SCHEDULE ECMS 2022

Author names written in **orange: video/online presentation**

Time (CET)	TUESDAY May 31st - All Schedule in CET
15:00-17:00	Registration and Reception

Time (CET)	DAY 1 WEDNESDAY (June 1st) - All Schedule in CET
08:00-14:00	Registration Office Open
08:30-09:00	Welcome & Opening Session
09:00-10:00	**Keynote 1: On the role of Modeling and Simulation for Artificial Intelligence, *Prof. Hussein Abbass***
10:00-10:30	**Coffee Break**

	Session 1.1: SIMO 1	Session 2: BPMI
	Session chair: *Frank Schaetter and Frank Morelli*	Session chair: *Romeo Bandinelli*
10:30-10:55	**A Simple Algorithm Selector For Continuous Optimisation Problems**	**Optimization Of Internal Logistics Using A Combined BPMN And Simulation Approach**
	Tarek A. El-Mihoub, Christoph Tholen, Lars Nolle	*Maximilian Wuennenberg, Benjamin Wegerich, Johannes Fottner*
10:55-11:20	**Optimised Bumblebee Paths As Search Strategy For Autonomous Underwater Vehicle**	**Simulating The Automation Of Sorting Crates – A Stepwise Approach**
	Christoph Tholen, Lars Nolle, Tarek A. El-Mihoub, Oliver Zielinski	*Armand Misund, Henrique M. Gaspar*
11:20-11:45	**Emission Reduction Through Production Scheduling By Priority Rules And Energy Onsite Generation**	**A Data-Driven Approach For Process Simulation Optimization: A Case Study**
	Hajo Terbrack, Thorsten Claus, Frank Herrmann	*Romeo Bandinelli, Andrea Nunziatini, Virginia Fani, Bianca Bindi*
11:45-12:10	**Supply Chain Resilience Management Using Process Mining**	**Towards A Meta-Modeling Approach For An IoRT-Aware Business Process**
	Frank Schaetter, Frank Morelli, Florian Haas	*Najla Fattouch, Imen Ben Lahmar, Khouloud Boukad*
12:10-13:10	**Lunch break**	

	Session 1.2: SIMO 2	Session 3: CPS **/ FES 1 paper**
	Session chair: *Carlo Simon*	Session chair: *Ümit Cali* / *FES track paper* *Kata Varadi*
13:10-13:35	**Stratification Of Timed Petri Nets At The Example Of A Production Process**	**Modelling AGV Operation Simulation With Lithium Batteries In Manufacturing**
	Carlo Simon, Stefan Haag, Lara Zakfeld	*Ozan Yesilyurt, Marius Kurrle, Andreas Schlereth, Miriam Jaeger, Alexander Sauer*
13:35-14:00	**Microbial Growth Of Lactobacillus Delbrueckii Ssp. Bulgaricus B1 In A Complex Nutrie Medium (MRS-Broth)**	**On The Use Of Graphical Digital Twins For Urban Planning Of Mobility Projects: A Case Study From A New District In Ålesund, Norway**
	Georgi Kostov, Rositsa Denkova-Kostova, Vesela Shopska, Bogdan Goranov, Zapryana L	*Pierre Major, Andreas Amundsen, Ricardo Da Silva Torres, Pernille Stadsnes, Egil Mikalsen*
14:00-14:25	**A Model For Predicting The Amount Of Photosynthetically Available Radiation From BGC-ARGO Float Observations In The Water Column**	**Digital Twins For Lighting Analysis: Literature Review, Challenges, And Research Opportunities**
	Frederic Stahl, Lars Nolle, Ahlem Jemai, Oliver Zielinski	*Muhammad Umair Hassan, et al.*
14:25-14:50	**Taking Randomness For Granted: The Complexities Of Applying Random Number Str In Simulation Modelling**	**Forecasting Models For First Year Premium Of Life Insurance** **- FES Track paper talk**
	Maximilian Selmair	*Somsri Banditvilai*
14:50-15:15	**Calibration Model For Perceptual Compensation Of Defective Pixels Of Self-Emitting Display**	
	Olga A. Basova, Anton Grigoryev, Dmitry P. Nikolaev	
15:15-15:30	**Coffee Break**	
15:30-20:00	optional: walk to Sunnmøre Museum with boat excursion or guided museums tour (food and drinks provided)	
14:00-15:30	**ECMS Board Meeting**	

Time (CET)	DAY 2 THURSDAY (June 2nd) - All Schedule in CET
08:00-14:00	Registration Office Open
09:00-10:00	Keynote 2: Building An Open-Source Community For Subsurface Flow Simulation, *Prof. Knut-Andreas Lie*
10:00-10:30	Coffee Break

	Session 1.3: SIMO 3	Session 4: PSTAT
	Session chair: *Hajo Terbrack*	Session chair: *Mauro Iacono*
10:30-10:55	**Improve The Output Quality Of Adaptive Process Chains With AI And Optimiziation** *Thomas Husslein, Christian Otto*	**Effect Of Impurities On Stability Of The Skyrmion Phase** **In A Frustrated Heisenberg Antiferromagnet** *Mariia Mohylna, Milan Zukovic*
10:55-11:20	**How To Run A World Record? A Reinforcement Learning Approach** *Sajad Shahsavari, Eero Immonen , Masoomeh Karami,* *Hashem Haghbayan, Juha Plosila*	**Massive Degeneracy And Anomalous Thermodynamics l** **In A Highly Frustrated Ising Mode On Honeycomb Lattice** *Milan Zukovic*
11:20-11:45	**Synergy Between Shuttles And Stacker Cranes In Dynamic Hybrid Pallet Warehouses:** **Control Strategies And Performance Evaluation** *Giulia Siciliano, Yue Yu, Johannes Fottner*	**Some Ergodicity And Truncation Bounds** **For A Small Scale Markovian Supercomputer Model** *Rostislav Razumchik, Alexander Rumyantsev*
11:45-12:10	**Elongated Boundaries Detector Parameters Optimisation** **Based On Generation Of Synthetic Data From Aerial Imagery** *Ekaterina Panfilova, Anton Grigoryev, Vladimir Burmistrov*	

