Monday, 3 July 2023

Time	
08h00	Registration
09h30	Opening Ceremony (Room Sentient Hubs)
10h30	Keynote Talk: Deltares: GhadaEl serafi (Room Sentient Hubs)
11h15	Coffeebreak & Networking

Session	Room Sentient Hubs — Agent Based Simulation I CHAIR: Idalia Flores			Room Wolfram — Simulation and Healthcare I CHAIR:Maria Papanikou			Room IGAMT — Multimodal Transport CHAIR: Ashish Verma		
Time	Paper #	Title	Authors	Paper #	Title	Authors	Paper #	Title	Authors
11h30	387	The Impact of Adding Interaction-Driven Evolutionary Behavior to the Schelling's Model	Yakup Turgut and Sanja Lazarova-Molnar	981	Data-based Model Identification of the Hypothalamus-Pituitary-Thyroid Complex	Clara Horvath, Andreas Körner and Corinna Modiz	1845	A Novel Simulation Based Approach for User-Based Redistribution in Bike-Sharing System	Milan Mathew Thomas, Ashish Verma, Sai Kiran Mayakuntla and Aitichya Chandra
11h50	4071	A Methodology for Limit Cycle Detection in Simulation Models	Francesco Bertolotti and Luca Mari	1734	Online Appointment Scheduling of Patients in a Resource Constrained Facility	Simran Lakhani, Ashutosh Mahajan, Akshay Baheti and Suyash Kulkarni	2241	Evaluating logistical concepts with simulation: a case study of increasing freight train length at ports	Pawel Kołodziejczyk, Cornelis Versteegt and Michele Fumarola
12h10	8550	An Agent-Based Model for exploring behaviour change policies for improving waste separation at SMEs	Kasper Lange, Sabine Kerssens, Gijsbert Korevaar and Martijn Warnier	3595	Analysis of the Notification Process for Medical Device Safety, Using Queuing Theory and Simulation	José Luis Dorbecker Saunders et al.	4093	Modelling passengers in air-rail multimodality	Luis Delgado, Tatjana Bolic, Andrew Cook, Elham Zareian, Ernesto Gregori and Annika Paul
12h30	2055	Impact of power and CO2 emissions on parking sustainability: comparative analysis between automated and traditional systems	Felipe Haro, Joaquin Guzman and Soheila Antar	7377	Contributions of Process Mining and Simulation to the Process Management Lifecycle using the Example of Healthcare Case Studies	Marianne Schmolke	7747	Design of robust business processes using multimodel approach	Katarina Samoylova and Elena Zamyatina

Time	
13h00	Lunch break (Canteen Wibauthuis)
14h00	Keynote talk: Pr. Gabriel Wainer (Room Sentient Hubs)

Session	Room Sentient Hubs — Simulation & supply Chain: Margarita Bagamanova			Room Wolfram — Simulation in Education CHAIR:Cristina Ruiz Martin			Room IGAMT — Simulation Optimization CHAIR: Mario Ruz		
Time	Paper #	Title	Authors	Paper #	Title	Authors	Paper #	Title	Authors
14h45	1140	A multi-paradigm simulation-based approach for resilient and sustainable supply chains in the process industry	Ana Silva, Catarina Marques and Jorge Sousa	9884	MCSimulRisk: an educational tool for quantitative risk analysis	Fernando Acebes et al.	2706	A method for efficient simulation of production lines through software-supported cooperation between production and simulation experts	Walter Wincheringer and Marec Kexel
15h05	656	Evaluating The Optimal Facility Location For Additive Manufacturing Service Bureau	Sagar Ghuge, Milind Akarte and Rohit Kumar	1689	Technology-supported Teaching of Modeling and Simulation in Inverted Classroom Format	Alexander Edthofer et al.	6543	A new Simheuristics procedure for stochastic combinatorial optimization	Joost Berkhout
15h25	7462	A Monte Carlo Simulation Methodology for Uncertainty Analysis in Product Recall Management	Jean P. Morán-Zabala and Juan M. Cogollo-Flórez	8176	Simulation model to the online course advising	Alejandro Felipe Zárate Pérez and Idalia Flores de la Mota	7363	Simulation applied to a consulting team assignment problem	Gabriel A. Rios-Esparza and Esther Segura-Pérez
15h45	4617	A simulation framework to support maintenance management in the design of biomass supply chains	Henrique Piqueiro, Romão Santos, Reinaldo Gomes and Jorge Sousa	3947	Simulation-based learning in aviation management studies using SIMIO software	Viktor Trasberg and Allan Nõmmik	1737	Estimating Wind and Emission Parameters in an atmospheric transport model	Andres Yarce Botero, Olga Lucia Quintero Montoya and Arnold Heemink

