

**Department of Statistics and Applied Informatics
Faculty of Economy, University of Tirana**

in collaboration with
**Academy of Sciences of Albania
University for Business and Technology, Kosovo**

6th INTERNATIONAL CONFERENCE

**“Information Systems
and Technology Innovations:
inducting Modern Business Solutions”**

Proceedings Book

Tirana, June 5 - 6, 2015

“Information Systems and Technology Innovations: inducing Modern Business Solutions”

Proceedings Book

Editor

Kozeta Sevrani (Faculty of Economy, University of Tirana)

Scientific Board

ANDREA ALBERICI, Studio Synthesis, Italy
ANDREAS KOERNER, Vienna University of Technology, Austria
ANITA MIRIJAMDOTTER, Linnaeus University, Sweden
ARETI STRINGA, Faculty of Economy, University of Tirana
BASHKIM RUSETI, Faculty of Economy, University of Tirana
BEKIM GASHI, University for Business and Technology, Kosovo
BERISLAV ANDRLI, Polytechnic of Pozega, Croatia
BETIM ÇIÇO, Dean, FCS, SEEU, Macedonia
BUKURIE DUMANI, Faculty of Economy, University of Tirana
DHIMITRI TOLE, Faculty of Economy, University of Tirana
DHORI KULE, Rector, University of Tirana
EDMOND HAJRIZI, Rector, UBT, Kosovo
ERMELINDA MEKSI, Faculty of Economy, University of Tirana
EUGENIO BRENTARI, University of Brescia, Italy
EUGENIUSZ WOJCIECHOWSKI, University of Lodz, Poland
FATMIR HOXHA, Faculty of Natural Sciences, University of Tirana
FATMIR MEMAJ, Faculty of Economy, University of Tirana
FELIX BRETENECKER, Vienna University of Technology, Austria
GRATIELA BOCA, Technical University Cluj Napoca, Romania
GUDAR BEQIRAJ, Academy of Sciences, Albania
KOZETA SEVRANI, Head of Department, Faculty of Economy, UT
KURT MATYAS, Vienna University of Technology, Austria
LARRY STAPLETON, Waterford Institute of Technology, Austria
MARY SOMERVILLE, University of Colorado, USA
NEKI FRASHËRI, Polytechnic University, Tirana, Albania
NORBERT JESSE, DCS, TU Dortmund University, Germany
PETER KOPACEK, Vienna University of Technology, Austria
ROZETA MIHO, Dean, Polytechnic University, Tirana, Albania
SALVADOR BUSHATI, Academy of Sciences, Albania
SILVANA TRIMI, University of Nebraska, USA
SULO HADËRI, Dean, Faculty of Economy, University of Tirana

ISBN:

ORGANIZING COMMITTEE

Kozeta SEVRANI
Albana GORISHTI
Erjon ZOTO
Ezmolda BAROLLI
Romina MUKA

STUDENT COMMITTEE

Bruno SHOLLA
Elison VRIONI
Lea ÇELIKU
Klaidi GORISHTI
Polina ÇEÇO
Raisa UKU
Xhulio MITRE

Website

www.conference.ijshint.org

To the reader...

It's a great honor for me to welcome you in the International Scientific Conference entitled "**Information Systems and Technology Innovations: inducting Modern Business Solutions**", organized by the Department of Statistics and Applied Informatics, Faculty of Economy, University of Tirana.

This year our department organizes the sixth consecutive conference, thus strengthening its positive role in IT developments not only in Albania, but also in the region and beyond. It also denotes that the previous conferences had such a success that the next conference is just the right opportunity to bring forward what was achieved till recently. The experience from previous conferences makes us very proud and impatient for this event. Previous years and conferences have contributed in creating a wide communication platform inside the academic world, including representatives from several countries inside EU and beyond, and strengthening the collaboration with various business representatives and other national or international institutions.

Recently, entrepreneurship, innovation and creativity have been seen as possible ways to solve the current economic, societal and environmental crisis as well as to generate growth. This is the case because technology and innovation are portrayed as seeds of new initiatives and ideas that will boost the new economic development. Information systems development, technological trends and their projection to different fields of society are seen as the transitive roads from traditional to service-based economy.

In this conference, the participants will have the opportunity to share experience with more than 200 authors coming from several countries, including Kosovo, Macedonia, Sweden, USA, Italy, Austria, Serbia, Greece, Rumania, Hungary, Poland, etc. The main topics include Information Systems and Technologies, Information Processing and Management, Information Security, Modeling and Simulation, Engineering and Networks, Cloud Computing and Mobile Technologies, Applied Statistics, Digital Economy, e-Services and other related topics.

This Conference would not be possible without the proper devotion of the members of the department, of the participants and especially of our guests of honor.

