges faced by people living with HIV and AIDS (PLWHA) in Kosovo. The main goal is to analyze some psycho-social aspects of people living with HIV and AIDS such as: disclosure of HIV status, HIV related stigma, adherence, socioeconomic issues, etc. Qualitative methods were used to examine the experiences of PLWHA. Six focus group discussions were conducted with 49 HIV-positive participants and 10 key informants involved in working with PLWHA were interviewed. AIDS-related stigma was perceived as pervasive by the participants. This was associated with the difficulty of disclosure of PLWHA status due to the fear of rejection by family members or community. Also, prominent was the fact that PLWHA considered that their HIV and AIDS status is seen as secondary comparing to the daily life stressors such as poverty, unemployment and other problems with constant provision of antiretroviral therapy (ART).

Keywords: HIV and AIDS, challenges, stigma, discrimination, adherence, disclosure.

**IC - MEDICAL, CHEMICAL AND
PHARMACEUTICAL SCIENCES**

Combined Orthodontic-Prosthetic Treatment in Patients with Bruxism

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Abstract: Orthodontic treatment in some cases alleviates or is a necessity for successful prosthetic treatment. The aim of the study is to present orthodontic-prosthetic treatment in third degree bruxism patients and the relationship between orthodontics and prosthetics. The 47-year-old patient is treated with a fixed appliance in the lower jaw (aesthetic braces) and teeth splint (Erkodur 2 mm) in the upper jaw. The reverse occlusion in the frontal region is corrected with the intrusion and the retrusion of the frontal teeth of the lower jaw. After orthodontic treatment, frontal teeth of the lower jaw 33 to 43 are fixed with Retainer then the prosthetic compensation of the missing teeth in the both jaws are done with Zirconia crowns and bridges with CAD-CAM technique. Aesthetics and function after orthodontic-prosthetic treatment of bruxism has been very satisfying. The reverse occlusion is corrected and teeth abraded surfaces from bruxism were compensated. At the end of the treatment, occlusion and ideal articulation is achieved and the patient has no longer expressed bruxism. Based on patient examination, model analysis, OPG and photos before and after treatment, we can conclude that the treatment has been very successful. In the presented case, occlusal disorder and missing teeth could have been the cause of bruxism. Achieved success is stable even 9 years after treatment.

Keywords: orthodontic-prosthetic therapy, bruxism, reverse occlusion, intrusion, retrusion

Challenges during the Dental Care of Children with Disabilities

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Abstract: Management and dental treatment of children with disabilities is a challenge for the dentist, particularly for specialist of pediatric dentistry. Oral health is of great importance in maintaining overall health, especially in children with special needs, including those with chronic systemic diseases. According to WHO "A handicapped child is considered a person who is not in full physical or mental condition for participation in normal activities of his peers, including those of a social, recreational, educational and speaking nature". Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. Disabled children are divided into these disabilities: Mental- delays in mental development with lower IQ intelligence; Physical -birth defects in extremities, muscular dystrophy, cerebral palsy and Medical - chronic systemic diseases which are considered as risk to overall health during dental treatments. For these disorders, dentist should have knowledge about psychological type of the child. In many cases when there is no cooperation with the child, premedication is needed prior to dental treatment. When all possibilities are used, general anesthesia should be initiated after the consent of the physician who follows the overall state of health. The lack of oral health care, or oral hygiene as well as dental treatments, endangers general health in chronic systemic-medical disabilities such as: Cardiovascular diseases, especially heart abnormalities, blood disorders, some endocrine and immunodeficiency diseases. Preventive dental measures, including information about oral hygiene and regular dental visits, have an important role on the overall health protection of these patients.

Keywords: Oral health, children, dental treatment, disabilities.

Trends of the Contraceptive Medicine Consumption in Kosovo

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Abstract: One of the main objectives of this research is to obtain data about the consumption of contraceptive medicines in Kosovo, compare to other European countries with drug utilization studies and try to understand the rationale about the obtained results while also measuring progress towards the WHO Millennium Development Goals and Kosovo Health Sectorial Strategy 2017-2021. Regarding the contraceptive medicine consumption it is used the ATC classification of and the Defined Daily Doses per inhabitant per day (DID) as a numeric tool of the analysis. As for the perception of contraceptive dispensing in retail pharmacies are conducted interviews with pharmacists and for the prescription with doctors as part of the qualitative research with predefined questioners with open ended questions. There are analyzed all drugs of the G Group (Genitourinary system and sex hormones) in Kosovo from 2011 to 2015. From the medicines consumption data, it is seen that for the G-Group there is in general increasing trend of the total consumption in DID from 4.26 DID in 2011 to 10.52 DID in 2015. In the detailed analysis for the contraceptives subgroup G03A - Hormonal contraceptives for systemic use and G03D – Progestogens are the most consumed with 2.78 DID respectively 2.91 DID for the five year period 2011-2015. Kosovo is among the countries with very low contraception medicine consumption compared to other European and neighboring countries, which have much more consumption of this class of medicines as in Croatia with annual average of 36.12 DID, Montenegro 24.2 DID, Serbia 40.5 DID, Estonia 52.17 DID, Latvia 32.67 DID, Lithuania 28.72 DID. These data show the entire group G, however also the subgroup analysis show similar comparison. From the interviews with pharmacists and doctors it can be concluded that there is a low budget for providing and covering all the needs, there is lack of education for the benefits of the contraception use although the UNFPA has done a lot on this regard, but there are also a cultural, economic, and social factors for which Ministry of Health should make more awareness campaigns and fulfill the requirements from the health sectorial strategy.

