



| Date | Time | Main Hall | Hall 1 | Hall 2 |
|--------------------------|---------------|---|--------|-------------|
| Saturday, September 21st | 08:30 - 10:30 | REGISTRATION * | | |
| | 10:30 - 12:00 | ME | ImProc | SmartBioMed |
| | 12:00 - 13:00 | Lunch** break | | |
| | 13:00 - 13:30 | CONFERENCE OPENING | | |
| | 13:30 - 14:15 | PLENARY LECTURE 1 prof. Markos Papageorgiou | | |
| | 14:15 - 15:00 | PLENARY LECTURE 2 prof. Fisnik Dalipi | | |
| | 15:00 - 16:00 | Coffee break | | |
| | 16:00 - 17:00 | SPECIAL SESSION DEDICATED TO prof. Mile Stankovski | | |
| | 17:00 - 18:30 | ProcCont | ICT | ML1 |
| | 19:30 - 21:00 | Welcome cocktail | | |

| Date | Time | Main Hall | Hall 1 |
|------------------------|---------------|---|--------|
| Sunday, September 22nd | 10:00 - 10:45 | PLENARY LECTURE 3 prof. Oscar Mayora | |
| | 10:45 - 11:30 | PLENARY LECTURE 4 prof. Tomislav Stankovski | |
| | 11:30 - 12:00 | SPONSOR PRESENTATION IEEE | |
| | 12:00 - 13:00 | Lunch** break | |
| | 13:30 - 15:00 | CybSec | IoT |
| | 15:00 - 16:00 | Coffee break | |
| | 16:00 - 16:30 | SPONSOR PRESENTATION Makedonski Telekom | |
| | 16:30 - 18:00 | ROUND TABLE: Emerging Trends and Challenges in Cyber Security | |
| | 19:30 - | Gala dinner | |

| Date | Time | Main Hall | Hall 1 |
|------------------------|---------------|----------------------------|--------|
| Monday, September 23rd | 09:00 - 10:30 | Cont | ML2 |
| | 10:30 - 11:00 | CLOSING CEREMONY | |
| | 11:30 - 15:00 | Social event / Sightseeing | |

* The registration desk will be open all days from 08:30 - 16:00.