Time	
16h15	Coffeebreak & Networking

Session	Room Sentient Hubs — Agent Based Simulation II CHAIR:Sahil Besare			Room Wolfram — Simulation in Manufacturing and Agriculture CHAIR: Idalia Flores			Room IGAMT — Industrial Case StudiesI CHAIR:Abdel El Makhloufi		
Time	Paper #	Title	Authors	Paper #	Title	Authors	Paper #	Title	Authors
16h30	4360	Pilot simulation for public passenger transport energy consumption	Carmen Angelina García Cerrud et al.	6557	Simulation analysis of flow patterns inside a cyclone bag separator at increasing clogging levels	Federico Solari et al.	2475	Reward Calculation in Real-time Scheduling Based on Simulation and Q-learning	Shufang Xie, Tao Zhang and Oliver Rose
16h50	5563	Learning Explanatory Coherence Models from Agent-Based Simulation Experiments	Levent Yilmaz	7625	Simulation-Optimization of Job Shop Scheduling using Reinforcement Learning	Sahil Besare and Mohammad Dehghani	3140	Simulation, a tool to improve the medical equipment production line	Federico Miguel Vázquez Trejo, Eduardo Herrera Jacobo and Ricardo Torres Mendoza
17h10	5635	Simulating patient outmigration based on regional-level healthcare quality: an agent-based modeling approach	Moo Hyuk Lee and Young Kyung Do	8005	An AI-Enabled Simulation: Applying Neural Network in a Flexible Flow Shop Problem	Soeb Hussain, Yash Nema and Mohammad Dehghanimohammadabadi	3829	A Reinforcement Learning Embedded Simulation Model for The Automation of Pipe Production Plans	Kamil Erkan Kabak and Alper Demir
17h30	6870	On the Relationship between Model Complexity and Decision Support in Agent-based Modeling and Simulation	Ruhollah Jamali and Sanja Lazarova-Molnar	8864	Modeling Dynamics of the Biogas Process under Uncertainty: A Fuzzy Set Theory Approach	Zahir Barahmand and Gamunu Samarakoon	4489	Optimizing Electric Arc Furnace Operations through an Intuitive User Interface on Siemens MindSphere: A Decision Support System	Simon Tomažič and Vito Logar

Time	
18h	Cocktail and poster session

Tuesday, 4 July 2023

Time	
08h00	Registration
09h00	Keynote Talk: Sanja Lazarova-Molnar (Room Sentient Hubs)
09h45	Coffeebreak & Networking