Keywords: Contraceptive medicine consumption, ATC, DID, drug utilization.

Herniated lumbar disc & Nursing care

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Abstract: Spinal disc herniation, also known as a slipped disc, is a medical condition affecting the spine in which a tear in the outer, fibrous ring of an intervertebral disc allows the soft, central portion to bulge out beyond the damaged outer rings. Disc herniation is usually due to age-related degeneration of the outer ring, known as the anulus fibrosus, although trauma, lifting injuries, or straining have been implicated as well. Tears are almost always posterolateral (on the back of the sides) owing to the presence of the posterior longitudinal ligament in the spinal canal. Disc herniations are normally a further development of a previously existing disc protrusion, a condition in which the outermost layers of the anulus fibrosus are still intact, but can bulge when the disc is under pressure. In contrast to a herniation, none of the central portion escapes beyond the outer layers. Most minor herniations heal within several weeks. Anti-inflammatory treatments for pain associated with disc herniation, protrusion, bulge, or disc tear are generally effective. Severe herniations may not heal of their own accord and may require surgery. The condition is widely referred to as a slipped disc, but this term is not medically accurate as the spinal discs are firmly attached between the vertebrae and cannot "slip" out of place. Lumbar disc herniations occur in the lower back, most often between the fourth and fifth lumbar vertebral bodies or between the fifth and the sacrum. Symptoms can affect the lower back, buttocks, thigh, anal/genital region (via the perineal nerve), and may radiate into the foot and/or toe. The sciatic nerve is the most commonly affected nerve, causing symptoms of sciatica. The femoral nerve can also be affected^[25] and cause the patient to experience a numb, tingling feeling throughout one or both legs and even feet or even a burning feeling in the hips and legs. A hernia in the lumbar region often compresses the nerve root exiting at the level below the disk. Thus, a herniation of the L4/5 disc will compress the L5 nerve root. With the patient and doctor, plan a pain control regimen. Encourage the patient to express his concerns about the disorder. Urge the patient to perform as much self-care as his immobility and pain allow. Use antiembolism stockings, as prescribed, and encourage the patient to move his legs, as allowed. Assess the patient's pain status and his response to the pain-control regimen. Perform neurovascular checks of the patient's legs such as color, motion, temperature, and sensation. Monitor vital signs, and check for bowel sounds and abdominal distention. Teach the patient about treatments, which include bed rest and pelvic traction. Urge the patient to maintain an ideal body weight to prevent lordosis caused by obesity. Discuss all prescribed medications with the patient. If surgery is required, explain all preoperative and postoperative procedures and treatments to the patient and his family.

Keywords: Herniated disc, surgical treatment.

Antibacterial Activity of Ethanol Extract from *Salvia Officinalis* (L.) Plant Growing Wild in Kosovo

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Abstract. In this study the antibacterial efficiency of ethanol extract from *Salvia officinalis* (L.) growing wild in Kosovo were examined. Ethanol extract was tested against two gram positive bacteria *Staphylococcus aureus* (clinical isolate), *Listeria monocytogenes* (clinical isolate) and one gram negative bacteria *Escherichia coli* (clinical isolate). The antibacterial activity was determined by using agar disc diffusion method. The inhibition zone of extract was compared to that of penicillin G. The ethanol extract showed activity in all of the concentrations 1, 3 and 5 mg/mL towards *E. coli*, *S. aureus* and *L. Monocytogenes*. Ethanol extract of the plant with concentration 5 mg/mL showed a stronger antibacterial activity towards bacteria *S. aureus* with inhibition zone of 9 mm. The antibacterial activity of the *S. officinalis* (L.) was due to the presence of various secondary metabolites such as phenols and flavonoids. Hence, this plant can be used to discover bioactive natural products that may serve as leads in the development of new pharmaceuticals.

Keywords: *Salvia officinalis* (L.), antibacterial activity, agar disk diffusion method, ethanol extract.

The Influence of Division of Amlodipine Tablets on their Efficacy and Stability

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Abstract: Tablet division is a widespread phenomenon nowadays in Albania, because of different factors such as the absence of small dosages in the pharmaceutical market, financial reasons etc. The purpose of this study is to identify the positive and negative aspects of tablets division by patients. It aims to show experimentally if the division affects or not, in a significant way the percentage of the active substance. It was selected Amlodipine as a drug for analysis, because of two reasons. First it is used in chronic therapy and second it is part of the List of Reimbursement of Medicines in the Republic of Albania. It was used besylate amlodipine as RS, three different productions of Amlodipine tablets bought directly in a community pharmacy, methanol HPLC grade and ammonium acetate. It was selected the method based on the HPLC analysis of the solutions obtained by dissolution of amlodipine in methanol as described in the European Pharmacopoeia 2011. This was an ongoing analysis for four weeks. The divided tablets have been kept in similar conditions as a patient can do. The organoleptic control after division showed no changes for all three productions. Only halves of sample A fulfill the pharmacopoeia criteria for $RD \pm 7.5\%$. From the results obtained, it was noted that there was a decrease in the percentage of the active substance, on halves taken randomly for analysis. The concentration of the active substance in sample A at the end of the analysis resulted to be 83.6%, in sample B 84.37% and sample C 83.75%. The level of impurities remain $\leq 2\%$ conform limits in Eur. Ph. Based on these results, it is concluded that tablet division is a process that significantly affects the percentage of the tablet's active substance. Reducing the concentration of the active substance implies that the patient does not receive the required dose for treatment and the success of therapy is in doubt. The division of amlodipine tablets is economically convenient, but is a practice that should be avoided and not advised by the healthcare providers.

