

WEDNESDAY October 11, 2023

07:30 – 08:30	Breakfast
08:00 – 09:30	Registration of the participants
09:30 – 09:45	◇ Opening of the Conference
09:45 – 11:15	Talks in session: Communication Technologies and Signal Processing I
11:15 – 11:30	Coffee break
11:30 – 12:00	Conference Partner Presentation
12:00 – 13:30	Lunch
13:30 – 15:00	Talks in session: Communication Technologies and Signal Processing II
15:00 – 15:30	Coffee break
15:30 – 17:00	Talks in session: Information Technologies and Information Processing I
17:00	Dinner

Talks in sessions:

◇ Information Technologies and Information Processing I

Chairperson: Marcel Harakal'

09:45 - 10:00	Feedforward Neural Network Classification of Tree Species Using Hyperspectral Imagery (Lenka Skovajsová, Bianca Badidová, Michaela Bilanská, Lubomir Deder, Martin Javurek, Miroslav Ďulík)
10:00 - 10:15	Implementation and Evaluation of Video Codecs in OpenCV for Real-time Object Detection (Ivan Suchý, Michal Turčaník)
10:15 - 10:30	Detection of Selected Attacks Based on ANN and Classifiers (Július Baráth, Michal Turčaník)
10:30 - 10:45	Comparing Signature Detection of Convolutional Neural Network in Low-level and Large Language Model in High-level Programming Language (Matej Adamec, Michal Turčaník)
10:45 - 11:00	Advanced Anti-Forensic Protection of Mobile Applications (Sebastián Potocký, Jozef Štulrajter)
11:00 – 11:15	Derivation of Two-point Difference Track Initiation Method for CWPA Model (Adam Beňo, Michal Turčaník)
11:30 – 12:00	Application of AI Methods in isolated environment (Microsoft)

◇ Communication Technologies and Signal Processing I

Chairperson: Miroslav Liška

13:30 - 13:45	SPIICE Modeling of Analog Circuits Containing Constant Phase Elements (Dalibor Bielek, Viera Biolková, Zdeněk Kolka, Zdeněk Bielek)
13:45 - 14:00	Design of Automatic Radiation Detection System as a Part of Radiation Protection in Linear Accelerator Facilities (Martin Dugas, Norbert Ferenčík, Radovan Hudák, Zuzana Naďová, Petra Kolembusová, William Steingartner)
14:00 - 14:15	Anomaly detection from TLE data (František Dráček, Jiří Šilha, Roman Ďurikovič)
14:15 - 14:30	Practical Use of Probabilistic Signal Processing Model Technology in Military (Radoslav Masnica, Jozef Štulrajter)
14:30 – 14:45	Monitoring of overhead power lines using an innovative modular system (Ján Gbelec, Ľuboš Pavlov, Jozef Madanský, Peter Bojda)
14:45 - 15:00	Hyperspectral Data Acquisition for Military Camouflage in Vegetation – Preliminary Results (Vaclav Krivanek, Jean Motsch, Yves Bergeon)

◇ Information Technologies and Information Processing II

Chairperson: Lubomir Deder

15:30 - 15:45	Docker-based Assignment Evaluations in E-learning (Jakub Dubec, Rastislav Bencel, Ján Balážia, Pavel Čičák)
15:45 - 16:00	Dangling Predicates and Function Call Optimization in the Oracle Database (Michal Kvet)
16:00 - 16:15	Oracle Application Express as a Tool for Teaching Web Software Development (Ivan Pastierik, Michal Kvet)
16:15 – 16:30	Improving the Quality of Automated Vehicle Control Systems using Video Compression Technologies for Networks with Unstable Bandwidth (Vladimir Khilenko, Andrii Zinchenko, Marek Galinski, Volodymyr Danylov)

16:30 - 16:45	Contribution to Pixel-Based Hyperspectral Classification of Tree Species by 1D-CNN (Michaela Bilanská, Miloš Očkay, Radoslav Forgáč, Martin Javurek, Bianca Badidová, Peter Krammer)
16:45 – 17:00	A Modified STAP Algorithm for Ground-Based Radar (Jana Loncová, Ján Ochodnický)

THURSDAY October 12, 2023

07:30 - 08:30	Breakfast
08:30 - 10:00	Talks in session: Cybersecurity
10:00 - 10:30	Coffee break
10:30 - 12:00	Talks in session: Communication Technologies and Signal Processing III
12:00 - 13:30	Lunch
13:30 - 18:00	Sport and recreational activities
19:00	◇ Reception

Talks in sessions:

