I3M Multiconference Program

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I3M: The 15th International Multidisciplinary Modelling & Simulation Multiconference

General co-Chairs
Agostino G. Bruzzone, DIME, University of Genoa, Italy
Miquel Angel Piera, Autonomous University of Barcelona, Spain

Program Co-Chairs
Francesco Longo, MSC-LES, DIMEG, University of Calabria, Italy
Yuri Merkuryev, Department of M&S, Riga TU, Latvia

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EMSS: The 30th European Modelling & Simulation Symposium,

EMSS General co-Chairs:
Francesco Longo, MSC-LES, DIMEG, University of Calabria, Italy
Emilio Jiménez, University of La Rioja, Spain

EMSS Program Chair:
Michael Affenzeller, Upper Austria University of Applied Sciences, Austria

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HMS: The 20th International Conference on Harbour, Maritime & Multimodal Logistics Modelling and Simulation

HMS General co-Chairs:
Agostino G. Bruzzone, DIME, University of Genoa, Italy
Yuri Merkuryev, Department of M&S, Riga TU, Latvia

HMS Program co-Chairs:
Eleonora Bottani, University of Parma, Italy
Miquel Angel Piera - Autonomous University of Barcelona, Spain

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MAS: The 17th International Conference on Modelling & Applied Simulation

MAS General co-Chairs:
Marina Massei, Liophant Simulation, University of Genoa, Italy
Adriano Solis, York University, Canada

MAS Program Chair:
Fabio De Felice, University of Cassino, Italy

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IMAACA: The 11th International Conference on Integrated Modeling and Analysis in Applied Control and Automation

IMAACA General co-Chairs:
Sergio Junco, Universidad Nacional de Rosario, Argentina
Geneviève Dauphin-Tanguy, École Centrale de Lille, France

IMAACA Program Chair
Loucas Louca, University of Cyprus, Cyprus.

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DHSS: The 8th International Defense and Homeland Security Simulation Workshop

DHSS General Chair:
Agostino G. Bruzzone, DIME, University of Genoa, Italy

DHSS Program Chair
Robert Sottilare, US Army Research Laboratory, USA
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I_WISH: The 7th International Workshop on Innovative Simulation for Health Care

I_WISH General co-Chairs:
Marco Frascio, University of Genoa, Italy
Vera Novak, BIDMC, Harvard Medical School, USA

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SESDE: The 6th International Workshop on Simulation for Energy, Sustainable Development & Environment

SESDE General co-Chairs:

Janos Sebestyen Janosy, MTA EK Centre for Energy Research Hungarian Academy of Sciences, Hungary
Gregory Zacharewicz, IMS Université Bordeaux, France

SESDE Program Chair:
Letizia Nicoletti, CAL-TEK Srl, Italy
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FOODOPS: The 4th International Food Operations and Processing Simulation Workshop

FOODOPS General Chair:
Giuseppe Vignali, University of Parma, Italy

FOODOPS Program Chair:
Francesco Longo, Unviersity of Calabria, Italy
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VARE: The 4th International Conference on Virtual and Augmented Reality in Education

VARE General Chair:
Egils Ginters, Riga Technical University, Latvia

VARE Program co-Chairs:
Jorge Martin Gutierrez, Universidad de La Laguna, Spain
Eduardo González Mendívil, Instituto Tecnológico de Monterrey, Mexico
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I3M: The International Multidisciplinary Modelling & Simulation Multiconference involves EMSS, MAS, HMS, IMAACA, DHSS, I_WISH, SESDE, FOODOPS, VARE and related Workshops and Special Sessions; All Sessions are open to all I3M Attendees

EMSS: European Modelling & Simulation Symposium, 30th Edition, Part of I3M2018

MAS: The International Conference on Modelling & Applied Simulation, 17th Edition, Part of I3M2018

IMAACA: The International Conference on Integrated Modeling and Analysis in Applied Control and Automation, 11th Edition, Part of I3M2018

HMS: The International Conference on Harbour, Maritime & Multimodal Logistics Modelling and Simulation, 20th Edition, Part of I3M2018

DHSS: The International Defense and Homeland Security Simulation Workshop, 8th Edition, Part of I3M2018

I_WISH: The International Workshop on Innovative Simulation for Healthcare, 7th Edition, Part of I3M 2018

SESDE: The International Workshop on Simulation for Energy, Sustainable Development & Environment, 6th edition, Part of I3M2018

FOODOPS: The International Food Operations and Processing Simulation Workshop, 4th Edition, Part of I3M 2018

VARE: The International Conference on Virtual & Augmented Reality in Education, 4th Edition, Part of I3M2018

Special Session: I3M Special Session freely open to all the attendees (i.e. Plenary Joint Opening, I3M 2018 Special session, etc.)