Keywords: amlodipine, tablet division, efficacy, stability.

Comparison of the Agreement between Intraoral and Articulator Contacts in the Retruded Contact Position

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Abstract: The clinical requirements of an articulator are the ability to perform reproduction of centric and eccentric occlusion. If dental casts are accurately mounted to an articulator, it is possible to simulate certain occlusal relationships, but it should not be forgotten an articulator can simulate but not duplicate all mandibular movements. Many different types of articulators have been developed to perform lateral and protrusive movements, and some of them have even individually adjustable. Nevertheless, most of them cannot be performed the retrusive movement. Thirty-five dental students were selected as subjects and two different articulator systems, Girschbach Artex CR (Amann Girschbach) and Gerber Condylator Vario, were used for the present study. The locations of Retruded contact position (RCP) contacts in articulators and intra-orally was determined by occlusal wax. From the result of the current study, no statistical difference was found between the two articulator systems regarding mimics of RCP contacts.

Keywords: articulator, retrusion.

Acromegaly and its Treatment

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Abstract: Acromegaly is a hormonal disorder which results when pituitary adenoma produces more growth hormone (GH). The most common symptoms of acromegaly are: severe face, thickening of soft tissues such as the face, typical hands like "shovels", jaw is more forward (Prognathism), sweating, impaired glucose tolerance or diabetes mellitus. The treatment focuses on lowering GH production, as well as reducing the negative effects of the tumor in the pituitary gland and surrounding tissues. Doctors can remove the pituitary tumor by using a method called transfenoid surgery with radiation. The medicines used to reduce the production or block the action of GH include: Somatostatin analogs, dopamine agonists, GH antagonists: Pegvisomant or Somavert, an analog of human growth hormone (GH) which is structurally modified to act as an antagonist GH receptor. Pegvisomant is a recombinant DNA protein containing 191 amino acid residues. Pegvisomant is synthesized by a specific origin of Escherichia Coli bacteria, which has been genetically modified by the addition of a plasmid that carries a gene for the antagonists of GH receptor. Somavert is available in a single dose, sterile bottle containing 10, 15, or 20 mg of pegvisomant protein. Each bottle also contains 1.36 mg glycine, 36.0 mg manitol, 1.04 mg sodium phosphate anhydrous, and 0.36 mg phosphate sodium monohydrate miono-basic. Get emergency medical help if you have any signs of an allergic reaction. Do not use pegvisomant if you have a serious side effect.

Keywords: Acromegaly, pegvisomant.

Contamination and levels of Mycotoxins (aflatoxin, ochratoxin) in white Cheese produced and marketed in Kosovo

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Abstract: In addition to the wide consumption of milk in all age groups of people, cheese as a dairy product is often used by the Kosovars and constitutes one of the main foods. Therefore, the presence of aflatoxin M₁ (AFM₁) and ochratoxin A (OTA) in dairy milk products is an important factor for human health. The purpose of this research was to study the frequency and levels of AFM₁ and OTA in cheese samples produced and marketed in Kosovo. AFM₁ and OTA levels in cheese samples were determined using the high-performance fluorescence method for fluorescence lighting separation and detection. A total of 10 white cheese products, namely 10 white cheese samples produced or imported in Kosovo from the countries abroad, were analyzed for AFM₁ and OTA during May 2017. There was no OTA detection and also only in one sample was not detected AFM₁, while in the other samples the detected levels of AFM₁ were in the range of allowed values (from 0.00 ppb to 0.026 ppb). The results of this research although showed that the levels of AFM₁ and OTA in the cheeses analyzed are within the allowed limits, the need for regular monitoring of the levels of AFM₁ and OTA in dairy products is necessary in order to protect human health.

Keywords: mycotoxins, aflatoxin, ochratoxin, white cheeses, human health.