◇ Cybersecurity

Chairperson: Július Baráth

08:30 - 08:45	Integrated, Language Oriented Cyber Security Glossary (Ladislav Burita)
08:45 - 09:00	Practical Aspects of Attacks Against Remote MS Windows Corporate Environment (Martin Pavelka, Jan Lasteinec)
09:00 - 09:15	Application of Neural Networks in Data Communication Analysis (Bianca Badidová, Michal Turčaník)
09:15 - 09:30	Adverse Media Screening Portal (Richard Marko, Michal Ries)
09:30 - 09:45	Generative Neural Networks as a Tool for Web Applications Penetration Testing (Petr Gallus, Marcel Štěpánek, Tomáš Ráčil, Petr Františ)
09:45 - 10:00	Cyber-attack Vectors Focused on Additive Manufacturing (Tomáš Šljajs, Ivo Klaban, Petr Františ)

◇ Communication Technologies and Signal Processing II

Chairperson: Michal Turčaník

10:30 - 10:45	Localization of Modulated Signal Emitters using Doppler-based Method implemented on Single UAV (Rafal Szczepanik, Jan M. Kelner)
10:45 - 11:00	Heterogeneous Wireless Sensor Networks Enabled Situational Awareness Enhancement for Armed Forces Operating in an Urban Environment (Pawel Kaniewski, Janusz Romanik, Krzysztof Zubel, Edward Golan, Maria D. R-Moreno, Pawel Skokowski, Jan M. Kelner, Krzysztof Malon, Krzysztof Maślanka, Emil Guszczynski, Łukasz Szklarski, RR Venkatesha Prasad)
11:00 – 11:15	Centralized Communication Scheduler for LoRa (Vanesa Milonová, Mátyás Neillinger, Ladislav Zemko, Pavel Čičák)
11:15 - 11:30	Improved Visibility of LoRa Networks Using LoRa Performance Evaluation Tool (Kristián Rončević, Alexander Valach, Pavel Čičák)
11:30 - 11:45	Carrier Sensing of LoRa@FIIT Devices (Michal Greguš, Alexander Valach, Pavel Čičák)
11:45 - 12:00	LoRa Industrial Monitoring and Management Network (Dominik Bucko, Alexander Valach, Pavel Čičák, Marcel Baláž, Ondrej Kachman)

PhD. students registered for PhD. prize

FRIDAY October 13, 2023

07:30 - 08:30	Breakfast
08:30 - 10:00	Talks in session: Information Technologies and Information Processing II
10:00 - 10:30	Coffee break
10:30 - 11:30	Talks in session: Communication Technologies and Signal Processing IV
11:30 - 12:00	♦ Ph.D.Prize+Closing of the Conference
12:00	Lunch

Talks in sessions:

♦ **Communication Technologies and Signal Processing III**

Chairperson: Marián Babjak

08:30 - 08:45	Network Centric Warfare and OODA Loop (Martin Révay, Miroslav Liška)
08:45 - 09:00	The Influence of Different Materials on the Magnetometer Operation (Miroslav Matejcek, Mikuláš Šostronek, Zdeno Baráni)
09:00 - 09:15	Optimization of Loudspeaker Design for Sound Reproduction in Acoustically Non-treated Environments (Rastislav Ledaj, Marian Babjak)
19:15 - 09:30	Algorithm for Radar Range-Doppler Maps with UAV Micro-Doppler Signatures Generation (Stanislava Gazovova, František Nebus, Jozef Perďoch, Miroslav Páček)
09:30 - 09:45	Coherent Direction Finder Model with Quadrature Signal Processing in the HF Band (Miroslav Páček, Jozef Perďoch, Zdeněk Matoušek)
09:45 - 10:00	Yolo-based Partial Discharge Detector Using Acoustic Emission Data (Miloš Očkay, Radoslav Forgáč, Martin Javurek, Marcel Harakaľ, Ľuboš Skurčák, Ľuboš Pavlov)

♦ **Communication Technologies and Signal Processing IV**

Chairperson: Jozef Štulrajter

10:30 - 10:45	Temperature Impact on Clock Stability of Ultra WideBand Chip Decawave DW1000 (Marián Babjak, Stanislava Gažovová)
10:45 - 11:00	Statistical Characteristics of Location and Location Variability Estimation in Ultra Wideband Indoor Positioning System (Martin Marko, Rastislav Ledaj, Stanislava Gažovová, Marian Babjak)
11:00-11:15	Deployment Scenarios of 5G Networks in Military Communication and Information Systems in the Slovak Armed Forces (Štefan Gašo, Marian Babjak)
11:15-11:30	Advanced Methods for Network Infrastructure Analysis and Security (Miroslav Ďulík, Marcel Harakaľ, Martin Javurek)



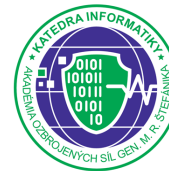
Communication and Information Technologies

Conference Program



**12th International Scientific Conference
October 11th -13th, 2023 – Hotel Granit Vysoké Tatry**

<https://kitaos.sk>



Organizers reserve rights to modify program schedule.