I3M Event: Special I3M Events (I3M Gala Dinner and I3M Welcome Ceremony) are open to I3M / DHSS/ EMSS/ HMS/ IMAACA/ MAS/IWISH/SESDE/FOODOPS/VARE Attendees

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Monday 2018-09-17 9:00-10:30
Joint I3M Opening, Room - Star Auditorium
Welcome Address I3M, Prof.Agostino G. Bruzzone, DIME, University of Genoa, Italy

Conferences, Societies and Networks Welcome
- Welcome to Budapest - Prof. Janos Sebestyen Janosy, Centre for Energy Research, Hungary
- EMSS Conference - Prof. Francesco Longo, MSC-LES, University of Calabria, Italy
- HMS Conference - Prof. Miquel Angel Piera, Autonomous University of Barcelona, Spain
- MAS Conference - Prof. Adriano Solis, York University, Canada
- IMAACA Conference - Sergio Junco, Universidad Nacional de Rosario, Argentina
- DHSS Workshop - Dr. Robert Sottilare, US Army Research Laboratory, USA
- I_WISH Workshop - Prof. Vera Novak, Harvard Medical School, USA
- SESDE Workshop - Prof. Gregory Zacharewicz, University of Boredaux, France
- FOODOPS Workshop - Prof. Giuseppe Vignali, University of Parma, Italy
- VARE Conference - Prof. Egils Ginters, Riga Technical University, Latvia
- Liophant - Dr. Marina Massei, University of Genova, Italy
Spain
- Simulation Team. Prof. Emilio Jimènez, La Rioja University, Spain
- I3M 2019 and Conference Updates, Prof. Guilherme Pereira, Universidade do Minho, Portugal

Monday 2018-09-17 10:30-11:00

COFFEE BREAK Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Monday 2018-09-17 11:00-12:30
Joint I3M Opening, Room - Star Auditorium

Plenary Speeches
Agostino Bruzzone, DIME, University of Genoa, Italy
MS2G as Pillar for developing Strategic Engineering as a New Discipline for Complex Problem Solving

Daniel Edgardo Viassolo, Schlumberger, USA
Industry 4.0, the forth revolution of industrial production: A Simulation perspective

Felix Breitenecker, Technical University of Vienna, Austria
Development and Application of System Simulation – A View from Opposed Properties

Monday 2018-09-17 12:30-14:00
LUNCHEON Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Monday 2018-09-17 14:00-15:30
Room: Magnòlia
EMSS: Soft Computing and Modelling & Simulation
Chair(s): Michael Affenzeller, University of Applied Sciences Upper Austria

EMSS_22: Distributed simulation execution on a high-performance cluster using HeuristicLab Hive
Johannes Karder, Andreas Beham, Stefan Wagner, Michael Affenzeller
University of Applied Sciences Upper Austria; Johannes Kepler University Linz - Austria

EMSS_23: Comparing machine learning methods on concept drift detection for Predictive Maintenance
Jan Zenisek, Josef Wolfartsberger, Christoph Sievi, Michael Affenzeller
University of Applied Sciences Upper Austria; Johannes Kepler University Linz - Austria

EMSS_38: Performance of industrial sensor data persistence in data vault
Florian Bachinger, Jan Zenisek, Lukas Kammerer, Martin Stimpfl, Gabriel Kronberger
University of Applied Sciences Upper Austria; Miba AG - Austria

EMSS_52: Sensor-based modeling of radial fans
Florian Holzinger, Michael Kommenda, Erik Strumpf, Josef Langer, Jan Zenisek, Michael Affenzeller
University of Applied Sciences Upper Austria; Scheuch GmbH - Austria

Monday 2018-09-17 14:00-15:30
Room: Jàzmin I

EMSS: Modeling & Simulation in Logistics, Traffic & Transportation - Session I
Chair(s): Miguel Angel Piera, Autonomous University of Barcelona

