Wrocław University of Science and Technology

DepCoS - RELCOMEX 2023 Programme

Monday (3.07.2023)

16.00 –	Registration
19.30 – 19.40	Welcome reception
19.40 –	Dinner

Tuesday (4.07.2023)

8.00 – 8.45	Breakfast
9.00 – 9.10	Welcoming remarks
9.10 – 10.40	Invited speakers
10.40 – 11.10	Coffee Break
11.10 – 11.55	Discussion panel
11.55 – 13.00	Session 1
13.15 – 14.15	Lunch
14.30 – 16.00	Session 2
16.00 – 16.30	Coffee break
16.30 – 18.20	Session 3
19.30 –	Banquet

Wednesday (5.07. 2023)

8.15 – 9.00	Breakfast
9.15 – 11.05	Session 4
11.05 –11.25	Coffee break
11.25 – 12.30	Industrial session
12.45 – 13.45	Lunch
14.15 – 18.45	Excursion
19.30 –	Barbecue

Thursday (6.07.2023)

8.00 – 8.45	Breakfast
9.00 – 10.50	Session 5
10.50 –11.20	Coffee break
11.20 – 12.50	Session 6
12.50 – 13.00	Closing ceremony
13.15 – 14.15	Lunch
15.00 –	Departure

Tuesday

Invited Speakers

Neural Computation Methods for the Early Diagnosis and Prognosis of Alzheimer's Disease: an Overview, Carmen Paz Suárez-Araujo, Ylermi Cabrera-León, Pablo Fernández-López, Patricio García Báez

Emerging Challenges in Technology-based Support for Surgical Training, Jerzy Rozenblit, Minsik Hong

Discussion Panel – Marek Kulbacki

Frontiers of Future Medicine: Innovations and Challenges

Session 1: Applications in Medicine – Carmen Paz Suárez-Araujo

Smart data logger with continuous ECG signal monitoring, Jan Nikodem, Ryszard Klempous, Konrad Kluwak, Dariusz Jagielski, Dorota Zyśko, Bruno Hrymiak, Jerzy Rozenblit, Thomas Zelniker, Andrzej Wytyczak-Partyka

Deep Learning ECG Signal Analysis: Description and Preliminary Results, Mateusz Surowiec, Piotr Ciskowski, Konrad Kluwak, Łukasz Jeleń

Session 2: Softcomputing – Jarosław Sugier

Efficient Clustering-based Neighbourhood in Recommender Systems, Urszula Kużelewska

Identification of the Language Using Statistical and Neural Approaches, Julian Szymanski

Partitioning of a m-part weighted graph with n vertices in each its part into n cliques with m vertices and the total minimum sum of their edges weights using ant algorithms, Krzysztof Schiff

Structural models for fault detection of Moore finite state machines, Valery Salauyou

Tabular structures detection on scanned VAT invoices, Marek Bazan, Paweł Pawłowski, Maciej Pawełczyk, Maciej Marchwiany

Session 3: Deep Learning – Urszula Kużelewska

A Study of Architecture Optimization Techniques for Convolutional Neural Networks, Artur Sobolewski, Kamil Szyc

New approach to constructive induction - Towards Deep Discrete Learning, Cezary Maszczyk, Dawid Macha, Marek Sikora

Deployment of Deep Models in NLP Infrastructure, Tomasz Walkowiak

Line Segmentation of Handwritten Documents Using Direct Tensor Voting, Tomasz Babczyński, Roman Ptak

Artificial intelligence methods in email marketing - a survey, Anna Jach

Detection of oversized objects in a video stream, exploiting an image classification approach using deep neural networks, Przemysław Jamontt, Juliusz Sarna, Jakub Wnuk, Marek Bazan, Krzysztof Halawa, Tomasz Janiczek

Wednesday

Session 4: Neural Networks – Jacek Mazurkiewicz

The digital twin to train a neural network detecting headlamps failure of motor vehicles, Aleksander Dawid, Paweł Buchwald, Bartłomiej Pawlak

Hammering test on a concrete wall using Neural Network, Yuma Ito, Atsushi Ito, Jingyuan Yang, Masafumi Koike, Katuhiko Hibino

Regression models evaluation of short-term traffic flow prediction, Paweł Dymora, Mirosław Mazurek, Maksymilian Jucha

Performance analysis of a real-time data warehouse system implementation based on open-source technologies, Paweł Dymora, Mirosław Mazurek, Gabriel Lichacz

Application of generative models to augment IMU signals in gait biometric, Aleksander Sawicki, Khalid Saeed

Ant colony optimization algorithm for finding the maximum number of d-size cliques in a graph with not always m-vertices in its d parts, Krzysztof Schiff

Medical-Industrial Session

Thaumatec: Software as medical product, Maciej Stachura, Dmytro Shestachuk

Human Digital Twin, Marek Kulbacki

Movement Tracking in Augmented and Mixed Realities Impacting the User Activity in Medicine and Healthcare, Jan Nikodem, Ryszard Klempous, Jakub Segen, Marek Kulbacki, Artur Bąk, Tomasz Zamojski

Thursday

Session 5: Applications – Wiktor Daszczuk

Safety assessment of maintained control systems with cascade two-version 2oo3/1oo2 structures considering version faults, Vyacheslav Kharchenko, Yuriy Ponochovnyi, Ievgen Babeshko, Eugene Ruchkov, Artem Panarin

Softcomputing Approach to Music Generation, Jacek Mazurkiewicz

Dynamic change of tasks in multiprocessor scheduling, Dariusz Dorota

Power Analysis of BLAKE3 Pipelined Implementations in FPGA Devices, Jarosław Sugier

Scheduling Resource to Deploy Monitors in Automated Driving Systems, Peng Su, Tianyu Fan, Dejiu Chen

Reliability Model of Bioregenerative Reactor of Life Support System for Deep Space Habitation, Igor Kabashkin, Sergey Glukhikh

Session 6: Cloud Computing and Software – Vyacheslav Kharchenko

Architecting Cloud-Based Business Software - A Practitioner's Perspective, Szymon Kijas, Andrzej Zalewski

Practical Approach to Introducing Parallelism in Sequential Programs, Denny Czejdo, Wiktor Daszczuk, Wojciech Grześkowiak

Automation of deanonymization queries for the Bitcoin investigations, Przemysław Rodwald, Nicola Kołakowska

CPU signal rank-based disaggregation in Cloud computing environments, Jakub Kosterna, Krzysztof Pałczyński, Tomasz Andrysiak

General provisioning strategy for local specialized cloud computing environments, Piotr Orzechowski, Henryk Krawczyk