Session	Room Sentient Hubs — Agent Based Simulation and Control CHAIR:Igor Škrjanc			Room Wolfram — Simulation and Healthcare II CHAIR: Maria Papanikou			Room IGAMT — Industrial Case Studies II CHAIR: Esko Juuso		
Time	Paper #	Title	Authors	Paper #	Title	Authors	Paper #	Title	Authors
10h00	8439	Evaluation of Government Incentive Policy on Industrial Waste Utilization by Agent-based Simulation of Industrial Symbiosis Network	Shufang Xie, Tao Zhang, Tobias Uhlig and Oliver Rose	5677	Towards a hospital-wide simulation framework	Melanie Reuter-Oppermann, Michael O'Sullivan, Cameron Walker and Ilze Ziedins	7612	The use of simulation throughout the lifecycle of advanced software algorithms – a case study	Yvo Saanen, Zack Lu and Gijsbert Bast
10h20	8099	Exploring the Use of Urban Consolidation Centers for Efficient Last-Mile Delivery Using Agent Based Modelling and Simulation	Aitor Ballano, Anas Al-Rahamneh, Adrian Serrano and Javier Faulin	5450	Analysis of Covid-19 Transmission Using Complex Networks	Sashiko Shirai, Oroselfia Sanchez, Carmen A. García-Cerrud and Idalia Flores-De la Mota	9738	Architecture based on Cloud Services to boost cultural and heritage tourism in the department of Cesar, Colombia	Paola Patricia Ariza Colpas et al.
10h40	3369	Error-Model Predictive Control of Wheeled Mobile Robots for Minimum-Time Trajectory Tracking	Martina Benko Loknar, Andrej Zdešar, Sašo Blažič and Igor Škrjanc	7693	Permutation Entropy as a Conceptual Model to Analyse Brain Activity in Sleep	Alexander Edthofer et al.	1602	Application of Digital Twin Simulation In Deploying AGV/ARV System To Hi-Tech Industry	Harikrishnan K, David Gyulai and Niranjana C
11h00	5934	Optimal Active Generator Torque Control Strategies for Tower Lateral Load Reduction in the IEA 15 MW Wind Turbine	Manuel Lara, Mario L. Ruz, Iñaki Sandua, Francisco Vázquez and Juan Garrido	3305	Identifying Flight Schedule Characteristics Increasing Pilots Absenteeism at an Airline Using a Data Mining and Simulation Approach	Thomas Nibbering and Alejandro Murrieta Mendoza	8742	Validation of Data-Driven Reliability Models in Manufacturing - Work in Progress	Jonas Friederich and Sanja Lazarova-Molnar

Time	
11h30	Coffeebreak & Networking

Morning Sessions (11h45–12h45)

Room Sentient Hubs — Aviation I : Alejandro Murrieta

Time	Paper #	Title	Authors
11h45	7311	Network Effects from Local Performance Improvements in Europe's Air Transport System	Daniel Lubig, Hartmut Fricke and Bruno Desart
12h05	7520	A Causal STAM Model to Increase Airspace Network Capacity	Gonzalo Martin and Miquel Angel Piera
12h25	4772	Simulation-Optimisation-based decision support system for managing airport security resources	Geoffrey Scozzaro, Miguel Mujica Mota, Daniel Delahaye and Catherine Mancel
12h45			

Room Wolfram — Simulation & Digital Twins CHAIR: Antonio Padovano

Time	Paper #	Title	Authors
11h45	3651	Digital Twins for Operations and Supply Chain Management from Data Engineering Point of View	Amir Ghasemi, Radhia Azzouz and Cathal Heavey
12h05	4370	Modeling of Logistics Networks with Labeled Property Graphs for Simulation in Digital Twins	Alexander Wuttke, Joachim Hunker, Anne Antonia Scheidler and Markus Rabe
12h25	5601	Sustainable Simulation-based Digital Twin: an Application Portfolio Management tool to Minimize Digital Waste and Maximize Useful Life	Antonio Padovano et al.
12h45	6358	Enhancing Smart Manufacturing Systems: A Digital Twin Approach employing Simulation, Flexible Robots and Additive Manufacturing Technologies	Romão Santos, Rui Dias, Cláudia Rocha and João Quintas

Room IGAMT — SPONSORS SESSION CHAIR: Paolo Scala

WOLFRAM		
INCONTROL		
Sentient Hubs		

Time	
13h15	Lunch break (Canteen Wibauthuis)
14h00	Keynote talk: Wolfram (Room Sentient Hubs)
14h45	Panel Session: "The importance of Simulation for a Sustainable Future" - Miquel Piera, Sanja Lazarova-Molnar, Jan Brugards, Ashish Verma, David Lucido (Room Sentient Hubs)
15h45	Coffeebreak & Networking

