

Schedule as of May 8, 2024

Schedule ECMS'2024: 4th - 7th June 2024

Tuesday 4 June 2024	
	Registration Office (GIL gallery, 1st floor) Open 5:00 PM - 7:00 PM
5:00 PM - 7:00 PM	Social Event - Reception (GIL gallery, 1st floor)

Wednesday 5 June 2024				
Registration Office (Kotłownia) Open 8:00 AM - 12:30 PM				
Welcome & Opening Session (Kotłownia) - <i>Daniel Grzonka</i>				
9:00 AM - 10:00 AM Keynote 1 (Kotłownia) - Complex Systems Approach to Natural Language - <i>Stanislaw Drozd</i>				
10:00 AM - 10:30 AM Coffee Break				
	Session DTSM (Kotłownia) Chair: <i>Giovanni Lugaresi</i>	Session MathMo (S1) Chair: <i>Natalia Rylko</i>	Session DIS (S2) Chair: <i>Armando Tacchella</i>	Session FES (S3) Chair: <i>Agnes Vidovics-Dancs</i>
10:30 AM - 10:55 AM	DTSM-21: Soft Body Simulation of Fish in Fish Processing Factories (<i>Paul Steffen Kleppe, Benjamin Karlsen, Fridtjof Pedersen Lersveen, Lars Andre Giske</i>)	MathMo-2: Computation of Temperature Distribution in the Integrated Thermal Protection System for Reusable Launch Vehicle (<i>Edyta Hetmaniok, Rafal Brociek, Damian Slota</i>)	DIS-50: Bound Block Elimination Algorithm for Accurate Visibility Computation in Point Cloud Analysis (<i>Adrian Widlak, Pawel Ozimek, Piotr Labeledz, Jerzy Orlof</i>)	FES-36: Analysis of the Housing Market Dynamics using NARX Neural Network (<i>Grazyna Suchacka, Daria Wotzka, Lukasz Mach, Pawel Fracz, Marzena Stec, Joachim Foltys</i>)
10:55 AM - 11:20 AM	DTSM-78: How to Evaluate Process Discovery for Digital Twins in Industry 4.0? Process Discovery, Hypothesis Testing and Conformance Analysis (<i>Juliano Yoshiro Nishiura, Paulo Victor Lopes, Filipe Alves Neto Verri, Anders Skoogh</i>)	MathMo-67: Multiscale Characteristics of Sentence Length Variability in Hopscotch by Julio Cortázar (<i>Michal Dolina, Stanislaw Drozd, Jakub Dec, Jaroslaw Kwapien, Tomasz Stanis</i>)	DIS-90: Ensemble Models for Predicting CO Concentrations: Application and Explainability in Environmental Monitoring in Campania, Italy (<i>Lelia Campanile, Luigi Piero Di Bonito, Francesco Di Natale, Mauro Iacono</i>)	FES-37: Impact of the Volume of Developer Housing Units on Real Estate Prices in Poland: Correlation and Coherence Analysis (<i>Daria Wotzka, Pawel Fracz, Marzena Stec, Ireneusz Dabrowski, Lukasz Mach, Bartosz Chorkowiy</i>)
11:20 AM - 11:45 AM	DTSM-14: Speech-To-Jobshop: An Ontology-driven Digital Assistant for Simulation Modeling (<i>Heiner Ludwig, Vincent Betker, Thorsten Schmidt, Mathias Kuehn</i>)	MathMo-60: Intersections among Cluster Inclusions in Multi-phase Polydispersed Structures (<i>Vladimir Mityushev, Daniel Grzonka</i>)	DIS-79: Evaluating the Effects of Nudging and Deterrence on Users' Behavior for Privacy-By-Design (<i>Maura Iacono, Michele Mastroianni</i>)	FES-32: How the Family Tax Allowances Have Affected Child Poverty in the Visegrad Countries 2005-2020 (<i>Erzsebet Terez Varga</i>)
11:45 AM - 12:10 PM		MathMo-44: Invariant Properties of Contrast Parameters of Plane Elastic Composites (<i>Vladimir Mityushev</i>)	DIS-86: 3D Weather Radar Network Cartesian Products Generation Framework (<i>Piotr Szuster, Joanna Kolodziej</i>)	FES-45: Women in Atypical Careers – Labour Market Analysis in the CEE Countries (<i>Agnes Vaskovi, Anna Horvath</i>)