EMSS_11: Surrogate-assisted high-dimensional optimization on microscopic traffic simulators
Bernhard Werth, Erik Pitzer, Gerald Ostermayer, Michael Affenzeller
University of Applied Sciences Upper Austria; Johannes Kepler University Linz - Austria

EMSS_26: Different traffic submodels within scalable unitary hybrid simulator related to railway systems
Radek Novotný, Antonín Kavička
University of Pardubice - Czech Republic

EMSS_30: Use reduced track profile and discrete simulation to calculate train travel time
Jan Fikejz, Jan Merta
University of Pardubice - Czech Republic

EMSS_32: Complex nested simulations within simulators reflecting railway traffic
Roman Diviš, Antonín Kavička
University of Pardubice - Czech Republic

Monday 2018-09-17 14:00-15:30
Room: Jázmin II
EMSS-MAS: Simulation for Business, Finance and Security
Chair(s): Edgar Alonso Lopez-Rojas, Norwegian University of Science and Technology

EMSS_34: BSE: A minimal simulation of a Limit-Order-Book stock exchange
Dave Cliff
University of Bristol - United Kingdom

EMSS_28: On the GDPR introduction in EU and its impact on financial fraud research
Edgar Alonso Lopez-Rojas, Dincer Gultemen, Erjon Zoto
The Norwegian University of Science and Technology - Norway

EMSS_10: Model-based image processing approaches for automated person identification and authentication in online banking
Andreas Pointner, Oliver Krauss, Georg Freilinger, Daniel Strieder, Gerald Zwettler
University of Applied Sciences Upper Austria; Credi2 GmbH - Austria

MAS_19: Discrete event simulation applied to the analysis of the cash-desks utilization in a selected shop of the retail chain
Martina Kuncova, Marketa Skalova
University of Economics Prague - Czech Republic

MAS_24: Cash and voucher impact factor in humanitarian aid: a system dynamic analysis
Fahimeh Allahi, Roberto Revetria, Roberto Cianci
University of Loughborough; University of Genoa - UK/ Italy

Monday 2018-09-17 14:00-15:30
Room: Kamilla I
IMAACA: Energy-based Modelling and Control
Chair(s): Sergio Junco, Universidad Nacional de Rosario

IMAACA_3: Thermo hydraulic pseudo bond graph based modeling of a centrifugal pump-pipe system with experimental analysis
Mohamed Kebdani, Geneviève Dauphin-Tanguy, Antoine Dazin
Ecole Centrale de Lille; Arts et Métiers Paris Tech - France

IMAACA_4: Bond graph approach for disturbance rejection with Derivative State Feedback
Joel A.Gonzalez, Christophe Sueur
Ecole Centrale de Lille - France

IMAACA_5: Bond graph approach for input-output decoupling of linear MIMO systems with Derivative State Feedback
Christophe Sueur
Ecole Centrale de Lille - France

IMAACA_7: Energy- and flatness-based control of DC-DC converters with nonlinear load
Juan Tomassini, Alejandro Donaire, Sergio Junco
CONICET; National University of Rosario; Queensland University of Technology - Argentina/ Australia

IMAACA_8: Robustifying passive closed-loop Port-Hamiltonian systems using Observer Based Control
Matías Nacusse, Alejandro Donaire, Sergio Junco
National University of Rosario; CONICET; Queensland University of Technology - Argentina/ Australia

Monday 2018-09-17 14:00-15:30
Room: Kamilla III
VARE: AR/VR for Learning, Education and Training - Session I
Chair(s): Egils Ginter, Riga Technical University

VARE_5: Motostudent and the reality-virtuality continuum
Héctor Olmedo, Karle Olalde
University of the Basque Country - Spain

VARE_8: Augmented reality: modernizing rural education in India
Nikhil Sawlani, Preeti Sangamesh, Sandesh B J
PESIT Bangalore - India

VARE_14: The impact of new technologies in design education

Nora Argelia Aguilera González, Fernando Suarez-Warden, Hector Nahun Quintero Milian, Samira Hosseini
Monterrey Institute of Technology - México

VARE_19: Using the augmented reality for training engineering students
Vitalii Ivanov, Ivan Pavlenko, Justyna Trojanowska, Yurii Zuban, Dmytro Samokhvalov, Pawel Bun
Sumy State University; Poznan University of Technology - Ukraine/ Poland