Afternoon Sessions (16h00–17h00)

Room Sentient Hubs — Monitoring and Control I CHAIR: Igor Škrjanc

Time	Paper #	Title	Authors
16h00	1635	Identification of Hybrid Systems by Fuzzy C-regression Clustering	Saso Blazic and Igor Skrjanc
16h20	1874	Closed-loop workload input-output control of production systems: A hybrid simulation study	Gasper Music and Juliana Keiko Sagawa
16h40	2830	Evolving Neuro-Fuzzy Design of Experiments: A Novel Approach of Nonlinear Process Identification	Miha Ožbot and Igor Škrjanc
17h00	5104	Uncertainty processing based on Nonlinear Scaling for the TCP-100 solar thermal power plant	Esko Juuso and Luis Yebra

Room Wolfram — Simulation and Machine Learning CHAIR: Mohammad Dehghani

Time	Paper #	Title	Authors
16h00	912	Integration of Reinforcement Learning and Discrete Event Simulation Using the Concept of Experimental Frame	Thorsten Pawletta and Jan Bartelt
16h20	7544	Supervised machine learning for input modelling of an agent-based simulation model for autonomous on-demand shuttle services.	Maylin Wartenberg et al.
16h40	6302	Modeling Social behavior on energy consumption – An agent-based with multivariate regression approach	Felipe Haro and Altaf Mazhar Soomro
17h00	4302	Combined Integration of Simulation and Machine Learning in a Design Methodology for Agile Production Networks	Willian Vent and Markus Rabe

Room IGAMT — Environment and Sustainable Applications I CHAIR: Luis Fernandez

Time	Paper #	Title	Authors
16h00	647	Irrigation Efficiency using a Systems Dynamics Model: A Case Study of a Pepper Crop in La Merced - Peru	Seleni Lara Jauregui et al.
16h20	1365	Simulation and optimization in cross-sectoral water: a review	Adrielly Nahomee Ramos Alvarez, Idalia Flores de la Mota and Francisca Irene Soler Anguiano
16h40	4763	The experience of implementation of augmented reality in the "Parque Adalinda Sierra", municipality of La Paz, Cesar, Colombia	Paola Patricia Ariza Colpas et al.
17h00	7543	WATER MANAGEMENT IMPROVEMENTS TYHORUGH THROUGH STRATEGIC ENGINEERING COMBINING SIMULATION & GENETIC ALGORITHMS	Agostino Bruzzone et al.

Time	
19h00	Gala Dinner (Restaurant Pllek)

Wednesday, 5 July 2023

Time	
09h30	Keynote Talk: Deltares: Igor Skrjanc (Room Sentient Hubs)
10h30	Coffeebreak & Poster Session

Room Sentient Hubs — Aviation II & Transportation CHAIR: Alejandro Murrieta

Time	Paper #	Title	Authors
11h30	966	Digital Twin Development with Agent-based Model to Support Aircraft Ground Operations in Total Airport Management	Mingchuan Luo, Hartmut Fricke, Michael Schultz and Bruno Desart
11h50	7153	Simulation-based Allocation and Routing Optimization: A Case Study of Single Versus Team Driving	Sajjad Amrollahi Biyouki, Chinedu Ufodike, Xueping Li, Hoon Hwangbo and John Bell
12h10	1939	U-space strategic deconflicting service impact on Very Low Level airspace capacity	Zhiqiang Liu, Joseluis Muñoz Gamarra and Juan José Ramos Gonzalez
12h30			

Room Wolfram — Simulation and Circular Economy CHAIR: Amir Ghasemi

Time	Paper #	Title	Authors
11h30	5221	Investigation of syngas production potential from gasification of coffee wastes using a computational particle fluid dynamic simulation	Rajan Kumar Thapa, Sunil Prasad Lohani, Roshan Shah and Rajan Jaiswal
11h50	7212	Enhanced Hydrogen production from gasification of waste feedstock in a fluidized bed reactor	Rajan Jaiswal et al.
12h10	7804	Optimizing Portfolio Selection Strategy for Purchasing and Supply in Healthcare Considering Circular Economy Principles - Case: Isolation Gowns	Amir Ghasemi, Lori DiVito, Zita Ingen-Housz and S. Ali Torabi
12h30	7966	Application of augmented reality in the Plaza Simón Bolívar in Manaure, department of Cesar Colombia, as a strengthening of tourism and culture	Paola Patricia Ariza Colpas et al.