A special credit goes to the Albanian Academy of Sciences for its strong support, and also to the University for Business and Technology in Kosovo.

Allow me to thank in particular our Conference sponsors that supported this important activity with their kindness, as they also did in the past conferences. Among them, allow me to thank especially TAG | Localeyes, ICTS Media, Dominusoft, Kreatx, Evolutivo and Spazio Eventi for the collaboration and support offered.

A special credit goes to the organizing team and to the Economic Informatics students for their continuous help and devotion during the Conference.

Thank you to everyone!

Prof. Dr. Kozeta SEVRANI

Head of the Department of Statistics and Applied Informatics



Table of Content

Session 1: INFORMATION SECURITY

Raising Cyber Security Awareness Across Smes: A Theoretical Perspective on the Effects of the Organizational, Technological and Psychological Aspects Milos ZEC, Miranda KAJTAZI	1
Using Data Mining Techniques to Predict the Level of Data Quality Erjon ZOTO, Dhimitri TOLE	2
Abusiveness of Bank Cards and the Assurance of Their Use Visar PACOLLI, Kozeta SEVRANI, Edmond HAJRIZI	3
Preventing Identity Fraud by Using Biometric Access Control System Miranda HARIZAJ, Petrika MARANGO	4
Analyzing of REST Services: Integration Services and Authorization Management Arbër BESHIRI	5
Efficient Record Linkage in Large Databases Gloria TYXHARI, Ogerta ELEZAJ	6
The Importance of IT General Controls for Information Security Enkeleda IBRAHIMI, Edlira MARTIRI	7
A Literature Review on SQL Injection: Vulnerabilities, Attacks and Their Prevention and Detection Techniques Bojken SHEHU	8
Design and Evaluation of Ad-IDS Algorithm Renalda KUSHE, Adrian SHEHU	8
Assessing Business Risk as Key Part of the BCP Project Gjergji MULLA, Alkid ADEMI	9
Software Reengineering for Various Imaging Modalities Integration of DICOM Images in PACS Edlira MARTIRI, Edlira KALEMI	10
Information Security in the Public Sector in Albania Elda KUKA, Edlira KALEMI, Ana SAVIC, Goran BJELOBABA	11
Email Security – Albanian Government Case Mirlinda KARÇANAJ, Blerina PIRANI	12

Session 2: ENGINEERING AND NETWORKS

The Levels of the Electromagnetic Radiation from the Radio Base. Stations of the GSM Operators in Albania. Algenti LALA, Bexhet KAMO	13
Conversion Charging Project in a Combined Environment (Mobile & Fix Telecommunication) in 4G Julian IMAMI, Lorena BALLIU	14
Trajectory Tracking Control for a Wheeled Mobile Robot Using Nonlinear PID Neural Based on Optimization Algorithm Margarita GJONAJ, Betim ÇIÇO	15
A Comparative Study on Four Phone Call Networks Orgeta GJERMENI, Deziana KAMBERI	16
TASM – A New Innovative Application for Student Attendance using RFID Krenare PIREVA, Edmond HAJRIZI, Lavdim MENXHIQI	17
Software Architecture - Challenges and Failures Jora BANDA, Bedrana MEKOLLI, Juli LOLOCI, Betim ÇIÇO	17
Optical Fiber as an Optical Waveguide Ledina KARTERI, Valma PRIFTI	18
Analysis of GPU Considering OS Terms using CUDA Framework Vladi KOLICI, Xhino PEÇI, Igli TAFA, Ilir SHINKO	19
Public Transportation Simulation by using Agent-Based Modeling: Case of Tirana Erilda DUZHA, Igli HAKRAMA	20
TCP Variants Behavior on MANET Anisa LUSHI, Inmerida HASA	21

Session 3: CLOUD COMPUTING AND MOBILE TECHNOLOGIES

Implementation of Cloud Computing Platforms in Albania. Data Security and financial impact for storing them within national boundaries Ergest ALITE, Olimpjon SHURDI	22
Data Confidentiality for Data Access Control on Cloud Esmeralda HYSENBELLIU	23
Design Diversity Fault Tolerant Approaches in Distributed Cloud Applications. Case Study: E-voting System Orges ÇIÇO, Zamir DIKA	24