VARE_35: Exploring dimensionality reduction effects in mixed reality for analyzing tinnitus patient data
Burkhard Hoppenstedt, Manfred Reichert, Christian Schneider, Klaus Kammerer, Winfried Schlee, Thomas
Probst, Berthold Langguth, Rüdiger Pryss
Ulm University; University of Regensburg; Danube University Krems - Germany/ Austria

Monday 2018-09-17 15:30-16:00

COFFEE BREAK Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Monday 2018-09-17 16:00-17:30
Room: Magnòlia
EMSS-HMS: Industrial Processes M&S and Industry 4.0
Chair(s): Juan Ignacio Latorre, Public University of Navarre

EMSS_25: Optimization of order picking activities in a wholesale food company
Eleonora Bottani, Andrea Panciroli, Roberto Montanari, Andrea Volpi
University of Parma - Italy

HMS_14: Distance estimate for order picking systems in manual warehouses
Eleonora Bottani, Giorgia Casella, Roberto Montanari
University of Parma - Italy

EMSS_21: Process model for a simulation-based early warning system using Artificial Intelligence
David Weigert, Tim Lippke, Tobias Reggelin, Michael Schenk
Otto von Guericke University Magdeburg - Germany

EMSS_29: Simulation of production line improvements in panelised floor manufacturing
Jingwen Wang, Xianfei Yin, Yichen Tian, Xinming Li, Mohamed Al-Hussein
University of Alberta - Canada

Monday 2018-09-17 16:00-17:30
Room: Jàzmin I
**HMS-EMSS-MAS: Modeling & Simulation in Logistics, Traffic & Transportation -
Session II**
Chair(s): Francesco Longo, University of Calabria; Antonio Padovano, University of Calabria

MAS_38: A methodological framework to implement lean in dynamic and complex socio-technical systems
Joshua Behr, Rafael Diaz, Francesco Longo, Antonio Padovano
Old Dominium University; Zaragoza Logistics Center; University of Calabria - USA/ Spain/ Italy

HMS_5: On the real time logistics monitoring system development using artificial neural network
Dmitriy Petrovskiy, Aleksandr Barashkov, Vladislav Sobolevsky, Boris Sokolov, Vjacheslav Pjatkov
NRUHSE; SPIIRAS; ITMO University; Military-space academy - Russia

HMS_7: Calabria region as competitive european terminal port for the silk maritime road. Scenario simulation
Domenico Gattuso, Gian Carla Cassone, Margherita Malara
Mediterranea University of Reggio Calabria - Italy

EMSS_33: Analysis of resource management methodologies for the development of discrete event simulation models representative of the works developed in shipyards
Adolfo Lamas-Rodríguez, David Chas-Álvarez, José Antonio Muiña-Dono
University of A Coruña; UMI Navantia-UDC - Spain

Monday 2018-09-17 16:00-17:30
Room: Jàzmin II
MAS: Simulation based Design
Chair(s): Marina Massei, University of Genoa

MAS_10: Study on fuel economy and regenerative braking of 48V mild hybrid vehicle with two motors
Seongmin Ha, Wonbin Na, Hyeongcheol Lee
Hanyang University - Korea

MAS_11: Model-based fault detection and isolation algorithm for vehicle semi-active suspension system
Wonbin Na, Juin Lee, Hyeongcheol Lee
Hanyang University - Korea

MAS_12: Fuel optimal speed profile using traffic information at intersection
Jooin Lee, Seongmin Ha, Hyeongcheol Lee
Hanyang University - Korea

MAS_13: A study on operating characteristics of a 48V electric supercharger and P0 configuration motor for fuel economy improvement
Yonghyeok Ji, Junyong Park, Hyeongcheol Lee
Hanyang University - Korea

Monday 2018-09-17 16:00-17:30
Room: Kamilla I
IMAACA: Algorithmic Modelling, Control and Optimization
Chair(s): Geneviève Dauphin-Tanguy, École Centrale de Lille

IMAACA_6: New results for global stability of neutral-type delayed neural networks
Neyir Ozcan
Uludag University - Turkey

IMAACA_20: Realising optimum design of a hybrid renewable energy system using multi-objective evolutionary algorithm
Majdi Saidi, Zhongliang Li, Rachid Outbib, Seifeddine Benelghali, Thiery Leroux, Emmanuel Cardone
Aix-Marseille University; University of Toulon; CNRS; LIS; Pompes Chaud Froid Industrie - France

