### DepCoS - RELCOMEX 2021 Programme

#### Monday (28.06.2021)
- 16.00 – 16.15 Welcome
- 16.30 – 16.45 Technical session 1
- 16.45 – 17.00 Technical session 2
- 17.00 – 17.15 Technical session 3

#### Tuesday (29.06.2021)
- 9.00 – 9.15 Opening
- 9.15 – 10.35 Session 1
- 10.55 – 12.15 Session 2
- 13.20 – 14.40 Session 3
- 15.00 – 16.20 Session 4

#### Wednesday (30.06.2021)
- 9.00 – 10.20 Session 5
- 10.50 – 12.10 Session 6
- 13.20 – 14.40 Session 7
- 15.00 – 16.20 Session 8

#### Thursday (01.07.2021)
- 9.00 – 10.20 Session 9
- 10.40 – 12.00 Session 10
- 13.30 – 14.40 Session 11
- 15.00 – 16.20 Session 12
- 16.20 – 16.35 Closing
Tuesday

Session 1: Computer Systems and Scheduling Problems (Czesław Smutnicki)

Scheduling Optimization in Heterogeneous Computing Environments with Resources of Different Types - Victor Toporkov, Dmitry Yemelyanov

Synchronization and Scheduling of Tasks in Fault-Tolerant Computer Systems with Graceful Degradation - Mieczysław Drabowski

A Stopwatch Automata-Based Approach to Schedulability Analysis of Real-Time Systems with Support for Fault Tolerance Techniques - Alevtina Glonina, Vasily Balashov


Session 2: Natural Language Processing (Jacek Mazurkiewicz)

Subject Classification of Texts in Polish - from TF-IDF to Transformers - Tomasz Walkowiak

Automatic Multi-class Classification of Polish Complaint Reports About Municipal Waste Management - Alicja Dąbrowska, Robert Giel, Sylwia Werbińska-Wojciechowska

Correlation of Bibliographic Records for OMNIS Project - Witold Wysota, Kacper Trzaska

Prediction and Causality Visualization in Speech Recognition - Adam Wróbel, Mikołaj Jarosławski, Paweł Jemiło

Session 3: Dependability & Risk Analysis (Zbigniew Gomółka)


Semi-Markov Model of Processing Requests Reliability and Availability in Mobile Cloud Computing Systems - Jerzy Martyna

Improving Effectiveness of the Risk Management Methodology in the Revitalization Domain - Andrzej Białas

Network Risk Assessment Based on Attack Graphs - Damian Hermanowski, Rafał Piotrowski

Session 4: Machine Learning (Henryk Maciejewski)

Softcomputing Approach to Sarcasm Analysis - Jacek Mazurkiewicz, Jakub Woszczyna

New Loss Function for Multiclass, Single-Label Classification - Krzysztof Halawa

Fractional Order Derivative Mechanism to Extract Biometric Features - Zbigniew Gomółka, Bogusław Twaróg, Ewa Żesławska

Explaining Predictions of the X-Vector Speaker Age and Gender Classifier - Damian Kwaśny, Paweł Jemiło, Daria Hemmerling
**Wednesday**

**Session 5: Testing and Verification (Urszula Kuželewska)**

*Migration of Unit Tests of C# Programs* - Anna Derezińska, Sofia Krutko

*Contract-Based Specification and Test Generation for Adaptive Systems* - Bence Graics, Vince Molnár, István Majzik

*Cost Results of Block Inspection Policy with Imperfect Testing in Multi-unit System* - Anna Jodejko-Pietruczuk


**Session 6: Cybersecurity (Wiktor Daszczuk)**

*Modelling Pedestrian Behavior in a Simulator for a Security Monitoring System* - Jarosław Sugier

*Experimental Comparison of ML/DL Approaches for Cyberattacks Diagnostics* - Aleksandr Krivchenkov, Boriss Misnevs, Alexander Grakovski


*Building of a Variable Context Key Enhancing the Security of Steganographic Algorithms* - Łukasz Nozdrzykowski, Magdalena Nozdrzykowska

**Session 7: Neural Networks (Andrzej Białas)**

*Generalized Convolution: Replacing the Classic Convolution Operation with the Sub-network* - Kamil Szyc

*Automated Music Generation Using Recurrent Neural Networks* - Mateusz Czyż, Michał Kędziora

*Monitoring the Granulometric Composition on the Basis of Deep Neural Networks* - Andrey Puchkov, Maksim Dli, Ekaterina Lobaneva, Yaroslav Fedulov

*Application of LSTM Networks for Human Gait-Based Identification* - A. Sawicki, K. Saeed

**Session 8: Blockchain and Data Analysis (Alexander Grakovski)**

*A Proposal to Use Elliptical Curves to Secure the Block in E-voting System Based on Blockchain Mechanism* - Marek Woda, Zen Huzaini

*An Analysis of Data Hidden in Bitcoin Addresses* - Przemysław Rodwald

*Data Sparsity and Cold-Start Problems in M-CCF Recommender System* - Urszula Kuželewska

*Supporting Architectural Decision-Making with Data Retrieved from Online Communities* - Andrzej Zalewski, Klara Borowa, Krzysztof Lisocki
Thursday

Session 9: Transport (Marek Młyńczak)
Reliability of Multi-rotor UAV’s Flight Stabilization Algorithm in Case of Object’s Working Point Changes - Michał Lower, Bogusław Szlachetko
Comparison of Selected Algorithms of Traffic Modelling and Prediction in Smart City - Rzeszów - Paweł Dymora, Miroslaw Mazurek
Time Based Evaluation Method of Autonomous Transport Systems in the Industrial Environment - Tomasz Serafin
Method of Visual Detection of the Horizon Line and Detection Assessment for Control Systems of Autonomous and Semi-autonomous Ships - Łukasz Nozdrzykowski, Magdalena Nozdrzykowska

Session 10: Hardware (Grzegorz Mzyk)
Application of the Closed-Loop PI Controller as the Low-Pass Filter - Michał Lower, Paweł Dobrowolski
Using ASMD-FSMD Technique for Digital Device Design - Valery Salauyou
The Reliability and Operational Analysis of ICT Equipment Exposed to the Impact of Strong Electromagnetic Pulses - Adam Rosiński, Jacek Paś, Marek Szulim, Jarosław Łukasiak
Hybrid Parallel Programming in High Performance Computing Cluster - Alexander Fedulov, Anastasiya Fedulova, Yaroslav Fedulov

Session 11: Complex Systems (Victor Toporkov)
Reliability Assessment of Multi-cascade Redundant Systems Considering Failures of Intermodular and Bridge Communications - Vyacheslav Kharchenko, Andriy Kovalenko, Eugene Ruchkov, Ievgen Babeshko
Efficient Computation of the Best Controls in Complex Systems Under Global Constraints - Grzegorz Mzyk
Application of Assumption Modes and Effects Analysis to XMECA - Ievgen Babeshko, Kostiantyn Leontiiev, Vyacheslav Kharchenko, Andriy Kovalenko, Eugene Brezhniev

Session 12: Applications (Vyacheslav Kharchenko)
Computing of Blocks of Some Combinatorial Designs for Applications - Alexander Frolov
Building AFDX Networks of Minimal Complexity for Real-Time Systems - Andrey Morkvin, Valery Kostenko, Vasily Balashov
Influence of Various DLT Architectures on the CPU Resources - Patryk Pankiewicz
Evolution Process for SOA Systems as a Part of the MAD4SOA Methodology - Szymon Kijas, Klara Borowa