Designing a Healthcare Information System using XML Web Services Tea TAVANXHIU, Romina MUKA, Klaudia ÇARÇANI	24
Inducting Modern University Service Solutions through Digitalization Edmond HAJRIZI	26
System Design and Management of UBT Center for Cyber Security and Privacy Edmond HAJRIZI	27
Vehicle-to-Infrastructure Communication Using 3G/4G Network for Better Public Transport Elson AGASTRA, Neki FRASHËRI, Tania FLOQI, Jorgaq KAÇANI, Frederik PREMTI, Jonida TETA, Eralda XHAFKA, Eno ZENELI	27
Testing and Reliability of Multicore Embedded Systems Hosting Multiple Operating Systems Orges ÇIÇO, Zamir DIKA	28
Cloud Computing Security Issues and Best Practices Elva LEKA, Bukuroshe XHAJA, Dorina GUXHOLLI, Anisa LUSHI	29
Use of Real Time Databases in Traceability Systems: Case of Albanian Viticulture Elira HOXHA, Kreshnik VUKATANA	29
Mobile Operating System. Android versus iOS Alsa KAZIU, Elda CINA, Eris ZEZO	30
Cloud Computing in Albanian Business Models Ezmolda BAROLLI, Albana GORISHTI	31
Other Optimizations for Reducing Energy Consumption through the Integration of Wireless Sensor Networks with Smart Grid Sonila HALILI, Blerina ZANAJ	32
Migration of Services to Cloud Computing: A Review of Network Challenges and Open Issues Elena CANAJ	34

Session 4: DIGITAL ECONOMY AND E-SERVICES

Peer Assessment Methodologies in the Digital Age: Literature Review on ICT Aspects of Peer Assessment Burim ISMAILI, Lejla ABAZI (BEXHETI), Adrian BESIMI, Betim ÇIÇO	34
Environmental Factors of EDI Adoption in Greek SMEs Ioannis ALLAGIANNIS	35

AML (Anti Money Laundering) System from Threat to Opportunity Evis DRINI, Rovena BAHITI, Valbona KARAPICI	36
Return migration and Brain Gain in Albania Esmeralda SHEHAJ	37
Delivering Quantitative Courses Online vs. Face-to-Face: Insights, Challenges, and Reactions Mirjeta BEQIRI, Atena BISHKA, Ardita BORICI	38
Payment Gateway Implementation in e-Albania Portal Mirlinda KARÇANAJ, Mimoza BALLGJINI, Blerina PIRANI	40
Design and Construction of the Room of Servers in the Public University, Comparison of Academic and Administrative Services after Digitalization Hilmi VARDARI, Edmond HAJRIZI, Muzafer SHALA	41
Social media and Knowledge Management in Albania Klodiana GORICA, Sokol LUZI	42
Ingredients in ITC Quality Management Gratiela Dana BOCA	43
Public – Private partnerships: A Theoretical Perspective on Benefits and Costs on Albanian Economy Olta MILOVA, Soana TEKA (JAUPLLARI)	44
Local Government and Its Organization in Poland Marek WOJCIECHOWSKI	45
Increase of E-Government Service Usability in Developing Countries, for a Better Citizens Services: Case Study Albania Vilma TOMÇO, Sanije ÇELA	45
Management of Natural Hazards through Geo Solutions Medjon HYSENAJ	46
Risk Management and Analyses in Oil Industry Blerta MJEDA	47
Evidence of Fiscal Policy and Labor Market in Albania Besa SHAHINI, Doloresa SINANAJ	48
A Theoretical Perspective of Debt Sustainability Approaches Edlira KALAJA, Arjeta VOKSHI	49
Informality, Causes and Results – Case of Republic of Macedonia Dashmir ASANI	50
Constructing a House Price Index for Albania Delina IBRAHIMAJ	51

The impacts of the Global Economic Crisis on the Tourism Sector. Case Study: Albania and the Region Rakela THANO, Veronika KALLANXHI	51
Albanian Products and the Related Policies and Instruments Oriented to the Alignment with the EU Acquis Arjana MISHA, Fatmir MEMAJ	52
The Impact of the Average age of Population at Retirement Security Olgerta IDRIZI	53
An Investigation to the Daily Exchange Rate Euro Albanian Lekë Rozana LIKO	54
The Efficiency Versus Activity Size for Albanian Banks Classification Suela KRISTO, Eri GJOKA	55
An Empirical Study about the Decomposition of Poverty Changes in Albania Ledia THOMO, Ines NURJA (HEBA), Kozeta SEVRANI	56
Corruption and Fraud Audit Elton KARAPICI, Vjollca IBRAHIMI	56
Academic Research in Finance, Evidence from Albania Dorina KRIPA, Brunilda NELI	57
E-Money Activity, Opportunities and Risks to be Considered Ermal HAXHIAJ, Artur RIBAJ	58

Session 5: MODELING AND SIMULATION

From Monetary Policy Decisions to the Economy: A Small Structural Calibrated Model for Albania Mimi KODHELI, Evelina ÇELIKU	59
Structural Convergence Model of Albanian Economy to the Region and European Union Ermelinda MEKSI, Ermelinda XHAJA (GJIKA)	61
Modelling and Simulation in Economy Andreas KÖRNER, Stefanie WINKLER	62
Experimenting with Text Classification Algorithms in News Articles: SVM vs. Naive Bayesian Algorithm Nuhi BESIMI, Visar SHEHU	63
Q-Functions Used in the Study of Exchange Rates for Currencies Traded in Albania and Balkans Dodë PRENGA, Julian FEJZAJ	64