** If included with room.

| SESSION NAME AND CHAIR | ID | TITLE | AUTHORS |
|--|----|--|--|
| Metrology and Electronics ME Sat 21/9 10:30 - 12:00 Session Chair: Mare Srbinovska | 18 | Determination of the Maximum Clock Frequency of 8-bit Serial Converters for Maximum Length Sequence to Natural Binary Code | Milan Dinčić, Goran Miljković, Milica Stojanović, Dragan Denić and Ivana Randelović |
| | 20 | Performance Evaluation of the 24-bit Floating Point Format in Different Variance Ranges for Digital Representation of Measurement Data | Milan Dinčić, Zoran Perić, Dragan Denić, Sofija Perić, Jelena Jovanović and Aleksandar Jocić |
| | 29 | DC-DC Converters in GaN Technology – measurements and SPICE simulations | Marko Kamilovski and Katerina Raleva |
| | 50 | Dixon Outlier Detection Approach Implemented in Sensor-to-Microcontroller Interface | Zivko Kokolanski, Mare Srbinovska, Kiril Demerdziev and Vladimir Dimcev |
| | 13 | Ultra-low power wrapper of the Ethos-U55 AI accelerator in the PSOC [™] Edge E84 MCU | Aleksandar Simevski, Henrik Hostalka and Bernd Waschneck |
| | 58 | Comparison of the properties and efficiency of photovoltaic cells | Filip Bojadjevski, Katerina Raleva, Marija Kalendar, Asami Mei and Ma Depu |
| Image Processing and Recognition ImProc Sat 21/9 10:30 - 12:00 Session Chair: Tomislav Kartalov | 42 | PointFEIT – Point Feature Extraction with Image PreTraining for 3D Semantic Segmentation | Dimitar Dimeski, Hristijan Gjoreski and Gorjan Nadzinski |
| | 51 | Siamese Neural Network Architectures for Efficient Person Re-identification | Elena Vasileva, Tatjana Petkovska and Zoran Ivanovski |
| | 52 | Siamese Networks for Vehicle Re-Identification | Monika Todevska, Elena Vasileva and Zoran Ivanovski |
| | 15 | Automatic private parking system using license plate recognition and car make and model recognition | Darko Pajkovski, Ilija Jolevski and Nikola Rendevski |
| | 57 | System for Visual Graphic Animation and Recognition of Macedonian Sign Language Using Machine Learning and 3D Visualisation Tools | Teodora Kochovska, Marija Kochovska, Bojana Velichkovska and Marija Kalendar |
| Smart Biomedicine SmartBioMed Sat 21/9 10:30 - 12:00 Session Chair: Branislav Gerazov | 12 | Assistive Keyboard for Children With Ataxia | Martin Milanoski, Vladimir Kitanovski, Marko Zajkov, Nikola Jovanovski, Danche Todorovska and Branislav Gerazov |
| | 14 | Open ended acoustic obstacle avoidance interface for visually impaired people based on consumer grade mobile device | Ana Sofronievska, Piotr Walas, Daniela Stojceska, Hristijan Slavkoski, Kristijan Lazarev and Branislav Gerazov |
| | 31 | Exploring Pigmented Skin Mole Borders: Minkowski Dimensions in Malignancy Detection | Mia Darkovska, Ilija Mizhimakoski, Ana Ristovska Dimitrovska and Vesna Andova |
| | 39 | Health Risk Prediction for Children Built on a Combination of Heterogeneous Datasets | Sebastijan Kramar, Marko Jordan, Marcel Založnik, Nina Rescic and Mitja Lustrek |
| | 47 | Recognizing Finger Flexions From EMG Signals Using Wavelet Transform and Machine Learning | Klimentina Paunkoska, Gorjan Nadzinski, Blagoj Hristov and Vesna Ojleska Latkoska |
| | 49 | Gesture control robotic arm using flex sensors | Hristijan Ivanoski and Katerina Raleva |
| Process Control in Industry and Manufacturing ProcCont Sat 21/9 17:00 - 18:30 Session Chair: Dushko Stavrov | 10 | Design and implementation of a laboratory-scale photobioreactor | Jovan Kamchev, Bojan Glushica, Martin Milanoski, Toni Atanasovski, Bojan Ginoski, Nikola Jovanovski, Mario Makradulij, Darko Dimitrovski and Branislav Gerazov |
| | 27 | Integrated Hybrid Manufacturing: Design, Control and Implementation of a Dual-Function CNC Machine | Nikola Jovanovski and Josif Kjosev |
| | 53 | Modern SCADA Solution for Mitigation of Water Losses in Water Distribution Network | Stefan Boshkovski, Gorjan Nadzinski, Goce Taseski and Mile Stankovski |
| | 32 | Model Predictive Control of a 2-DOF Robotic Arm and Comparative Analysis with Fuzzy Logic Control | Marija Bikova, Dushko Stavrov, Vesna Ojleska Latkoska and Blagoj Hristov |
| | 33 | Optimal Control Algorithm for Electrical Load Management in Touring Buses and Comparative Analysis with Fuzzy Logic Control | Boris Butevski, Vesna Ojleska Latkoska, Dushko Stavrov and Gorjan Nadzinski |
| Information and Communications Technology ICT Sat 21/9 17:00 - 18:30 Session Chair: Marko Porjazovski | 21 | Segment Routing IPv6 for Future Networks | Toni Janevski and Darko Koloski |
| | 22 | Technical Aspects of using SRv6 compared to MPLS for a Telecom Operator | Toni Janevski and Olivera Koteska |
| | 25 | The impact of SD-WAN on the Quality of Services compared to Traditional WAN | Mitko Jankuloski and Stojan Kitanov |
| | 28 | Optimization and Testing of Smart Contracts for Generation and Verification of Academic Diplomas | Avni Rustemi, Fisnik Dalipi, Vladimir Atanasovski and Aleksandar Risteski |
| | 41 | AI Strategies for Reducing Carbon Footprint in the ICT Sector: An Evaluation through the Science-Based Targets Initiative | Jelena Gjorgjev, Nexhibe Sejfuli-Ramadani, Valentina Angelkoska, Valentin Rakovic and Aleksandar Risteski |