12:10 PM - 12:35 PM		MathMo-61: Application of Structural Sums to Study Collective Behavior of Bacteria (<i>Tomasz Ligocki</i>)		FES-9: PLS-SEM Multigroup Analysis of Industry 5.0 Specific Human Capital Performance in Manufacturing Companies (<i>Iliia Chernenko, Veronika Zemzulina</i>) - online
12:35 PM - 1:35 PM Lunch break				
	Session DTSM (Kotłownia) Chair: <i>Kovacs Laszlo</i>	Session SecMoS (S1) Chair: <i>Joanna Kolodziej</i>	Session SIMO (S2) Chair: <i>Georgi Kostov</i>	Session FES (S3) Chair: <i>Agnes Vaskovi</i>
1:35 PM - 2:00 PM	DTSM-76: Digital Twin Driven Assembly Line Re-balancing and Decision Support (<i>Giovanni Lugaresi, Kornel Tamas, Kovacs Laszlo</i>)	SecMoS-91: Human-centric Cybersecurity: Trends – SecMoS Invited Talk (<i>Joanna Kolodziej</i>)	SIMO-70: Simulation-Based Optimization for Driving Innovation in Manual Order Picking for a Wholesale Company (<i>Pasquale Legato, Rina Mary Mazza</i>)	FES-31: The Prospects of Financial Opening-up in China in Light of the Trilemma of International Finance (<i>Eszter Boros, Gabor Sztona</i>)
2:00 PM - 2:25 PM	DTSM-77: Process Mining and Production Routing Fast Profiling for Data-Driven Digital Twins (<i>Paulo Victor Lopes, Giovanni Lugaresi, Filipe Alves Neto Verri, Anders Skoogh</i>)	SecMoS-48: Expressing Impact of Vulnerabilities: An Expert-filled Dataset and Vector Changer Framework for Modelling Multistage Attacks, based on CVE, CVSS and CWE (<i>Tomasz Machalewski, Marcin Szymanek, Adam Czubak, Tomasz Turba</i>)	SIMO-6: Modeling and Design of Fermentation Processes Part 1. Culture Medium Optimization and General Parameters of the Fermentation Process (<i>Georgi Kostov, Vesela Shopska, Rositsa Denkova-Kostova, Kristina Ivanova</i>)	FES-38: Valuing a Compound Exchange Option by Monte Carlo Method (<i>Kata Varadi, Janos Szaz, Patricia Becsky-Nagy</i>)
2:25 PM - 2:50 PM	DTSM-42: System and Management Interpretation of the Processes of Creation and Use of Digital Twins of Complex Technical Objects (<i>Oleg V. Kofnov, Valerii V. Zakharov, Vladislav A. Sobolevsky, Boris V. Sokolov</i>)	SecMoS-71: Security of Containerization Platforms: Threat Modelling, Vulnerability Analysis, and Risk Mitigation (<i>Andrzej Mycek, Maryna Lukaczyk</i>)	SIMO-40: Application of Artificial Neural Network for Predicting Nutrient Release from Neem (Azadirachtaindica) Coated Urea (<i>Manish Vashishtha, Gaurav Yadav, Meenu Suhag, Shiv Om Meena</i>)	FES-41: A Simulation-based Framework for Planning Dental Caries Prevention Programmes (<i>Maria Hajlasz, Bozena Mielczarek</i>)
2:50 PM - 3:15 PM		SecMoS-49: RFCA: Efficient, Robust and Flexible Cipher Algorithm For FPGA Implementation (<i>Raphael Couturier, Hassan Noura</i>)	SIMO-39: Dashboard Use Case for Supply Chain Resilience Management and Future Research Direction (<i>Angela Sekulovska, Frank Morelli, Frank Schaeetter</i>)	FES-73: Assessment the Effect of Green Bonds on Green Innovation (<i>Emilia Nemeth-Durko</i>) - online