Epidemiological Features of Tuberculosis in the region of Prizren

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Abstract: Tuberculosis is still one of disease with high incidence in the region of Prizren, but at a lower level than at the Country level. The aim of our research was analysis of epidemiological parameters of tuberculosis in region of Prizren, its trend and comparison of incidence at the Country level. In this study are used data from the Institute of Public Health in Prizren, registration forms of tuberculosis disease. The data are processed and analyzed using descriptive epidemiological method. For an analysis of the results and their expression in tables and graphs we use Microsoft Exell 2007. During the time period from 2011 to 2015 in the region of Prizren have registered 619 cases with tuberculosis. From them, 56.2% of cases were male and 43.8% were female. The largest number of cases registered was during 2013, while the most involved municipality at the region level was the municipality of Prizren. The age group most affected was 15-24 years old with 27.3% of the cases. Pulmonary tuberculosis was recorded in 428 cases and extra pulmonary tuberculosis in 191 cases. New cases have dominated with over 90% of cases, while recidivism was occurred in 10% of cases. The average incidence of tuberculosis in the region of Prizren for the period 2011- 2015 was 313.3 per 100,000 inhabitants, while at the country level was about 42.8 per 100,000 inhabitants. Incidence of tuberculosis has shown an upward trend in the region of Prizren, as well as at the country level. Most affected are adolescents and young people. This should be investigated further, and institutions need to be more active in the prevention and treatment of tuberculosis.

Keywords: tuberculosis, incidence, region, Prizren

“Nephron Sparing Surgery” in a Tumor Greater than 7 Cm

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Abstract. We present a case of nephron sparing surgery (NSS), in a patient, 68 years old, born in the Prizren, who had a tumor bigger than 7 (8.5 cm), meaning T2a staging tumor. Renal cell carcinoma (RCC) is a common malignancy with an increasing incidence¹. NSS was proven feasible decades ago for patients with imperative indications to preserve maximum kidney function, for instance solitary kidney, bilateral renal tumors, or moderate/severe chronic kidney disease (CKD)². The goal of partial nephrectomy is complete excision of potentially malignant tissue without malignant cells at the border of the surgical specimen, with maximum preservation of nearby normal renal parenchyma. It is known that nephron sparing surgery is preferred for T1a and T1b, or when the tumor is limited in kidneys and not greater than 7 cm. In this case, the tumor has passed T1 staging, it belonged to T2 staging. We succeeded doing the “nephron sparing surgery”, saving less than half of the kidney. The approach to a SRM (small renal masses) is based on tumor size, stage, and location. Most NSS requires renal vessel occlusion during the excision, and renal tubular tissue is particularly sensitive to ischemia; the WIT (warm ischemia time), therefore, should be minimized. Damage to renal tubular tissue is directly related to WIT. Although the upper limit of WIT is debatable, a limit of 20 minutes is a generally accepted guideline. The kidney can be approached with traditional “open” surgery or laparoscopically. For SRMs appropriate for NSS, open partial nephrectomy represents the gold standard. This approach has the most data regarding oncologic and renal function outcomes, with long-term cancer-specific survival rates exceeding 90%³. We can conclude that “nephron sparing surgery” in specific cases can be used also for patients with T2a staging tumor, for those patients where there is hope that they can benefit from this procedure. The patient has stayed in our clinic for ten days, and is released in a good health condition, unfortunately the remaining renal parenchyma was not sufficient to perform its function, because of the chronic pyelonephritis with an emphasized hypoplasia of the other kidney (left kidney). So the only benefit of this procedure in this patient was that instead of doing the dialysis three times a week, he could do it two times a week.

Keywords: Nephron sparing surgery, renal carcinoma, partial nephrectomy, papillary renal cell carcinoma.

Differential Diagnosis between the Variety of Vasculitis Forms

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Abstract: Vasculitis is an inflammation of the blood vessels. It can affect any blood vessel in the body by manifesting a variety of systemic, non-specific symptoms that make difficult the diagnosis of this pathology and especially its specific form. In front of any patient suspected of being affected by vasculitis, some questions are asked: Is the vasculitis or other pathology that camouflages, whether it is primary or secondary vasculitis, in which vessels this pathology extends, how can the diagnosis be confirmed and how can it be determined the type of vasculitis?The purpose of this study is to inform about the protocols to be followed to perform differential diagnosis of vasculitis types.This study is a review based on the research of world studies and literature regarding the recommendations for performing differential diagnosis among the variety of vasculitis forms.Primary patient assessment involves taking the history of the medications it uses, risk factors for infectious pathology, history of cardiac valve pathologies, and autoimmune pathologies. Then laboratory and imaging studies are carried out, aiming at setting the diagnosis, determining the affected organ and the degree of disease activity. And recently we refer to algorithms to make differential diagnosis between the varieties of vasculitis forms.Despite the diagnostic difficulties of vasculitis, the variety of its forms, the separation of responsibilities among many specialities, there are protocols that need to be followed rigorously to arrive at a safe diagnosis as well as auxiliary algorithms to distinguish the type of vasculitis.

Keywords: vasculitis, differential diagnosis, protocols.

Prevalence of Terminal Renal Disease in Lupus Nephritis Patients

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Abstract: Systemic erythematosus lupus is a chronic inflammatory disease of autoimmune nature. This illness can affect all organs, but one of the most common illnesses is lupus nephritis. Patients with renal impairment, despite aggressive immunosuppressive medication carry the risk of developing terminal renal disease and doing dialysis or renal transplant. The purpose of this study is to reflect global statistics on the frequency of the development of terminal renal disease in lupus nephritis patients as an awareness-raising way to stimulate studies that present a successful treatment or screening protocol in preventing this complication. This study is a review based on the research of world studies and literature regarding the prevalence of terminal renal disease in lupus nephritis patients. Over 50% of patients with LES, depending on different regions of the world, race / ethnicity develop lupus nephritis. 10-30% of lupus nephritis cases develop terminal renal disease where among the major risk factors are new age, nephrotic proteinuria, disease activity index, histological class of renal impairment, high creatinine, lack of remission, etc. Performing as early as possible the renal transplant increases the lifespan of patients with terminal renal disease. It is very difficult to prevent renal impairment in patients with LES, more so when some of them have lupus nephritis as the initial manifestation. However, since more than 50% of LES patients develop lupus nephritis and 10 to 30% of lupus nephritis cases develop terminal renal disease, studies should be encouraged to determine a successful treatment or screening protocol in preventing this complication.