IMAACA_16: Design and verification of discrete event controllers for Smart Factory
Armand Toguyeni
University of Lille Nord-Europe - France

IMAACA_18: Study of supply chain vulnerabilities based on cognitive engineering and ARIMA formal models
Leïla Sakli, Jean-Marc Mercantini, Jean-Claude Hennet
Aix-Marseille University - France

Logistics Zone
David Weigert, Fabian Behrendt, Michael Schenk
Fraunhofer Institute for Factory Operation and Automation IFF; SRH Mobile University - Germany

Monday 2018-09-17 16:00-17:30
Room: Kamilla III
VARE-MAS: AR/VR for Learning, Education and Training - Session II
Chair(s): Egils Ginter, Riga Technical University

VARE_21: Augmented reality in production management classes
Pawel Bun, Paulina Rewers, Filip Gorski
Poznan University of Technology - Poland

VARE_23: Defining the parameters for a holographic telepresence classroom experience
Héctor Nahún Quintero Milián, Pablo Guillermo Ramírez Flores, Luis Eduardo Luévano Belmonte
Monterrey Institute of Technology - México

VARE_25: Virtual aquarium: tool for science motivation using augmented reality
Poonpong Boonbrahm, Charlee Kaewrat, Prasert Pengkaew, Salin Boonbrahm
Walailak University - Thailand

VARE_26: Decision support method for using virtual reality in education based on a cost-benefit-analysis
Polina Häfner, Jana Dücker, Charline Schlatt, Jivka Ovtcharova

Karlsruhe Institute of Technology; FZI Research Center for Information Technology - Germany

MAS_14: Leveraging virtual environments to train a deep learning algorithm
Dean Reed, Troyle Thomas, Latika Eifert, Shane Reynolds, Jonathan Hurter, Frank Tucker
University of Central Florida; SFC Paul Ray Smith Center - USA

Monday 2018-09-17 17:30-19:00
Room: Magnòlia
W-Artemys Project Meeting
Chair(s): Giuseppe Vignali, University of Parma; Luciano Di Donato, INAIL
Wearable Augmented RealiTy for EMployee safetY in manufacturing Systems. During the meeting the
results of the W-ARTEMYS project will be presented

Monday 2018-09-17 17:30-19:00
Room: Jàzmin I
EUROSIM BOARD MEETING
Chair(s): Emilio Jiménez, La Rioja University
The participation to this meeting is restricted to the representatives of all the national/international societies
and entities part of EUROSIM

Tuesday 2018-09-18 9:00-10:30
Room: Magnòlia
EMSS: Discrete, Combined and Distributed Simulation
Chair(s): Chair(s): Gasper Music, University of Ljubljana; Thomas Wiedemann, HTW Dresden FB Informatik

EMSS_36: OpenCAL simulation of the 1992 Tessina landslide
Donato D'Ambrosio, Alessio De Rango, Rocco Rongo
University of Calabria - Italy

EMSS_59: Web-based optimization with JavaScript frameworks and a GraphQL-API-interface
Yu Xingyue, Thomas Wiedemann, Wilfried Krug
University of applied Science Dresden; Zhejiang University of Science and Technology Hangz; Dualis IT
Solution GmbH - Germany/ China

EMSS_50: Data modelling approach for physical systems
Stefanie Winkler, Andreas Körner, Felix Breitenecker
Vienna University of Technology - Austria

EMSS_5: Parallel simulation of the N-body problem using Quad-Tree HLPC
Mario Rossainz López, Manuel I. Capel, Erika Álvarez Martínez, Ivo Pineda Torres
Autonomous University of Puebla; University of Granada - México/ Spain

industrial context
Simon Gorecki, Youssef Bouanan, Judicael Ribault, Gregory Zacharewicz, Nicolas Perry
University of Bordeaux; ENSAM of Bordeaux - France

Tuesday 2018-09-18 9:00-10:30
Room: Jàzmin I
EMSS-HMS-MAS: Modeling & Simulation in Logistics, Traffic & Transportation - Session III
Chair(s): Manfred Gronalt, BOKU University