1:40 PM - 3:40 PM	ECMS Board Meeting (GIL gallery, 206B)			
3:15 PM - 3:40 PM Coffee Break				
5:15 PM - 7:45 PM Social Event - Site Tour (Guided Tour of Cracow) - meeting at 5:00 PM at Kotłownia				

Thursday 6 June 2024				
Registration Office (Kotłownia) Open 8:00 AM - 12:30 PM & 1:30 PM - 2:00 PM				
9:00 AM - 10:00 AM	Keynote 2 (Kotłownia) - Formal Theory of Quantifiers in Natural Language and Their Syllogisms - <i>Vilem Novak</i>			
10:00 AM - 10:30 AM	Coffee Break			
	Session BPMI (Kotłownia) Chair: <i>Virginia Fani</i>	Session MathMo (S1) Chair: <i>Vladimir Mityushev</i>	Session DIS (S2) Chair: <i>Maura Iacono</i>	Session FES (S3) Chair: <i>Kata Varadi</i>
10:30 AM - 10:55 AM	BPMI-72: Combined Use of AI Techniques and Simulation To Support Production Scheduling: Evidence From Empirical Research (<i>Romeo Bandinelli, Virginia Fani</i>)	MathMo-16: Structural Analysis of Hybrid Electro-Hydraulic Power Steering System – A Bond Graph Approach (<i>Amine Laaribi, Damien Eberard, Wilfrid Marquis-Favre, Jean-Marc Blond, Jerome Chaudet</i>)	DIS-84: Investigating Reliability of Machine Learning Results depending on a Method and the Feature Pre-processing – the Case of E-customer Session Classification (<i>Jacek Iwanski, Grazyna Suchacka</i>)	FES-34: Studying the Interrelations between USALI Parameters and GOP through Wavelet Coherence Analysis (<i>Lukasz Labanowski, Pawel Fracz, Daria Wotzka, Ireneusz Dabrowski</i>)
10:55 AM - 11:20 AM	BPMI-22: Design, Testing and Operation of Fish Processing Lines – Can Simulation Tools and Artificial Intelligence Be a Gamechanger? (<i>Irina-Emily Hansen, Ola Jon Mork, Paul Steffen Kleppe</i>)	MathMo-57: Analyze the Encryption and Decryption Methods using the Catalan Sequence (<i>Lukasz Walusiak, Natalia Rylko, Maciej Zdanski</i>)	DIS-85: Lung Operation Training in Low-Cost Virtual Reality Simulation Environments (<i>Pietro Piazzolla, Marco Gribaudo, Marco Domenico Buttiglione, Francesca Guerrero, Giorgio Colombo</i>)	FES-35: Application of the Nonlinear Autoregressive Model with Exogenous Inputs for Predicting the Gross Operating Product based on USALI Data (<i>Lukasz Labanowski, Pawel Fracz, Daria Wotzka, Joachim Foltys</i>)
11:20 AM - 11:45 AM	BPMI-23: Sustainable Technology and Business Development: Application of Simulation Platforms in Norwegian Marine Industries (<i>Irina-Emily Hansen, Ola Jon Mork, Paul Steffen Kleppe</i>)	MathMo-74: Structural Investigation of Clouds (<i>Natalia Rylko, Karolina Szymanska</i>)	DIS-20: Improving Abstract Propagation for Verification of Neural Networks (<i>Stefano Demarchi, Andrea Gimelli, Armando Tacchella</i>)	FES-43: Hedging the FX Risk: The Role of Correlation (<i>Agnes Vidovics-Dancs</i>)
11:45 AM - 12:10 PM	BPMI-65: Machine Learning In Agile Manufacturing: A Usecase from Offshore Wind Turbine Product Lifecycle Management (Plm) System (<i>Mehrnoosh Nickpasand, Henrique M. Gaspar, Hassan El Jaafari</i>)	MathMo-51: Anisotropy Coefficient in 2D Polydisperse Model of Composite Structures (<i>Krzysztof Barczak, Edyta Hetmaniok, Julia Kita, Joanna Warycha</i>)	DIS-88: VGGISH for Music/Speech Classification in Radio Broadcasting (<i>Salvatore Serrano, Marco Lucio Scarpa, Omar Serghini</i>)	FES-33: GDP Influence on the ESG Risk Framework Disclosure of the Visegrad Four Banks (<i>Zsuzsanna Tamasne Voneki, Gabriella Lamanda</i>)