Keywords: systemic lupus erythematosus, prevalence, lupus nephritis, terminal renal disease

A Way to Monitor Quality Control in Radiology

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Abstract: In this paper we have represented an experimental thesis study of how it is realized quality control in radiology. This control will be done for determining functional condition of radiological apparatuses. Its main purpose was patient protection from excess irradiation and films that can be read clearly with a very good quality. In this study were introduced measurements carried out in Radiological Department of "Mother Theresa" hospital nr.5 and were discussed their results. Measurements realized were: i) Compliance of light batch with RX batch ii) tension tube iii) current tube iv) exposure time v) tube reproduction. As a measurement equipment was used a multimeter that measures at the same time four physical parameters like tension (kVp), exposure time (ms), current (mA) and RFE (relative exposure film). Referring to standards results were satisfactory. They were within allowed values. Batches compliance resulted within standards. By calculations there was a smaller deviation, less than 1.1 cm. When tension tube changed with some values, from calculations resulted that reading values were too close of what we needed (within standards). An accurate tension induces a very good radiological film contrast. For different currents and constant tension, the curve was a horizontal line. Measured tension never changed, even though we changed current values. When tube current was changed with some values, from calculations resulted that reading values were too close of those allowed. When time exposure was changed with some values, from measurements and calculations was shown that for very short time there was a small deviation from standards. With increasing time exposure accuracy becomes high. During measurement of tube reproduction, RFE value remained unchangeable. Standard deviation was zero. Proper recommendations are given like periodicity of controls and other suggestions. Controls described in this paper are predicted to be used from physicists for occasional controls and measurements following certain procedures.

Keywords: quality control, radiology, RX batch, multimeter

Nonmelanotic Skin Cancer of the Face and Their Treatment

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Abstract: Basal cell carcinoma (BCC) and Squamos cell carcinoma (SCC) are the most common form of skin cancer. They can occur anywhere on the body, but are most common on areas that are exposed to the sun, such as your face, head, neck and ears or in skin areas where burns, scars or ulcers have damaged the skin. They are more common in men than women. The prognosis for patients this pathology is excellent, but if the disease is allowed to progress, it can cause significant morbidity. They grow very slowly. If they are treated earlier defect can be closed very easily with direct closure. If not treated in time they continue to grow wide and deep, destroying skin tissue and bone, loss of the eye, ear, nose, lip, they can lead to devastating cosmetic and functional deficits with resultant psychological, physical, and nutritional detriment. Local flaps have been commonly used in the reconstruction of small facial defects left after excision of primary tumors. However, larger defects often present a surgical difficulty and may necessitate free flaps. In the repair of such large defects, multiple local flaps may prove to be a viable and satisfactory alternative. Facial defects can be managed with the correct choice of local flap. Local flaps being easy to harvest and handle, provide good results due to good matching of the skin in terms of color, texture, and thickness.

Keywords: skin cancer, maxillofacial surgery.

Oral Health in School Children

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Abstract: In recent dental studies its being officially accepted each and every day that caries is caused by the combination of several factors. The carious etiology is much complex, affected by the interference and the action of many factors: food, microorganisms, bad habits, economic situation, low level of health education, etc. The observation of dental condition, oral health promotion, public awareness of children's oral health and the importance of oral health promotion. In order to achieve the aim of the study, in the sample are included students of the 1st, 2nd and 3rd grade of primary public schools in Pristina. The research results were analyzed separately according to age, gender, preschool institution. By gender, the prevalence of caries is higher in males 61.32%, compared to females 60.98%. The prevalence of caries increased with age, 26% at age of 6 years old, 73% at age of 12 years old, and up to 85% at age of 15 years old. Also, the DMFT average increases with age. Oral hygiene by gender is more satisfactory among women 0.35, while in men 0.37. With the increasing age, oral hygiene decreases. Caries represents a major health and socio-economic issue. The research' results show correlation between caries and factors such as age, gender, knowledge level on oral health.

Keywords: caries, oral hygiene, education and oral health promotion.