Room IGAMT — Enviornment and Suistanable Applications II CHAIR: Marta Varo

Time	Paper #	Title	Authors
11h30	9951	Emission-based Production and Inventory Control System: A stability-based analysis for system cost and service level	Rishav Deval and Jayendran Venkateswaran
11h50	9255	A survey-based system dynamics analysis of commercializing biomass supply chains in Iran	Davoud Hosseinnezhad, Fooroogh Goodarzi and Cathal Heavey
12h10	7390	Applying Simulation System to Compare the Use of Electric and Diesel Truck Fleets	Irina Yatskiv, Jurijs Tolujevs, Vladimirs Petrovs and Aleksejs Vesjolijs
12h30	8589	Surrogate Assisted Simulation-based Grey Wolf Optimization for energy-efficient Supply Chain Configuration	Lucas Schreiber and Dennis Wilk

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Time	
13h00	Lunch break (Canteen Wibauthuis)
14h00	Keynote Talk: U Crowds : Roland Geraerts (Room Sentient Hubs)
15h15	Coffeebreak & Networking

Room Sentient Hubs — Monitoring and Control II CHAIR: Igor Škrjanc

Time	Paper #	Title	Authors
15h30	2648	Nonlinear control of a helio-crane laboratory device	Goran Andonovski, Martin Porenta and Igor Škrjanc
15h50	6820	Inventory control in MSMEs using Monte Carlo Simulation	Juan Genaro Chip Domínguez, Guillermo Pérez Camacho and Sonia Karina Pérez Juárez
16h10	9631	Resilience Analysis of Large-scale Food Flow Networks with an Optimization-based N-1 Contingency Approach	Sissi Adeli Bazan Santos and Sebastian Albrecht
16h30	7176	Deep Neural Input-Filtered Gaussian Process Model	Tadej Krivec and Juš Kocijan

Room Wolfram — Simulation & Human Behaviour CHAIR: Geoffrey Scozzaro

Time	Paper #	Title	Authors
15h30	295	Modelling and simulating serpentine group behaviour in crowds using modified social force model	Gayathri Harihara Subramanian, Nipun Choubey and Ashish Verma
15h50	615	Metaverse Simulator for Emotional Understanding	Antonella Petrillo et al.
16h10	1588	Analyzing the sensitivity of pedestrian behaviour using a pedestrian simulation model	Nipun Choubey, Karthika P S and Ashish Verma
16h30	275	Discrete-Event Modeling of Human Behavior for Spread of Diseases on University Campuses	Hazel Griffith, Cristina Ruiz-Martin and Gabriel Wainer

Room IGAMT — Simulation and Data: Arnold Heemink

Time	Paper #	Title	Authors
15h30	4743	Use of simulation to determine line production capacity in MSMEs	Yazmin Galvan, Susana Tellez and Ricardo Torres
15h50	4647	Backward-Oriented Decision and Planning Approaches in Production Scenarios: A Systematic Literature Review and Potential Solution Approach	Madlene Leißau and Christoph Laroque
16h10	7031	truck shuttle simulation between production plant and logistics centre: data acquisition and preparation	Marec Kexel and Walter Wincheringer
16h30	6209	Augmented reality applied to the "Balneario Paso de la Danta" in Manaure Cesar, an interactive experience of ICT and cultural heritage.	Paola Patricia Ariza Colpas et al.

Time	
17h00	Closing Ceremony (Gerard van Haarlem Room)