12:10 PM - 12:35 PM		MathMo-58: Acoustic Manifestations of Symmetry Breaking in Self-Similar Signals (<i>Piotr Zielinski</i>)		FES-69: Hybrid Agent-based Machine Learning Simulation of a Classroom Disruption Model (<i>Khulood Alharbi, Alexandra Cristea</i>) - online
12:35 PM - 1:35 PM	Lunch break			
	Session SIMO (Kotłownia) Chair: <i>Chenghao Dai /Maximilian Dilefeld</i>	Session SIMO (S1) Chair: <i>Frank Morelli</i>	Session SIMO (S2) Chair: <i>Lars Kappertz</i>	Session DIS (S2) Chair: <i>Marco Gribaudo</i>
1:35 PM - 1:55 PM	SIMO-13: Analysis of Viscosity Behaviour of Shear-Thinning Hydrogels in 3D-Printing Nozzles (<i>Fatemeh Ardaneh, Eero Immonen, Ashvinkumar Chaudhari, Jani Pelkonen, Santeri Knuutinen</i>)	SIMO-52: Numerical Simulation of Localized Climate Scenarios Impacts on Vegetation CO2 Fluxes in the Madrid Region (Spain) with the WRF/CHEM-VPRM Model (<i>Roberto San Jose, Juan Luis Perez-Camanyo</i>)	SIMO-83: Pairing State Automata and Petri Nets – Simulation of Processes in Logistics (<i>Carlo Simon, Stefan Haag</i>)	DIS-68: Photogrammetric vs. Lidar Methods for Augmented Reality in Logistics (<i>Krzysztof Skabek, Pawel Ozimek, Dominika Rola</i>)
1:55 PM - 2:15 PM	SIMO-7: Reinforcement Approach using Topology Optimization (<i>Rabia Altunay, Eero Immonen, Jarkko Suuronen, Andreas Rupp, Lassi Roininen</i>)	SIMO-8: Robot Task Assignment in Dynamic Factory Environments (<i>Maximilian Dilefeld, Thorsten Claus, Frank Herrmann, Enrico Teich</i>)	SIMO-18: On the Performance Evaluation of Synchronous and Asynchronous Parallel Particle Swarm Optimisation (<i>Christoph Tholen, Lars Nolle</i>)	DIS-56: Forecasting Energy Consumption in Energy Clusters using Machine Learning Methods (<i>Piotr Jurek, Anna Plichta</i>)
2:15 PM - 2:35 PM	SIMO-29: Biomechanical Identification and Simulation of Passive Ankle Joints in AnyBody (<i>Adam Leon Kleppe, Oystein Bjelland, Mohammad Amin Shayestehpour</i>)	SIMO-11: Multi-Site Aggregate Production Planning with Resilience Consideration (<i>Chenghao Dai, Maximilian Schoen, Thorsten Claus, Frank Herrmann</i>)	SIMO-19: Model Generalisation for Predicting the Amount of Photosynthetically Available Radiation in the Water Column from Freefall Profiler Observations (<i>Christoph Tholen, Lars Nolle, Jochen Wollschlaeger, Frederic Stahl</i>)	DIS-66: Multi-Agent System for Intelligent Scheduling (<i>Eugene Aloeff, Dzmitry Adzinets</i>)
2:35 PM - 3:05 PM	Coffee Break			
4:30 PM	Private bus to Wieliczka (Social Event - <i>Wieliczka Salt Mine Tour</i>) - meeting at 4:20 PM at Kotłownia			
7:00 PM - 10:00 PM	Social Event - Conference Gala Dinner (Wieliczka Salt Mine - Warszawa Chamber)			

Friday 7 June 2024				
Registration Office (Kotłownia) Open 8:00 AM - 11:00 AM				
9:30 AM - 10:00 AM	Coffee Break			