The Social Relations: Education, Income and Health

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Abstract. This paper puts forward a conceptual framework in social context linking education, income and health. There are a number of theoretical frameworks available. Advocates of each tend to work within specific academic disciplines or traditions such as public health, economics, developmental psychology and sociology. The paper raises the question; does education and income lead to better health? The answer isn't that simple. While it is commonly understood that the more educated you are, the higher your income is likely to be, which is also likely to lead to better health, the evidence for the links between education and health is less developed. A key reason for this paper is that the research area is necessarily inter-disciplinary and does not sit comfortably within any single disciplinary foundation. The economic returns to education are relatively easily understood as the result of the human capital formed in the education process. Education does not act on health in isolation from other factors. The health effects of education are much broader in scope, reflecting a much wider set of outcomes with an equivalently wider set of mechanisms. This paper lays out the mechanisms for the effects of education on health but this is not to suggest that other factors do not have importance independently of education. Education may impact on income and so some of the effect of income may be thought of as the channelling of the effect of education but that is not to subsume the whole income effect under the heading of education. Our aim is not to depreciate the significance of income but to support a more balanced view that recognizes that many factors are important in the generation of health.

Keywords: health; social impact; education; income.

ESBL (Extended Spectrum Beta Lactamase) Infections - an Emerging Problem in Children

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Abstract: There is an emergence of infections with ESBL-producing micro-organisms recently. They remain poorly characterized in children. We sought to characterize children in a teaching hospital from whom an ESBL-producing organism had been isolated. We identified all children under sixteen years of age who had ESBL-producing organism isolated in the year 2016 in children admitted to pediatric hospital at University Hospital center “Mother Theresa”, Tirana. The referral source was contacted for further information where possible. Clinical details and treatment were analyzed to determine likelihood of infection or colonization. Fifteen children were identified, aged three months to nine years. Thirteen isolates were obtained from urine, one each from a wound swab and a cough swab. Three isolates were obtained from hospitalized children, but only one of these needed treatment. This child presented with lymphadenitis and continued to be pyrexial and irritable despite treatment with cephalosporin. Subsequently ESBL producing organism was isolated from the urine and she responded to appropriate antibiotic. Data was available for nine out of twelve patients originating from the community. Of these, four had repeat specimens which didn't grow ESBL-producer again. Three were treated and two remained asymptomatic and well. ESBL-producing organisms are increasingly isolated in children, but from our review appear frequently to be colonizers rather than pathogens. However, it is very important to be vigilant about the possibility of ESBL infection in children especially if they fail standard antibiotic therapy.

Keywords: beta lactamase, wound.

Transferring the Competences of Primary Health Care Management Scheme Management as well as other Healthcare Responsibilities from Central to Local Government

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Abstract: The primary healthcare sector in the Albanian healthcare system is not supported by the local government. Administrative reform has foreseen that local government oversees and supports Primary Health Care - PHC. There is practically no institutional and concrete legal initiative regarding the transfer of competencies from the central government to the local government. Currently, all family doctors, general practitioners, and nurses of PHC are appointed by the Minister of Health. We are dealing with a unique case of centralizing the competencies of the central government in the health systems. Local authorities have no impact on the many shortages in health personnel, mostly doctors in the territory they cover. The local government has the financial capacity and other opportunities to support the primary care sector, does not financially support and in any way support the PHC in the territory they cover, despite the fact that citizens pay taxes. Municipalities that have developed the tourism sector, and especially in tourist seasons where tourism flows are expected, have problems with what they offer regarding health care, both in informing tourists and the quality of health care. What is recommended consists of: Increase the competences of local government towards the PHC; Increase and improve the quality of health services in the PHC; Increase of primary health care financing (Ministry of Finance / Compulsory Health Insurance Fund / 61 Municipality); Increase the flexibility of management of the Health Care financing scheme based on the specific needs and requirements of each municipal unit; The transfer of competencies from the central government to the 61 municipalities on primary health care should be accomplished through a clear, discrete, inclusive, transparent and focused process towards improving the quality of health care, then the opportunities for primary health care for citizens will be increased, have a better infrastructure, have more flexibility in managing human resources, investments and more funding for medications and other needs. Accountability will also be increased based on community requirements and information on the quality of health care.

Keywords: health, care.

Prevalence of caries on elementary school children in the city of Durrës and their related risk factors

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Abstract. Caries on elementary school children, is a severe form of dental decay, very spread and with multi-factorial origin. Caries in children is considered as a serious public health problem as it is a complex disease of primary and permanent dentition, which relay serious socio-behavioral issues that afflict mainly the infants and toddlers (Postme TC. et al. 2008). If left untreated, the main effects are pain, compromised chewing ability, malocclusion, phonetic problems and lower self-esteem (Casamassimo PS. et al. 2009). The aim of this study is to determine the prevalence and related risk factors of caries, among children of elementary school in city of Durrës. A sample size of 600 elementary school children between 6–12 years of age was randomly selected from rural and urban areas of Durrës and decayed, missing and filled teeth indices were recorded. A standardized questionnaire about children oral habits, was distributed to the parents and filled by them. Data gathered were elaborated through SPSS 17.0 and statistically analyzed with Chi-square test. Prevalence of caries on elementary school children, in the study sample was found to be 62%. The prevalence reported varies on rural and urban areas, where the urban ones, had a lower percentage. The study has showed a positive correlation between caries on children of elementary school and age of the child, location of residence, dietary habits and oral hygiene. There is an urgent need to implement preventive and curative oral health programs for elementary school children mostly in rural areas school of Durrës and also a need to educate parents on the right oral habits and the dental treatments their children need.

Keywords: elementary school children, caries, oral hygiene habit, prevalence, Durrës.

