

BOS/SOR2024: Systems and Operational Research 2024 Conference

Organised by the *Polish Operational and Systems Research Society*, in cooperation with the *Systems Research Institute of the Polish Academy of Sciences* and *WIT Academy in Warsaw*

17 October 2024 - Thursday	
9:00 CEST*: opening of the Conference; <u>Maria Skłodowska-Curie Room</u>	
<i>Introductory Address</i> by Janusz Kacprzyk , President, Polish Operational and Systems Research Society	
9:30 CET: <u>Plenary lecture</u> : Saeed Rahimpour, Atieh Fahimi Bandpey, Marcelo Fuentes and Andrzej Kraslawski : Circularity of rare earth elements for sustainable mobility; <i>Chair: Janusz Kacprzyk</i>	
10:15-10:45 CEST Coffee break	
10:45-12:45 Parallel technical sessions	
Session I: Multiple criteria decision making and optimisation ; <i>Chair: Lech Kruś; <u>Hugo Kołłataj Room</u></i>	
Dmitry Podkopaev : An Approach to Dynamic File Allocation in Heterogeneous Storage Systems Based on Multiobjective Optimization and Machine Learning	
Andrzej Łodziński : Modeling and decision support under risk using multi-criteria optimization (cancelled)	
Przemysław Juszczak & Lech Kruś : On the derivation of the Pareto front from a non-dominated set of variants on the Forex	
Dariusz Ruciński : Neural modeling of prices on the Day-Ahead Market at TGE S.A. supported by an evolutionary algorithm and inspired by quantum computing	
Session II.1: Advances in integrated analysis of some energy and transportation issues ; <i>Chair: Zbigniew Nahorski; <u>Maria Skłodowska-Curie Room</u> (virtual presentations transmitted from China)</i>	
Bingqing Ding , Tiejue Ma, Zbigniew Nahorski, Hongtao Ren, Janusz Granat and Marek Makowski: Hedging uncertainties in technological learning and conflicts among different objectives in adopting new technologies	
Jinyang Zhao , Yadong Yu, Hongtao Ren, Marek Makowski, Janusz Granat, Zbigniew Nahorski and Tiejue Ma: Multi-objective analysis of olefin production technology route in China	
Ronghui Zhu and Tiejue Ma: Policy mixes to promote the diffusion of battery electric vehicles with an agent-based model and experiments using the case of China	
Chunyan Xiong and Tiejue Ma: Research on the optimization of renewable energy power systems in steel plant based on dual uncertainty	
12:45-13:30 CEST Lunch break	
13:30-14:50 CEST: Plenary lectures (virtual presentations); <i>Chair: Jan W. Owsinski; <u>Maria Skłodowska-Curie Room</u></i>	
Tadeusz Trzaskalik : PROMETHEE application to multi-stage bipolar method	
Elena Antonacopoulou & Horatiu Dragomirescu : Cultivating and activating a systemic mindset: why it matters in a VUCA world?	
14:50-15:20 CEST Coffee break	
Parallel technical sessions, 15:20-16:50 CEST	
Session III: Spatial and urban systems ; <i>Chair: Andrzej Kałuszek; <u>Hugo Kołłataj Room</u></i>	
Piotr Holnicki , Zbigniew Nahorski and Andrzej Kałuszek: Environmental impact of low emission zone in an urban area	
Barbara Maźbic-Kulma , Jan W. Owsinski, Jarosław Stańczak , Aleksy Barski and Krzysztof Sęp: The hub & spoke structure for the public transport system in Warsaw using hypergraphs and an evolutionary approach	
Jan W. Owsinski & Jarosław Stańczak : Some thoughts on modeling of internal migrations in Poland at the municipality level	
Session II.2. Advances in integrated analysis of some energy and transportation issues ; <i>Chair: Janusz Granat; <u>Maria Skłodowska-Curie Room</u> (hybrid session)</i>	
Marek Makowski , Janusz Granat, Andrii Shekhovtsov, Zbigniew Nahorski and Jinyang Zhao: Enhancements of pyMCMA: autonomous Pareto-front representation (virtual presentation)	
Janusz Granat : Online data analysis and optimization	
Zixuan Zhang , Marek Makowski, Zbigniew Nahorski, Janusz Granat and Tiejue Ma: Model-based support for operational decisions in a variable renewable energy system	
16:50-17:10 CEST Coffee break	
Parallel technical sessions, 17:10-18:30 CEST	
Session IV: Algorithms and optimality ; <i>Chair: Jerzy R. Tchorzewski; <u>Hugo Kołłataj Room</u></i>	
Jan W. Owsinski and Marek Gajewski : Distinguishing human and bot behaviours on the web: the partly known ground truth	
Jerzy R. Tchorzewski & Wojciech Szpura : Comparative studies of the parametrical and analytical model of the movement of the end of the PR-02 robot arm	
Session IV: Application areas and results ; <i>Chair: Francesca Guerriero; <u>Maria Skłodowska-Curie Room</u></i>	
Alisa Harkai & Cristian-Eugen Ciurea : Economic impact of IOT data breaches: cost analysis and statistical trends (virtual presentation)	
Piotr Sowiński : Obtaining occupational safety insights with a knowledge base	
Francesca Guerriero and Paolo Francesco Saccomanno: Accelerating the Clarke-Wright algorithm for the capacitated vehicle routing problem using GPUs	
18:30 CEST: Closing of the Conference	
19:30 CEST: Dinner at “Bazyliśzek” Restaurant, Old City Market Square	

* CEST: Central European (Summer) Time

All participants of the BOS/SOR2024 Conference are invited to join the **International Workshop on Fuzzy Intuitionistic Sets and Generalized Nets**, on Friday, October 18th, 2024, at the Systems Research Institute, Polish Academy of Sciences, Newelska 6, 01-447 Warszawa, Poland