	Session SIMO (Kotłownia) Chair: Carlo Simon	Session FDEM (S1) Chair: Peter T. Zwierczyk	Session OCMS (S2) Chair: Henrique M. Gaspar, Yasuo Ichinose	Session SIMO (S3) Chair: Christoph Tholen
10:00 AM - 10:25 AM	SIMO-12: An Adaptive Approach for Parallel Discrete Event Simulation Thread Pool Prediction (JiMing Su, Yiping Yao, Feng Zhu)	FDEM-1: Time History Analysis of Buildings and Structures Design Models in SCAD Software on Multicore Computers (Sergiy Fialko)	OCMS-55: Urban Lighting Infrastructure Analysis using Topology Density Maps (Zhicheng Hu, Ricardo da Silva Torres, Claudia Lopez-Alfaro)	SIMO-82: Finite Capacity Multi-Server Job Systems: A Simulation Study (Muhammad Waqas, Leonardo Maccari, Andrea Marin)
10:25 AM - 10:50 AM	SIMO-15: Fitting Stochastic Lattice Models using Approximate Gradients (Jan Schering, Sander Keemink, Johannes Textor)	FDEM-26: Development of a 3D DEM Simulation Software for Coupled Simulations (Jozsef Balazs Graeff, Kornel Tamas, Laszlo Pasty)	OCMS-59: Computer Vision for Reverse Engineering in the Design, Simulation and Operation of Maritime Systems (Maria Jose Legaz, Henrique M. Gaspar)	SIMO-75: Automated Generation of Decision Trees for Decoding Irregular Instruction Sets (Lillian Tadros)
10:50 AM - 11:15 AM	SIMO-25: Computational Fluid Dynamics Simulation of Sloshing Inside Beverage Cans on a Rotary Filling Machine (Federico Solari, Natalya Lysova, Roberto Montanari, Federico Scano, Enrico Bedogni, Gabriele Copelli)	FDEM-27: Analytical Validation of the FE Model of a Railway Wheel-Rail Rolling-Sliding Contact (Sandor Doebrenstei, Peter Tamas Zwierczyk)	OCMS-63: Simulation of Ship Flooding in Open Foam: A Praise for Open Source CFD (Pedro Paludetto Silva de Paula Lopes, Marcos Maturana, Marcelo Ramos Martins, Henrique M. Gaspar, Kazuo Nishimoto)	SIMO-28: Physics-Based Modelling of a Milk Cooling System for Intelligent Energy Management (Lars Kappertz, Christof Bueskens)
11:15 AM - 11:40 PM	SIMO-46: Foundational Statistical Methods in Comparative Design for Simulation Experiments (Maximilian Selmaier, Ahmed Tolba)	FDEM-30: Analysis of Performance Differences of FEM Numerical Integration Algorithm on Two Generations of Intel Xe-LP GPUs (Filip Kruzal, Mateusz Nytko)	OCMS-64: Graph Databases for Multi-Domain Taxonomies in Maritime Systems (Janica A. Bronson, Fernando H. P. Luz, Icaro A. Fonseca, Henrique M. Gaspar)	SIMO-54: Simulation of the Complete Operation of a Bus Rapid Transit System Using Cellular Automata (Oscar Camargo, Miguel Angel Uribe-Laverde)
11:40 AM - 12:05 PM		FDEM-81: Calibration of Discrete Element Method Soil Models based on Penetrometer and Direct Shear Box Tests using a Genetic Algorithm (Bence Szabo, Taddeus Szabo, Kornel Tamas)		SIMO-24: Global Convergence Limits of Differential Evolution Algorithm (Roman Knobloch, Jaroslav Mlynek)
12:10 AM - 12:30 PM	Closing Session & Best Paper Award (Kotłownia) - General & Program Chairs			
12:35 PM - 1:35 PM	Lunch break			

All times are given in CET

Rooms S1, S2, S3 and 206B are in GIL gallery building. "Kotłownia" is in a separate building nearby.