The Impact of the Remaining Dentine Thickness after Tooth Preparation on Dentine - Pulp Complex

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Abstract: There are many factors accused of causing pulpal damage, but studies indicate that endodontic complications after placement of fixed prosthetic crowns and bridges are entirely iatrogenic and as a consequence of a deep tooth preparation. In 2mm of the remaining dentine thickness after preparation, there are significant reductions in cellular cell adhesion molecules in the pulp of the prepared tooth data compared to those intact. Researchers confirm that even this decline may be an expression of early stages of pulp inflammation. According to Murray & co, the number of odontoblasts in a dentine thickness of 2.5-0.5mm, was reduced by 13.6%; in a dentine thickness of 0.5-0.01mm, this number was reduced by 33.7%, and in pulp exposure the number of odontoblasts was reduced by 99%. Also, I. Abouta and his associates concluded that the number of odontoblasts and dentine repair activity was mostly affected by tooth preparation (cavity preparation/tooth preparation for crowns) variables rather than the type of filling, material, or patient related factors (age, gender). To inform the dentists' community with the latest studies and recommendations which raises awareness of the effect that the remaining dentine thickness after tooth preparation, has on the pulp vitality. Studies suggest that clinicists should aim for conservative tooth preparation in order to preserve the vitality of the pulp. The number of odontoblasts and the amount of reparative dentine is disproportional to the amount of dentine removed during the tooth preparation. The remaining dentine thickness in the cavity/tooth has a huge impact on the pulp vitality, and during restoration procedures a dentine thickness of 0.5mm or more than necessary to avoid an irreversible damage of the pulp.

Keywords: the remaining dentin thickness, odontoblast, irreversible pulp damage.

Variety of Operations at the Laparoscopic Center in UCCK – Prishtina, November 1999 - MAY 2017

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Abstract: Laparoscopic Center near UCCK has started its work on 12.11.1999. Lecturer and trainer of laparoscopy was prof.dr. Faris al Hadi. He has also equipped the Laparoscopic Center with the equipment and has refurbished it. Four UKUK surgeons were trained by this professor and received diplomas in June 2000. Subsequently, there were also trained 8 other surgeons who received diplomas in December 2000. In the Laparoscopic Center at the beginning only cholecysts (gallbladder) have been operated. Subsequently, other operations have been carried out with a laparoscope. Up to now 7200 laparoscopic operations have been performed so far, over 90% of them have been laparoscopic cholecystectomy and others with laparoscopic surgery of other organs. Laparoscopic cholecystectomy is the most common operation in the world and in the laparoscopic world. However, nowadays, other operations in the abdomen with laparoscopy are also being carried out in the world. We have a bit of stagnation due to the lack of experience and equipment, but we have done some of the other operations apart from laparoscopic cholecystectomy. We will present a series of them with video-presentation.

Keywords: laparoscopy, operation range, laparoscopic cholecystectomy.

Differential Diagnosis of ST segment elevation on ECG

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Abstract. ST segment elevation on ECG is crucial for emergent reperfusion therapy of acute myocardial infarction with ST-segment elevation. Because acute myocardial infarction (STEMI) is not the most common cause of ST-segment elevation amongst chest pain patients, we need to consider other factors like reciprocal changes to shore up the diagnosis. In this review we would like to present statements which are manifested with ST segment elevation on ECG and to show clues which can help to make differentiations between them. The clinical setting and specific electrocardiographic criteria often allow identification of the cause. In writing this paper, we hope for quicker and better stratification of patients with ST segment elevation on ECG, which will lead to be better outcomes.

Keywords: ST segment elevation, myocardial infarction, pericarditis, early repolarization.

Low Molecular Weight Heparins (LMWH) in the Treatment of Recurrent IVF-ET Failure

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Abstract: Implantation failure is common in assisted reproductive technology. LMWH can alter the hemostatic response to the controlled ovarian stimulation and modify the risk of thrombosis. It can also modulate many of the fundamental physiological processes required for blastocyst apposition, adherence, and implantation, as well as trophoblast differentiation and invasion due to its similarities with heparan sulfates and has the potential to improve pregnancy rates and outcomes. Our study, represents a retrospective study, which was undertaken during 01 January 2012 – 31 December 2013, in the Department of Gynecology and Obstetrics, at Clinical Hospital in Tetova. The patient demographic: date, month and week of pregnancy; diagnosis; drug details; which include name of the drug, dosage form, dose frequency were recorded. During the period of two years, the number of patients which received anticoagulation therapy after in vitro fertilization was 14. The age group with the highest attendance was >35, 6 patients (42.85 %). For 7 patients (50 %), this was their fourth pregnancy. The majority of patients 9 (64.28 %) were treated with Clexane (enoxaparin) 4000 IU anti-Xa in 0.4mL. Despite in vivo and in vitro evidences in favor of the alleged beneficial effect wholesale adoption of this strategy into routine practice will not become a gold standard until further research confirms the presence of such an effect and reveals its exact mechanism of action.

Keywords: low molecular weight heparins, hypercoagulable state, pregnancy, IVF.