Using a Queuing Model to Analyze the Client Service Performance of a Business Organization Majlinda GODOLJA, Denisa MILLO	64
Identifying the Impact of Monetary Policy on Government Bond Market in Albania through a Yield Curve Evaluation Anisa PLEPI	65
Comparing Methods in Estimating Oil Reserves. A Probability Approach. Case Study of Marinza Oilfield, M- Sector Robert KOSOVA, Valentina SHEHU, Alma STANA, Ditila EKMEKÇIU, Bashkim QERKINI	66
Application of Cut-Off Scores Methods Alfons HARIZAJ, Fatmir HOXHA	68
Modeling Heteroscedasticity of Albanian Exchange Rate Time Series in R Software Kristel BOZHIQI, Mirjeta DËRA, Rinela KAPÇIU	69
An Application of Decision Trees in Technology Daniela QËNDRAJ, Thoma MITRE, Etleva HALIDINI	70
A Banach Zarecky Theorem for Vector Functions Sokol KALIAJ	71
Binary Options in Forex versus Traditional Trading, Comparison and Evaluation Gert KALLBAQI, Aleksandër BIBERAJ	71
Forecasting the Maximum Power in Hydropower Plant using PSO Aurora SIMONI, Eralda DHAMO	72
Statistical Analysis of the Asymmetrical Economic Time Series in Albania Ornela SHALARI, Areti STRINGA	73
An estimation of the Food and Nonalcoholic Drinks group effects on the Consumer Price Index in Albania Valentina SINAJ, Arjan TUSHAJ	74
The Risk Management & VAR Method Glediana ZENELI, Elva URUÇI	74
Comparing the Efficiency of CID Distance and CORT Coefficient for Finding Similar Subsequences in Time Series Eralda DHAMO, Nertila ISMAILAJA, Eglantina KALLUÇI	75
A Mathematical Model to Determine the Market Value of Apartments in Tirana city- Albania Mentor BALILAJ, Elfrida SHEHU, Teuta MYFTIU	76

Factorial Analysis of the Business Relationship with Neighboring Countries and Business Development in the Vlora Area Zamira SINAJ	77
Use of Variation Analyses in Marketing Decision Making - Case Study of Market Basket Products Elmira KUSHTA, Fatmir MEMAJ	78
Improved Techniques and Algorithmic in Solving Problems in Socio-Economic Application Julian FEJZAJ, Dodë PRENGA	79
A Study on the Similarity of Time Series of Consumer Price Index Edjola NAKA	80
Filtering Time Series Using the Filter Hodrick-Prescott Arjola SINANI	80

Session 6: INFORMATION SYSTEMS

Absorptive Capacity using Knowledge Management System in Emerging Countries in Manufacturing Plants Betim ÇIÇO, Zamir DIKA, Haris MEHMETI	81
Informed Systems: Essential Elements for Learning Organizations Mary M. SOMERVILLE	81
Elasticsearch for a Business Logging Infrastructure Embedded in a Business Process Management Application Tea TAVANXHIU, Brisilda MUNGULI	82
Transport Tracking System – Implemented and Tested for Tirana Bus Route Eda DOKO, Muhammed MURAT CENGIZ, Betim ÇIÇO	83
The Emergence of Open Source Information Retrieval Software Libraries as an Alternative to DWH Using Schema-Less Database in a Non-Traditional BI Initiative Kozeta SEVRANI, Andrea ALBERICI, Eugenio BRENTARI	84
E-Commerce for Standardization Systems Genci SHARKO, Anni DASHO, Romeo TENEQEXHI	86
The Effective usage of Durres Seaport Container Terminal Capacity using an Agent-based Modeling Approach Egi AGOLLI, Igli HAKRAMA	87

Web Applications Development by UET-ICT Group - A New Challenge for European University of Tirana Anni DASHO, Genci SHARKO, Nevila BACI, Albana GORISHTI	88
Innovation Solutions In E-Governance on the Example of Albania and Poland Renata PISAREK, Gert DRAGOSHI	88
Organizational and Administrative Innovations in Polish Local Government Aldona PODGORNIAK – KRZYKACZ	89
Innovations in the Management of Local Development. The Case of Poland Justyna PRZYWOJSKA	90
Application of GIS in the Study of Noise Pollution in Tirana Ariana BEJLERI	90
Corporate Social Responsibility under the Influence of Globalization Veronika KALLANXHI	91
Digitalization of Immovable Property Registration System in Albania Marsela THANASI	92
