

Wednesday, November 20th 2019

10.00-12.00 Registration of participants in Poprad
Hotel Poprad

Conference opening (with Lunch)

12.30

Plenary session - Invited lectures

13.30-14.30

Chairman: William Steingartner

Wolfgang Schreiner

Logic and Semantic Technologies for Computer Science Education

Mirosław Kurkowski

Complexity of Security Protocols Verification Tools

14.30-15.00 Coffee break

15.00-18.00 Regular sessions

19.00 Welcome party with dinner

Session A: Applied Informatics

15.00-18.00

Chairwoman: Jarmila Škrinárová

15.00-15.20 Dušan Marček

Comparison of Predictive Statistical Learning Accuracy with Computational Intelligence Methods

15.20-15.40 Marie Nedvěďová, Alena Pozdílková, Jaroslav Marek, Michael Bažant

A Simulation Study of Depot with Multiple Temperature Modes: Maximum Flow Estimation

15.40-16.00 Martin Švejda, Tomáš Myslivec, Martin Goubej

Coordinated joggng algorithm for general serial robot architectures

16.00-16.20 Tomáš Dobravec

Java Virtual Machine Educational Tools

16.20-16.40 Coffee break

16.40-17.00 Michal Povinský, Miroslav Melicherčík, Vladimír Siládi

A Chatbot based on Deep Neural Network and Public Cloud Services with TjBot Interface

17.00-17.20 Alžbeta Michalíková, Branislav Pažický

Classification of Tire Tread Images by Using Neural Networks

17.20-17.40 Jozef Sitarčík, Mária Lucká

*epiBAT: Multi-objective bat algorithm for detection of epistatic interactions **

17.40-18.00 William Steingartner, Martin Haratim, Jiří Dostál

Software visualization of natural semantics of imperative languages - a teaching tool

19.00 Welcome party with dinner

Session B: Data & Knowledge Bases

15.00-18.00

Chairman: Zoltán Porkoláb

15.00-15.20 Andrzej Grzybowski and Piotr Puchała

A Class of Multidimensional Oscillating Sequences and Related Young Functionals

15.20-15.40 Andrzej Grzybowski and Tomasz Starczewski

Comparative study of inconsistency indices based on a notion of a triad inconsistency

15.40-16.00 Peter Krammer, Marcel Kvassay, Ondrej Habala and Ladislav Hluchý

Short-Term Rainfall Estimation by Machine Learning Methods

16.00-16.20 Malgorzata Łazarska and Olga Siedlecka-Lamch

Comparative study of relational and graph databases

16.20-16.40 Coffee break

16.40-17.00 Jasmin Cosic, Christian Schlehüser and Drazen Morog

New Challenges in Forensic Analysis in Railway Domain

17.00-17.20 Marek Menšík, Marie Duzi, Adam Albert, Vojtěch Patschka and Miroslav Pajr

Seeking Relevant Information Sources

17.20-17.40 Dražen Bajec, Bruno Zorić, Mario Dudjak and Goran Martinović

Evaluation and analysis of bio-inspired optimisation algorithms for feature selection

17.40-18.00 Jakub Vasta, Václav Skala, Michal Šmolik and Martin Červenka

Modified Radial Basis Functions Approximation Respecting Data Local Features

19.00 Welcome party with dinner

Session C: Intelligent Information Systems

15.00-18.00

Chairman: Wolfgang Schreiner

15.00-15.20 Michal Ďuračik, Emil Kršák, Matej Meško and
Ján Ružbarský

Software architecture of Automatic Train Operation

15.20-15.40 Štefan Toth, Emanuel Zaymus, Michal Ďuračik, Matej
Meško and Patrik Hrkút

Automatic restoration of diacritics based on word n-grams for Slovak texts

15.40-16.00 Matej Madeja and Jaroslav Porubän

*Accuracy of Unit Under Test Identification Using Latent Semantic Analysis
and Latent Dirichlet Allocation*

16.00-16.20 Peter Berta and Valentino Vranić

Synergy of Organizational Patterns and Aspect-Oriented Programming

16.20-16.40 Coffee break

16.40-17.00 Marko Vještica, Vladimir Dimitrieski, Milan Pisarić,
Slavica Kordić, Sonja Ristić and Ivan Luković

Towards a formal description and automatic execution of production processes

17.00-17.20 Tibor Brunner and Zoltan Porkoláb

The Role of the Version Control Information in Code Comprehension

17.20-17.40 Dániel Lukács, Gergely Pongrácz and Máté Tejfel

Performance guarantees for P4 through cost analysis

17.40-18.00 Bence Bogdándy and Zsolt Tóth

*Analysis of Training Parameters of Feed Forward Neural Networks for WiFi
RSSI Modeling*