EMSS_62: How do travellers decide: a stochastic modelling approach to determine decision factor significance
Faboya T. Olusola, Peer-Olaf Siebers, Brendan Ryan, Grazziela P. Figueredo
University of Nottingham - United Kingdom

HMS_4: Agent-based simulation of restaurant deliveries facilitating cargo-bikes and urban consolidation
Christian Fikar, Manfred Gronalt

University of Natural Resources and Life Sciences; Vienna University of Economics and Business - Austria

HMS_6: A discrete event simulation to investigate unloading operations in an urban retail street
Jana Vögl, Christian Fikar, Patrick Hirsch, Manfred Gronalt

University of Natural Resources and Life Sciences; Vienna University of Economics and Business - Austria

MAS_33: ACO Topology optimization: the pheromone control for considering The Mechanical Kansei
Nanami Hoshi, Hiroshi Hasegawa
Shibaura Institute of Technology - Japan

Tuesday 2018-09-18 9:00-10:30
Room: Jàzmin II
IWISH: M&S in Healthcare and Medicine - Session I
Chair(s): Niki Popper, DEXHELPP; Andreas Körner, Technical University of Vienna

IWISH_13: Predictors of cognitive decline in metabolic syndrome
Vera Novak
Harvard Medical School - USA

IWISH_3: Simulation framework for Mobile Patient Monitoring Systems
Michael Aleithe, Philipp Skowron, Angela Carell, Daniel Böttger, Tobias Goblirsch, Bogdan Franczyk
Leipzig University; Adesso AG; Stiftung Deutsche Depressionshilfe - Germany

IWISH_9: An approach for attenuation corrected 3D internal radiation dosimetry
Werner Backfrieder
University of Applied Sciences Upper Austria - Austria

IWISH_5: Evaluation of hardware-based evolutionary algorithms for the identification of motion-based action potentials in neural bundles
Volkhard Klinger
University of Applied Science Hannover - Germany

Tuesday 2018-09-18 9:00-10:30
Room: Kamilla I
FOODOPS: Modelling and Simulation of Food Processing
Chair(s): Giuseppe Vignali, University of Parma

FOODOPS_4: A quantitative microbiological exposure assessment model for bacillus cereus in packaged rice cakes with thermal processing
Hyeon Woo Park, Kyung Mi Kim, Gwi Jung Han, Won Byong Yoon
Kangwon National University; National Institute of Agricultural Science - Korea

FOODOPS_8: Application of REA-method to a convective drying of apple rings at ambient temperature
Dinmukhamed Bulegenov, Sayara Saliyeva, Aigerim Sekerbayeva, Sergey Spotar
Nazarbayev University - Kazakhstan

FOODOPS_9: Design and testing of Modified Atmosphere Packaging of cow's ricotta
Sara Ugolotti, Giuseppe Vignali
University of Parma - Italy

FOODOPS_10: Life cycle analysis and environmental impact of manufacturing chateau and burgundy wine barrels
Francisco .J. Flor Montalvo, Emilio Jiménez-Macías, Mercedes Pérez de la Parte, Juan Ignacio Latorre-Biel, Eduardo Martínez-Cámara, Julio Blanco-Fernández
Public University of Navarre; University of La Rioja - Spain

Tuesday 2018-09-18 9:00-10:30
Room: Kamilla III
MAS: Production Simulation and Industry 4.0
Chair(s): Antonella Petrillo, Parthenope University of Naples

MAS_30: Modeling and simulation of cabinet manufacturing processes: evaluation and recommended controls
Osama Mohsen, Sina Abdollahnejad, Narges Sajadfar, Yasser Mohamed, Simaan AbouRizk
University of Alberta - Canada

MAS_34: Scenario-based analysis in high-mix low-volume production environment
István Gödri, Csaba Kardos, András Pfeiffer, József Váncza
Aventics Hungary; MTA SZTAKI, EPIC Centre of Excellence - Hungary

MAS_35: The role of digital twin in a cyber-physical production environment with prescriptive learning
János Jósvai, András Pfeiffer, Norbert Szántó, Gergő Monek
Széchenyi István University; Hungarian Academy of Sciences - Hungary

MAS_36: Assembly line balancing techniques: literature review of deterministic and stochastic methodologies
Giuseppina Belfiore, Domenico Falcone, Luca Silvestri
University of Cassino and Southern Lazio; Niccolò Cusano University - Italy

