UPT

FACULTY OF
INFORMATION
TECHNOLOGY

PROGRAM GUIDE

ICITEE 23

The 2nd International Conference on Information Technologies and
Educational Engineering

December 15-16, 2023

Tirana, Albania

Organized by:

Faculty of Information Technology
Polytechnic University of Tirana

Supported by:

Raiffeisen Bank

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Friday, December 15, 2023

Location: Room 303, Faculty of Information Technology

11:30-12:00   *Registration & Coffee*

12:00-12:30   *Opening Ceremony*

Welcoming speeches

Prof. Elinda Meçe
Dean of the Faculty of Information Technology
ICITEE 23 Conference Chair

Prof. Andrea Maliqari
Rector of the Polytechnic University of Tirana

12:30-13:30

Keynote I

"Non-Terrestrial Networks: a new role for Satellite Communications"
Prof. Luigi Boccia, *Università della Calabria, Italy*

Keynote II

Prof.Asoc. Adrian Shehu, *CEO TCN, Albania*

13:30-15:00   *Welcome Reception*

15:00-16:30   *Workshop: "The latest technology trends in Industry"*

"Life in the Cloud"
Mr. Ardit Shehu, *Raiffeisen Bank Albania*

"Modernization of the IPTV television platform at One Albania operator"
Mr. Ilir Duka, *CTO, ONE Albania*

"Beyond Manual: Unleashing the power of Test Automation"
Mrs. Klaus Coka, *Raiffeisen Bank Albania*

"Powering the next-generation of data-driven business"

Mr. Florjan Çala, *CDATA Software Albania*

Saturday, December 16, 2023
Location: Faculty of Information Technology

09:00-09:30   *Registration*

09:30-10:00

Keynote I

"Using Robust Optimization to design resilient optical wireless networks"
Prof. Dritan Naçe, *Université de Technologie de Compiègne, France*

Room:303

10:00-12:00   *Parallel Sessions I*

ICITEE S1: Advancements in Artificial Intelligence in Albania and the Albanian Language
Chair: Dr. Nelda Kote, Polytechnic University of Tirana, Albania
Room: 303

Adapting Handwritten Text Recognition to Albanian Language: Leveraging Synthetic Datasets and Pre-Trained Models
Evis Trandafili and Stela Paturri

A Comparative Analysis of Machine Learning and Deep Learning Methods for Sentiment Analysis in the Albanian Language
Alba Haveriku, Sidorela Bejdo, Nelda Kote and Elinda Kajo Meçe

Sentiment Analysis of Social Media Posts in Informal Albanian Language Using Artificial Intelligence Techniques
Nelda Kote, Hakik Paci, Eda Graceni and Alba Haveriku

Assessing AI Maturity, the precondition building the Path to Responsible AI Implementation in Albania
Erjon Curraj

Feature engineering for sentiment analysis on Albanian corpora
Besjana Muraku, Nelda Kote and Elinda Kajo Meçe

An agglomerative hierarchical clustering method for text in Albanian
Luela Prifti, Denisa Salillari and Najada Firza

Reforming Legalization Process: An AI-driven Model for Property Title Evaluation in Albania
Erison Ballasheni, Vladi Koliçi, Ilir Shinko, Bexhet Kamo, Gani Demiraj

ICITEE S2: Network Operation and Management
Chair: Prof. Elson Agastra, Polytechnic University of Tirana, Albania
Room: 302

FMCW Radar based Monitoring of Distracted Pedestrians Gait with Machine Learning
Antonio Nocera, Michela Raimondi, Gianluca Ciattaglia, Linda Senigagliesi and Ennio Gambi

Design of an optical fiber distribution system based on Fiber to the home technology, FTTH. A real application case using COMSOF and QGIS
Ornela Gjoni, Ilir Shinko, Bexhet Kamo and Vladi Kolici

Empirical Evaluation of Local Distributed Algorithms for Task Allocation in Network of Nodes
Dorian Minarolli

VANET-Radar Integration: Challenges and strategies for issue mitigation
Orjola Jaupi and Evjola Spaho

Analysis and regulation of intermodal transportation networks affected by disruptive events
Lediana Islamaj, Vladi Koliçi, Simona Sacone, Cecilia Pasquale and Endrit Lugji

ICITEE S3: Insights into Artificial Intelligence Systems: Ethics, Emotions, and Practical Applications
Chair: Dr. Dorian Minarolli, Polytechnic University of Tirana, Albania
Room: 304

Legal and Ethical Aspects of Artificial Intelligence: An Evaluation Based on Bibliometric Analysis
Yusuf Kaçar, Halil İbrahim Cebeci and Emrah Aydemir

Emotional Traces Behind the Videos: Analysis of YouTube Comments
Okan Karakaya and Emrah Aydemir

Predicting bachelor's students' academic performance with machine learning algorithms
Aida Shasivari, Paola Shasivari and Aleksander Xhuvani

Data Quality Analytics for Customer-Level Dataset
Brunela Karamani

The Role of Generative AI in 3D Modeling and Printing Efficiency
Anduel Kuqi, Ambra Korra and Indrit Enesi

Integrating Physics-Informed Machine Learning with Second-Order Discrete Traffic Models for Traffic State Estimation
Kleona Binjaku, Elinda Kajo Meçe, Simona Sacone and Cecilia Pasquale

Sign Language Recognition through Machine Learning Techniques
Evis Trandafili, Hakik Paci and Egisa Fusha

12:00-12:30 *Coffee Break*

12:30-14:00 *Parallel Sessions II*

ICITEE S4: Innovations in Optimization: from Communication Networks to Transportation and Supply Chains
Chair: Dr. Ilir Shinko, Polytechnic University of Tirana, Albania
Room: 303