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| <p align="center">Machine Learning 1 ML1</p> <p align="center">Sat 21/9 17:00 - 18:30</p> <p>Session Chair: Tomislav Kartalov</p> | 8 | Static, Dynamic, and High-Order Functional Connectivity Analysis in Schizophrenia and Bipolar Disorder Differentiation | Daniela Janeva, Martin Breyton, Spase Petkoski and Branislav Gerazov |
| | 17 | Comparative Sentiment Analysis and Semantic Meaning in Text using sentiment models from Hugging Face and Power Automate | Aneta Trajkovska and Ilija Jolevski |
| | 26 | Optimizing Sensor Configuration on OCOSense for Accurate Detection of Facial Gestures | Ana Sofronievska, Daniela Stojceska, Jovana Angelovska, Sandra Shukleva, Borjan Sazdov and Hristijan Gjoreski |
| | 30 | A system for voice control of mobile robotic devices in real time in Macedonian language | Marija Neceva, Branislav Gerazov, Zoran Ivanovski and Tomislav Kartalov |
| | 38 | Optimizing Chewing Rate Estimation: Insights from Sensor Data using OCOSense glasses and Machine Learning | Mia Darkovska, Kristina Kalamukoska, Damjan Mihajloski, Ognen Sekuloski, Hristijan Gjoreski and Simon Stankoski |
| | 11 | Performance comparison between PPG and ECG based heart rate detection | Marko Petrov, Branislav Gerazov, Nikola Jovanovski and Tomislav Kartalov |
| <p align="center">Cyber Security Applications CybSec</p> <p align="center">Sun 22/9 13:30 - 15:00</p> <p>Session Chair: Marko Porjazovski</p> | 6 | GPU-Accelerated Password Hacking: Analyzing Performance Across Varied Password Lengths | Bisera Naumovska, Aleksandar Cvetanov, Bojana Velichkovska, Goran Jakimovski and Danijela Efnusheva |
| | 7 | Web Application for Web Attack Detection Through Network Traffic Analysis | Ivana Dineva, Danijela Efnusheva and Goran Jakimovski |
| | 40 | Analysis of models for detection of cyberattacks in computer systems and networks | Georgi Kamchevski, Dimitar Gugucheski and Hristijan Gjoreski |
| | 55 | Binary Classification of VPN Proxy IP Address | Teodora Kochovska, Marija Kochovska, Ana Cholakovska Cilakova and Danijela Efnusheva |
| | 56 | A Review on Machine Learning Based Intrusion Detection System: Techniques, Public Datasets and Challenges | Goce Stevanovski, Marko Porjazovski, Ivo Paunovski, Monika Kachurova and Aleksandar Risteski |
| <p align="center">Internet of Things IoT</p> <p align="center">Sun 22/9 13:30 - 15:00</p> <p>Session Chair: Hristijan Gjoreski</p> | 36 | An IoT System for Detection and Displaying of PM Particles Concentrations in the Air | Josif Kjosev, Nikola Jovanovski, Marko Petrov, Filip Petkovski, Tijana Petkovska and Andrej Ilievski |
| | 2 | Ethical Aspects in Building a Short-Range Object Detection Radar System with Arduino Mega 2560 | Rexhep Mustafovski, Aleksandar Risteski and Tomislav Shuminoski |
| | 46 | Digital development board for short distance detection in a 360-degree | Rexhep Mustafovski, Aleksandar Risteski and Tomislav Shuminoski |
| | 45 | Ambient CO2 and Temperature IoT Monitoring Solution | Aleksandar Kormushoski, Marija Kalendar, Ana M. Lazarevska and Valentina Gecevska |
| | 48 | Design and Implementation of a Cloud-based System for IoT Sensor and Security Metrics Analysis | Marija Andonovska, Marija Kalendar and Daniel Denkovski |
| | 9 | Enhancing Music Genre Classification: A Divide and Conquer Approach | Alek Pachemski, Ivan Jovanovski and Hristijan Gjoreski |
| <p align="center">Control and Control Applications Cont</p> <p align="center">Mon 23/9 09:00 - 10:30</p> <p>Session Chair: Vesna Ojleska Latkoska</p> | 24 | Complex Networked Time-delay Systems: Synchronization by Variable-Structure Control Coordinator | Georgi Dimirovski, Mile Stankovski and Boban Temelkovski |
| | 43 | Modelling, Simulation and Development of a Test Rig for Comparative Analysis of Temperature Controllers | Ana Sofronievska and Filip Donchevski |
| | 35 | Quality control with real-time data analysis using intelligent algorithms | Aleksandar Arsovski, Vesna Ojleska Latkoska, Dushko Stavrov and Mile Stankovski |
| | 34 | Designing Haptic Interfaces for the Internet of Things: An Open-Source Experimentation Platform | Alper Başaran and Dilek Tükel |
| | 44 | A Fuzzy Systems Approach to Discrete-time Sliding-mode Control for Uncertain Nonlinear Plant Systems | Yuanwei Jing, Yan Zheng, Gorjan Nadzinski and Georgi Dimirovski |
| <p align="center">Machine Learning 2 ML2</p> <p align="center">Mon 23/9 09:00 - 10:30</p> <p>Session Chair: Gorjan Nadzinski</p> | 23 | Artificial Intelligence architectural, regulatory and business framework for telecom networks | Dimitar Tanevski, Toni Janevski and Venceslav Kafedziski |
| | 54 | Bitcoin Price Prediction Using Machine Learning Algorithms | Teodora Kochovska, Marija Kochovska, Valentina Angelkovska, Pero Latkoski and Aleksandar Risteski |
| | 37 | A Comparison of Gradient Boosting Algorithms: XGBoost, CatBoost, and LightGBM | Ognen Pendarovski, Kristijan Milosheski and Hristijan Gjoreski |
| | 16 | Analyzing Telecom Customer Churn using Machine Learning | Stefan Shipinkoski and Hristijan Gjoreski |
| <p>Special Session Dedicated to prof. Mile Stankovski</p> <p align="center">Sat 21/9 16:00 - 17:00</p> <p>Session Chair: Georgi Dimirovski</p> | 19 | Dynamic Graphs, Networks-of-Networks with Faulty Inter-network Connections, Pinning-control Synchronization Coordinator: Coincidences and Confluences | Georgi Dimirovski, Jinde Cao, Tao Ren, Lin Lin and Mile Stankovski |