MAS_25: A management framework to support industry 4.0 implementation
Antonella Petrillo, Fabio De Felice
University of Naples "Parthenope"; University of Cassino and Southern Lazio - Italy

Tuesday 2018-09-18 10:30-11:00

COFFEE BREAK Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Tuesday 2018-09-18 11:00-12:30
Room: Magnòlia
SESDE: M&S for Sustainability
Chair(s): Janos Sebestyen Janosy, Centre for Energy Research

SESDE_17: SMARTGRID: Integrating unpredictable energy sources
Janos Sebestyen Janosy
Centre for Energy Research - Hungary

SESDE_16: Corporate sustainability assessment through fuzzy TOPSIS
Eleonora Bottani, Marta Rinaldi, Federico Solari
University of Parma - Italy

SESDE_9: Design methodology considering environmental impact and critical raw materials, application on induction hobs
Patricia Gómez, Daniel Elduque, Carmelo Pina, Carlos Javierre
BSH Electrodomésticos España; University of Zaragoza - Spain

SESDE_14: Infrastructure linking for E-Mobility – approach to integrative traffic and energy network planning
Niels Schmidtke, David Weigert, Fabian Behrendt
Otto von Guericke University Magdeburg; Fraunhofer Institute for Factory Operation and Automation IFF; SRH Mobile University - Germany

Tuesday 2018-09-18 11:00-12:30
Room: Jàzmin I
EMSS-HMS: Modeling & Simulation in Logistics, Traffic & Transportation - Session IV
Chair(s): Idalia Flores, University of Mexico; Miguel Mújica Mota, Amsterdam University of Applied Sciences

EMSS_45: Real time traffic simulator for self-adaptive navigation system validation
Vít Ptošek, Jiří Ševčík, Jan Martinovič, Kateřina Slaninová, Lukáš Rapant, Radim Cmar
VŠB - Technical University of Ostrava; Sygic - Czech Republic

EMSS_24: Complex Networks of the air passenger traffic in Culiacan´s airport
Olivia Sashiko Shirai Reyna, Idalia Flores De La Mota
UNAM - México

HMS_9: Simulative analysis for performance measurement of RFID implementation in cargo handler logistics

Elvezia Maria Cepolina, Ilaria Giusti, Federico Menichini, Donato Aquaro, Gabriella Caroti, Andrea Piemonte
University of Genoa; University of Pisa - Italy

HMS_16: Analysis of flight-efficient ecosystem solutions in a multi-aircraft conflict environment
Darryl Chain Wei Chong, Marko Radanovic
Nanyang Technological University; The University of Western Australia; Autonomous University of Barcelona - Singapore/ Australia/ Spain

Tuesday 2018-09-18 11:00-12:30
Room: Jàzmin II
IWISH-EMSS: M&S in Healthcare and Medicine - Session II
Chair(s): Vera Novak, Harvard Medical School

IWISH_4: Benefits of automated wheelchairs in a hospital: a simulation approach
Iván Castilla-Rodríguez, Rafael Arnay, Jonel Rodríguez, Raquel Rodríguez
University of La Laguna - Spain

EMSS_64: A simulation approach for Human Reliability Analysis in an orthopaedic operating room
Valentina Di Pasquale, Raffaele Iannone, Nicola Maffulli, Salvatore Miranda, Stefano Riemma
University of Salerno - Italy

IWISH_14: The association of demographic and health factors with working capability in elderly
Laura Aponte-Becerra, Antonio Padovano, Francesco Longo, Vasileios-Arsenios Lioutas, Peter Novak, Long Ngo, Regina McGlinchey, Catherine Fortier, Vera Novak
Harvard Medical School; University of Calabria; VA Boston Healthcare System - USA/ Italy

IWISH_10: Skill-based routing problem in Emergency Call Centers: toward an improvement of response time
Eva Petitdemange, Franck Fontanili, Elyes Lamine, Matthieu Lauras
IMT Mines Albi; University National Institute Champollion - France

IWISH_8: Phase Contrast-MRI integrated CFD simulation: effect of Cthres on blood flow fields for patient-specific cerebrovascular
Mohd Azrul Hisham Mohd Adib, Nurul Najihah Mohd Nazri, Mohd Shafie Abdullah
University of Malaysia Pahang; Hospital University Sains Malaysia - Malaysia