Application of multiobjective evolutionary algorithms for solving the spectral and energy efficiency trade-off problem in Massive MIMO systems: A literature review
Eni Haxhiraj, Elson Agastra and Bexhet Kamo

A New Energetic Reasoning for the Cumulative Scheduling Problem
Kristina Kumbria, Jacques Carlier, Antoine Jouglet and Abderrahim Sahli

An approach to optimize the railway resource planning process in a microscopic scale
Estia Maliqari, Dritan Nace, Antoine Jouglet, Giuliana Barbarino and Elinda Kajo Meçe

Traffic Simulation-Based Optimization of the Tirana Roundaboat: A Case Study
Veranda Syla and Aleksander Biberaj

Optimizing Warehouse Storage: The Location Assignment Problem
Ermal Belul, Dritan Naçe, Antoine Jouglet and Marwane Bouznif

Forecasting Product Demand for Inventory Optimization in the Petroleum Supply Chain
Ina Dervishi, Rexhina Hoxha, Ilir Shinko, Roberto Sacile and Enrico Zero

ICITEE S5: Software Engineering and Applications
Chair: Dr. Hakik Paci / Dr. Ina Papadhopulli, Polytechnic University of Tirana, Albania
Room: 302

Online payments using paypal in e-commerce WEB applications, a practical implementation case.
Bruna Biçaku, Ilir Shinko, Bexhet Kamo and Vladi Koliçi

Building High-Performance ETL Systems Using Microservices and Distributed Messaging
Ina Papadhopulli and Igli Balla

Checking student attendance in classes using mobile devices
Hakik Paci and Evis Trandafili

Implementation of reflective programming in .NET
Hakik Paci and Nelda Kote

Analyzing the dynamics of ERP selection across diverse company profiles
Ernest Shahini and Ana Ktona

ICITEE S6: Internet of Things and Engineering: From Home Automation to Sensing Technologies
Chair: Prof. Asoc. Evjola Spaho, Polytechnic University of Tirana, Albania
Room: 304

Design and Implementation of a Smart Home Automation System based on remote control from Home Kit and Android.
Erilda Muka, Elvis Avdyli and Gerti Mecaj

A Comparative Analysis of Multi-Sensor Radar Integration for Human Activity Recognition
Djazila Korti and Zohra Slimane

Regenerative energy management-reuse algorithm in UPSsupplied systems
Fatmir Basholli and Bexhet Kamo

A personalized low cost solution for supervision and control of HVAC/r systems via Modbus protocol
Jonadri Bundo, Genci Sharko, Denis Panxhi and Darjon Dhamo

Real-Time Detection of Unusual Events in the Petrol Products Logistics
Anjeza Hoxha, Kleona Binjaku, Elinda Kajo Meçe, Roberto Sacile and Enrico Zero

Wearable sensors for cardiac desease monitoring using IoT
Gledis Basha, Lorena Balliu and Elma Zanaj

14:00-15:00 *Lunch*

15:00-15:30

Keynote II

Prof. Asoc. Igli Tafa, *General Director and National Cyber Coordinator of AKCESK, Albania*

Room:303

15:30-16:30 *Parallel Sessions III*

ICITEE S7: Innovation Technology in Education
Chair: Prof. Aleksander Biberaj, Polytechnic University of Tirana, Albania
Room: 303

Automatic Literature Review based on AI (OpenAI)
Adrian Besimi, Nuhi Besimi and Xhemal Zenuni

Ranking of Universities using Majority Judgment
Genta Babasuli, Dritan Naçe, Ina Papadhopulli and Nelda Kote

Penetration Rate and Application of IoT, IoE and Green Transformation in the ICT Curricula: Assessment of the Current Situation in Six Western Balkan Universities
Evjola Spaho, Enida Sheme and Aleksander Biberaj

Teaching Microservice Architectures: An Experience Report
Klesti Hoxha

ICITEE S8: Cyber Security, Privacy, and Cloud Computing
Chair: Prof. Asoc. Enida Sheme, Polytechnic University of Tirana, Albania
Room: 302

Systematic Literature Review for Security in Cloud Computing
Anduena Dibra and Igli Tafa

Quantum Computing: A Risk or Challenge to Modern Cryptographic Algorithms
Elior Vila

Definition and implementation of the Static and Dynamic Application Security Testing Tools in web-based information systems applied to logistics
Endrit Lugji, Ilir Shinko, Roberto Sacile and Enrico Zero

A Glimpse into Digital Hardware Design in the Era of Large Language Models: A simple microprocessor design example
Gani Demiraj, Ilir Shinko, Vladi Koliçi, Bexhet Kamo and Erison Ballasheni

ICITEE S9: Computer Vision and Applications
Chair: Prof. Indrit Enesi, Polytechnic University of Tirana, Albania
Room: 304

Efficiency and Performance Evaluation of Inception-V3 and Inception-ResNet-V2 in Image Classification
Ambra Korra, Anduel Kuqi and Indrit Enesi

Enhancing disease detection through Machine Learning for imaging data analysis in the context of healthcare applications.
Lorena Balliu, Gledis Basha and Elma Zanaj

Capacitated Clustering Approaches in the Assignment of Service Stations to Multi-Depots
Ronaldo Rexhmati, Kleona Binjaku, Enida Sheme, Roberto Sacile and Enrico Zero

Time Efficacy Analysis of Finger Vein Recognition using Local Line Binary Pattern
Blerina Zanaj and Virtyt Lesha

20:00-23:00   *Gala Dinner*

Location: Hotel Xheko Imperial
Rruga "Ibrahim Rugova" Nr.56/H2, 1019, Tirana, Albania