Intra-Alveolar Application of Clindamycin- Impact in reducing the incidence of Complications following Surgical Removal of Mandibular Third Molar

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Abstract: The most commonly performed surgical procedures in oral surgery are extractions of third mandibular teeth. Complications following the extraction of third mandibular teeth which may occur are pain, alveolar osteitis, and edema. The purpose of this study was to determine if the effectiveness of intra-alveolar application of Clindamycin could reduce the incidence of pain, alveolar osteitis and edema after the extraction of third mandibular tooth in nonsmoker patients. Patients who qualified for the prospective, randomized, placebo-controlled trial were nonsmokers. In a group of 30 patients, mandibular third molars in both sides were extracted on the same day. In total 60 third mandibular molars were extracted. The left side was a study group in which we applied the Clindamycin intra alveolarly, and the right side was a control group. Tooth extraction was performed under local anesthesia. At 1, 2, and 5 days after surgery, postextraction evaluation was recorded by the same examiner. The results demonstrate an effectiveness of intra-alveolar application of Clindamycin in reducing the incidence of pain (with Clindamycin M 45.7 vs. without Clindamycin 18.7) but not in reducing alveolar osteitis and edema.

Keywords: pain, alveolar osteitis, edema, nonsmokers, Clindamycin.

Health and safety at work

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Abstract: The International Labor Organization's Health Commission in 1950 has defined health at work as "the highest level of physical, mental and social well-being of workers in all professions". Occupational health represents a dynamic balance between the worker and the working environment. Work in general and especially in the health care sector has a key role in worker health due to specific factors in the workplace that can lead to injuries, occupational disease related to work with long-term health consequences. The professional health objectives are to preserve and promote the physical, mental and social well-being of workers, applying ergonomic principles to adapt the workplace and the working environment to the needs of workers and to reduce job losses due to illnesses and injuries. Although the dangers in the workplace are divided into biological, chemical and physical, there is an important role in the work psychology for assessing the behavior of an individual at work, the performance of people at work, and employee satisfaction. For this purpose, five (5) work risk assessment steps are defined as risk assessment, prevention, recording of significant findings and reconsideration. Stress reaction depends on external circumstances, individual sensitivity and personality structure. The purpose of assessing the work ability of health care professionals is to maintain the health of workers, prevent disability, occupational diseases and work-related illnesses and injuries. Work shifting to healthcare workers is a major stress factor because based on data, the occurrence of cardiovascular disease is about 40% higher than those who do not work in shifts. For this purpose measures should be taken to reduce work overload and the time pressure to carry out the duties; Additional education of workers on health and safety at work which is important for preventing and relieving stress in order to preserve the health of employees as a key prerequisite for maintaining working ability. At an individual level, preventive measures should include proper health surveillance, with particular emphasis on workplace, working conditions, and change work and risk assessment.

Keywords: health, medicine, safety.

Bleeding Ulcers: Effect of low dose Aspirin - Our experience

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Abstract: Aspirin is among the most commonly used pharmaceutical products used for the management of fever, to relieve mild to moderate pain, to reduce swelling in inflammatory conditions such as arthritis, while a low dose aspirin is used to prevent blood clots. The latter effect reduces the risk of stroke and heart attack. However, its use is associated with gastrointestinal and other complications. The aim of this study was to evaluate the influence of aspirin in bleeding ulcers. 122 patients were included in this prospective comparative study that were divided in two groups: the first group consisting of 60 patients that were treated with low dose Aspirin, and the second group consisting of 62 patients that were treated with low dose aspirin and pantoprazole (a proton pump inhibitor). All the patients had positive history for previous ulcer disease in whom bleeding ulcers were evaluated with endoscopic examinations during 12 months of treatment. The mean age of the patients with bleeding ulcers in the study was 60.4 ± 14.3 years, of whom 68.8% were males and 31.2 % were females. In the aspirin only treated group, after 12 months of administration, bleeding ulcers were present in 11 patients (18.3 %) while in the group that were co-prescribed aspirin and pantoprazole were present only in 3 (4.8 %) patients. Findings from this study show that the prevalence of bleeding ulcers is significantly higher in the group treated with aspirin as monotherapy compared to the group that were co-prescribed aspirin and pantoprazole. Gastroprotection with proton pump inhibitors is essential in patients with positive history of gastrointestinal ulcers in the past that need long-term use of prophylactic low-dose aspirin.

Keywords: bleeding ulcers, aspirin, PPI

Family Related Non Syndromic Supernumerary Teeth - Case Reports

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Abstract: Hiperdontia is the condition characterized by supernumerary teeth, the teeth that appear in addition to the regular number of teeth. They can appear in any area of the dental arch and can affect any dental organ. We will present case reports of three children of the same family aged, 10, 11, 13 years, who were multidisciplinary treated for supernumerary teeth condition. Follow up is presented with RTG and photos taken during the treatments. Patients with non-syndromic supernumerary teeth might be related to heredity factor, therefore familial history should be carefully examined. For proper treatment of this condition is necessary to establish close cooperation in between Pedodontist, Oral surgeon and Orthodontist.

Keywords: supernumerary teeth, non syndromic

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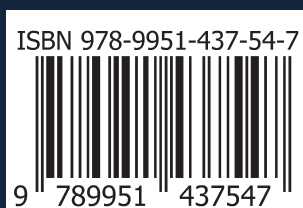


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