12:10-13:10	Lunch break

	Session 5.1: DIS 1	Session 6.1: FES 1
	Session chair: *Mauro Iacono*	Session chair: *Kata Varadi* **one talk already given Wednesday 14:25 - 14:50**
13:10-13:35	**Causal Analysis Graph Modeling For Strategic Decisions** *Alexander H. Levis, Amy Sliva*	**Reflections On Assumptions For A Simulation Model Of Dental Caries** **Prevention Planning In A Primary School** *Maria Hajlasz, Bozena Mielczarek*
13:35-14:00	**Epistemic Games With Conditional Believes For Modelling Security d** **Threats Defence In Clou Computing Systems** *Lukasz Gaza, Agnieszka Jakobik*	**Comparison Of Separated Families' Standard Of Living In Germany:** **Analyzing The Equalised Incomes In Simulated Families After Child Support And Child Benefit Paid** *Erzsebet Terez Varga*
14:00-14:25	**Simulating The Programmable Networks For HLA Compatible High-Performance Simu** *Kayhan M. Imre*	**European Quality Of Life In Retirement - Analyzing Personal Differences** **Based On SHARE Data** *Sara Szanyi-Nagy, Erzsebet Kovacs, Agnes Vaskoevi*
14:25-14:50	**Agent And Evolutionary-Based Modelling And Simulation** **Of A Simplified Living System** *Adrian Sosnicki, Daniel Grzonka, Lukasz Gaza*	**Rising Regional Importance Of** **The Renminbi In The Asia-Pacific Area: A Panel Analysis** *Eszter Boros, Gabor Sztano*
14:50-15:10	Coffee Break

	Session 7: FDEM	Session 6.2: FES2
	Session chair: *Peter T. Zwierczyk*	Session chair: *Kata Varadi*
15:10-15:35	**FEM Study On The Strength Increasing Effect Of Nitrided Spur Gears** *Jakab Molnar, Peter T. Zwierczyk, Attila Csoban*	**Implied Volatility Based Margin Calculation On Cryptocurrency Markets** *Balazs Kralik, Nora Felfoeldi-Szuecs, Kata Varadi*
15:35-16:00	**Development Of A 2D Discrete Element Software With LabVIEW t** **For Contact Model Improvemen And Educational Purposes** *Laszlo Pasthy, Joszef Graeff, Kornel Tamas*	**Regional Models Of Corporate Sector Development In Russia:** **Where Does Family-Friendly Policy Matter Most?** (A Study Based On Cluster Analysis) *Anna Bagirova, Oksana Shubat*
16:00-16:25	**Application Of The Extended Finite Element Method In The Aim Of Examination Of Cr** **Propagation In Railway Rails** *Daniel Bobis, Peter T. Zwierczyk, Tamas Mate*	**Identifying Regional Models Of Active Grandparenting In Russia** Based On Cluster Analysis *Oksana Shubat, Irina Shmarova*
16:25:16:50	**Application Of The Finite Element Method To Determine The Velocity Profile In An Open Channel** *Daria Wotzka*	
16:50-17:00	**Coffee Break**	
17:00-18:30	**Mobilization to dinner place**	
18:30-21:00	**Conference Dinner**	

Time (CET)	DAY 3 FRIDAY (June 3rd) - All Schedule in CET	
09:00-10:00	**Keynote 3: Modeling for using Deep learning,** *Prof. Manish Gupta*	
10:00-10:30	**Coffee Break**	
	Session 5.2: DIS 2	Session 8: SST
	Session chair: *Mauro Iacono*	Session chair: *Di Wu*
10:30-10:55	**Formal Verification Of Neural Networks:** **A Case Study About Adaptive Cruise Control** *Stefano Demarchi, Dario Guidotti, Andrea Pitto, Armando Tacchella*	**GENOR: A Generic Platform For Indicator Assessment In City Planning** *Leo Leplat, Ricardo da Silva Torres, Dina Aspen, Andreas Amundsen*
10:55-11:20	**Predicting Performance Of Heterogeneous AI Systems With Discrete-Event Simulatio** *Vyacheslav Zhdanovskiy, Lev Teplyakov, Anton Grigoryev*	**Heuristic Techniques For Reducing Energy Consumption Of Household** *Sarah M. Daragmeh, Anniken Th. Karlsen, Ibrahim A. Hameed*
11:20-11:45	**Time Series Clustering With Different Distance Measures** **To Tell Web Bots And Humans Apart** *Grazyna Suchacka*	**Learned Parameterized Convolutional Approximation Of Image Filters** *Olga Chaganova, Anton Grigoryev*
11:45-12:10	**A DSL-Based Modeling Approach For Energy Harvesting IoT / WSN** *Lelio Campanile, Mauro Iacono, Fiammetta Marulli, Marco Gribaudo, Michele Mastroianni*	
12:15-12:30	**Closing session**	
12:30	**Lunch break**	