19.00 Welcome party with dinner

Session D: Artificial Intelligence

15.00-18.00

Chairman: Andrzej Grzybowski

15.00-15.20 Arnold Szederjesi-Dragomir, Radu Gaceanu, Horia Pop and Costel Sarbu

A Comparison Study of Similarity Measures in Rough Sets Clustering

15.20-15.40 Ondrej Kainz, Eduard Karpel, Rastislav Petija, Miroslav Michalko and Frantisek Jakab

Detection of non-standard situations in smart water metering

15.40-16.00 Marek Žák, Jaroslav Rozman and František V. Zbořil

Design of Omni-directional Hexapod Robot with Horizontal Coxa Joint

16.00-16.20 János Hollósi and Áron Ballagi

Training neural networks with computer generated images

16.20-16.40 Coffee break

16.40-17.00 Michal Vagač, Michal Povinský and

Miroslav Melicherčík

Obtaining tire tread model from its real world photo

17.00-17.20 Jana Dudová, Emil Kršák and Tomáš Kello

Pre-diagnostic of diabetes with the use of statistical machine learning

17.20-17.40 Iman Aamara, Radwa Fathalla and Mohamed Kholief

A Deep Meta-learning framework for Heart Disease Prediction

17.40-18.00 Michal Chovanec, Hynek Bachraty, Katarína Jasenčáková and Katarína Bachratá

Influence of CNN Input Modification for Red Blood Cells Trajectory Prediction in Blood Flow

19.00 Welcome party with dinner

Thursday, November 21st 2019

Session A: Applied Informatics

09.00-12.00

Chairman: Valentino Vranić

09.00-09.20 Adam Dudáš, Eduard Vesel and Jarmila Škrinárová
Optimization design for parallel coloring of a set of graphs in the High-Performance Computing

09.20-09.40 Branislav Sobota, Filip Majcher, Martin Sivý and Marián Hudák
Chaos simulation and audio output

09.40-10.00 Elżbieta Gawrońska
Modeling and computer simulations with the use of a specific organization of calculations

10.00-10.20 Petr Veigend, Gabriela Nečasová and Václav Šátek
High Order Numerical Integration Method and its Applications -- The First 36 Years of MTSM

10.20-10.40 Coffee break

10.40-11.00 Pawel Kossecki
Valuation in the Sector of New Technologies – Taxonomic Measures and Comparison of Markets

11.00-11.20 Ladislav Huraj and Marek Šimon
Realtime attack environment for DDoS experimentation

11.20-11.40 Patrik Voštinár, Dana Horváthová, Martin Mitter and Martin Bako
Possibilities of human interaction in the virtual environment

11.40-12.00 Katarína Teplická
Significance of implementation of Management Information Systems in the IPO chain for SMEs

Session B: Intelligent Information Systems

09.00-12.00

Chairman: Gábor Sági

09.00-09.20 István Donkó, János Márk Szalai-Gindl, Gergő Gombos and Attila Kiss

An implementation of the M-tree index structure for PostgreSQL using GiST

09.20-09.40 Alena Pozdílková, Marie Nedvěďová and Jaroslav Marek

An Approach to Web Advertising Server Parsing - Apartment Price Analysis in the Czech republic

09.40-10.00 Patrik Pekarčík, Tomáš Kekeňák, Pavol Sokol and Terézia Mezešová

Real-time processing of cybersecurity system data for attacker profiling

10.00-10.20 Judit Tamás

Hierarchical Clustering based on IndoorGML Document

10.20-10.40 Coffee break

10.40-11.00 George Papageorgiou, Anastasia Ioannou, Athanasios Maimaris and Alexander N. Ness

A Framework for Evaluating the Benefits of Implementing a Smart Pedestrian Network System

11.00-11.20 Endre Fülöp and Norbert Pataki

Symbolic Execution with Finite State Automata

11.20-11.40 Hristina Gulabovska and Zoltan Porkolab

Towards More Sophisticated Static Analysis Methods of Python Programs

11.40-12.00 David Andrešič, Petr Šaloun and Bronislava Pečíková

Large Astronomical Time Series Pre-processing and Visualization for Classification using Artificial Neural Networks

Session C: Software Engineering

09.00-12.00

Chairman: Jurij Mibelič

09.00-09.20 George Papageorgiou, Anastasia Ioannou, Athanasios Maimaris and Alexander N. Ness

Managing The Implementation of a Smart Pedestrian Network (SPN) System

09.20-09.40 Sergej Chodarev and Ján Halama

Interconnecting YAJCo with Xtext: Experience Report

09.40-10.00 Bianka Békefi, Kristóf Szabados and Attila Kovács

A case study on the effects and limitations of refactoring

10.00-10.20 Boldizsár Németh and Brunner Tibor

HaskellCompass: Extending the CodeCompass comprehension framework for Haskell

10.20-10.40 Coffee break

10.40-11.00 Monika Václavková, Marek Kvet and Peter Sedláček

Graphical development environment for object programming teaching support

11.00-11.20 Gabor Kruppai and Attila Kiss

Building Neural Networks as Dataflow Graph

11.20-11.40 Ján Lang and Radovan Kohút

Mind Map and Business Process Model: Specification support by model transformation

11.40-12.00 William Steingartner, Ján Eged, Davorka Radaković and Valerie Novitzká

New learning software for teaching the course on Data Structures and Algorithms

Session D: Computer Networks and Their Applications

09.00-12.00

Chairwoman: Olga Siedlecka-Lamch

09.00-09.20 Oleg Tikhonenko and Marcin Ziółkowski

Queueing Models of Systems with Non-Homogeneous Customers and their Applications in Computer Science

09.20-09.40 Baasanjargal Erdenebat and Tamás Kozsik

Adoption of Cloud and Container Technologies in Mongolia

09.40-10.00 Mirosław Kurkowski, Artur Soboń and Sylwia Stachowiak

Towards Complete SAT-based Cryptanalysis of RC5 Cipher

10.00-10.20 Lilla Pellegrini, Alexandru Iovanovici, Monica Leba and Anca-Maria Moscovici

Network motifs uncovering hidden characteristics of urban transportation networks

10.20-10.40 Coffee break

10.40-11.00 Eva Marková, Tomáš Bajtoš, Pavol Sokol and Terézia Mézešová

Classification of malicious emails

11.00-11.20 Tomáš Huszaník, Jan Turan and Ľuboš Ovseník

On the Carrier Suppressed Optical Modulation Methods for High Capacity DWDM Systems

11.20-11.40 Renát Haluška, Ľuboš Ovseník and Peter Šuľaj

The Use of Mini Computer in Hybrid FSO/RF System

11.40-12.00 Michal Márton, Ľuboš Ovseník, Ján Turán, Tomáš Huszaník and Jakub Urbanský

Design of Microstrip Patch Antennas Operating on 2.45GHz in HFSS and FEKO

12.00 Lunch

13.15 Trip A – *Nestville Park, Hniezdne*

Trip B – *Poliankovo — Digital Gallery, Tatranská Polianka*

19.00 Banquet

Friday, November 22nd 2019

Session A: Applied Informatics

09.00-11.00

Chairman: Paweł Kossecki

09.00-09.20 Ján Janech, Marek Tavač and Michal Kvet

Versioned database storage using unitemporal relational database

09.20-09.40 Michal Kvet and Karol Matiasko

Effectivity of the relational database tuple access

09.40-10.00 Xinyue Wang, Nobutada Fujii, Toshiya Kaihara and Daisuke Kokuryo

A proposal for service design based on user's action history using machine learning

10.00-10.20 Ruriko Watanabe, Nobutada Fujii, Daisuke Kokuryo, Toshiya Kaihara, Yoichi Abe and Ryoko Santo

Text-mining-based support method for consulting service firms - Data augmentation using thesaurus dictionary

10.20-10.40 Hana Bučková and Jiří Dostál

Teachers' attitudes towards implementing coding at schools

10.40-11.00 Branislav Bednár and Zuzana Bilanová

Towards Automated Translating Natural Language Sentences into Intensional Constructions

Session B: Theoretical Computer Science

09.00-11.00

Chairman: Mirosław Kurkowski

09.00-09.20 Matúš Sulír and Jaroslav Porubán

Designing Voice-Controllable APIs

09.20-09.40 Uroš Čibej and Jurij Mihelič

Two classes of graphs with symmetries allowing a compact representation

09.40-10.00 Jurij Mihelič and Uroš Čibej

A comparison of refinements for the subgraph isomorphism backtracking algorithms

10.00-10.20 Gábor Sági and Karrar Alsabti

Totally bounded metric spaces and similarity detecting algorithms

10.20-10.40 Michal Olenčín and Ján Perháč

Automated configuration of a Linux web server security

10.40-11.00 Darko Galinec, William Steingartner and Vinko Zebić

Cyber Rapid Response Team: An Option within Hybrid Threats

Session C: Computer Graphics and Virtual Reality

09.00-11.00

Chairman: Radu Gaceanu

09.00-09.20 Ingmar Besic, Zikrija Avdagic and Kerim Hodzic
Virtual Reality Test Setup for Visual Impairment Studies

09.20-09.40 Michal Smolik and Vaclav Skala
Reconstruction of Corrupted Vector Fields using Radial Basis Functions

09.40-10.00 Vaclav Skala and Martin Cervenka
Novel RBF Approximation Method Based on Geometrical Properties for Signal Processing with a New RBF Function: Experimental Comparison

10.00-10.20 Marián Hudák, Štefan Korečko and Branislav Sobota
Enhancing team interaction and cross-platform access in web-based collaborative virtual environments

10.20-10.40 Peter Čerešník, Branislav Madoš, Anton Baláž and Zuzana Bilanová
SSVDAG: Efficient Volume Data Representation Using Enhanced Symmetry-Aware Sparse Voxel Directed Acyclic Graph*

11.30 Lunch

13.00 Conference closing

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