Tuesday 2018-09-18 11:00-12:30
Room: Kamilla I
FOODOPS: Simulation for Food Production, Supply Chain and Sustainability
Chair(s): Giuseppe Vignali, University of Parma

FOODOPS_3: Comparative Life Cycle Assessment of different packaging systems for coffee capsules
Annachiara Tonelli, David Mosna, Giuseppe Vignali
University of Parma - Italy

FOODOPS_5: Simulation in food catering industry. A dashboard of performance indicators
Alessandro Tufano, Riccardo Accorsi, Andrea Gallo, Riccardo Manzini
University of Bologna - Italy

FOODOPS_6: Improving integration in supply chain traceability systems for perishable products
Andrea Gallo, Riccardo Accorsi, Riccardo Manzini, Daniele Santi, Alessandro Tufano
University of Bologna - Italy

FOODOPS_7: Sustainability evaluation of last mile food delivery: pick up point using lockers versus home delivery
Sameh M. Saad, Ramin Bahadori
Sheffield Hallam University - United Kingdom

Tuesday 2018-09-18 11:00-12:30
Room: Kamilla III
VARE-MAS: AR/VR for Learning, Education and Training - Session III
Chair(s): Egils Ginter, Riga Technical University

VARE_27: Acoustic AR-TA agent using footsteps in corresponding to audience members' participating attitudes
Yuki Kitagishi, Tomoko Yonezawa
Kansai University - Japan

VARE_28: Virtual spaces for collaboration and learning constructing multi user virtual environments for learning
Pablo G Ramirez Flores, Eduardo Gonzalez Mendívil, Héctor Nahún Quintero

Monterrey Institute of Technology - México

VARE_43: VR in education at Tecnologico de Monterrey
Pablo Guillermo Ramírez Flores
Tecnologico de Monterrey - Mexico

VARE_31: 3D scenery learning on solar system by using marker based augmented reality
K.Martin Sagayam, Chung Ching Ho, Lawrence Henesey, Robert Bestak
Karunya University; Multimedia University; Blekine Inst. of Tech; Czech Tech. University - India/ Malaysia/ Sweden/ Czech Republic

MAS_28: Towards retooling the microsoft hololens as outdoor AR and MR device
Christoph Praschl, Oliver Krauss, Gerald Zwettler
University of Applied Sciences Upper Austria - Austria

Tuesday 2018-09-18 12:30-14:00
LUNCHEON Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Tuesday 2018-09-18 14:00-15:30
Room: Magnólia
SESDE-EMSS: M&S for Energy and Sustainable Development - Session I
Chair(s): Janos Sebestyen Janosy, Centre for Energy Research

SESDE_6: Modelling of a solar air conditioning pilot plant
Sergio Lugo, Wilfrido Rivera
National Autonomous University of Mexico - México

SESDE_10: Simulation of an Isolated Wind Power System with Battery Energy Storage and Dump Load
Rafael Sebastián, Jerónimo Quesada
Spanish University for Distance Education; University of the Basque Country UPV/EHU - Spain

SESDE_13: Investigation of pressure loss coefficient of hot duct break scenario in ALLEGRO reactor using the CATHARE thermohydraulic code
Gusztáv Mayer, Attila Guba
Hungarian Academy of Sciences Centre for Energy Research (MTA EK) - Hungary

EMSS_56: Fuzzy adaptation of intelligent control for solar thermal power plants
Esko K. Juuso
University of Oulu - Finland

Tuesday 2018-09-18 14:00-15:30
Room: Jàzmin I
DHSS: M&S in Defense and Homeland Security - Session I
Chair(s): Agostino Bruzzone, University of Genoa

DHSS_5: Stratagems: an innovative approach for increasing cognitive authenticity in game-based environments
Emily Newsome, Laura Militello, Sowmya Ramachandran
ShadowBox LLC; Applied Decision Science; Stottler Henke Associates, Inc - USA

DHSS_7: A quiz game for Jumpmaster training: design and development considerations
Tamara Griffith, John Surdu, Crystal Maraj
U.S. Army Research Laboratory Simulation & Training Technology Center; Cole Engineering Services, Inc.; University of Central Florida - USA

DHSS_6: Crime scene evidence collection as a Virtual Reality use case
Jeffrey Mills, Tabitha Dwyer, Jennie Ablanedo, Tamara Griffith, Elwin Collins, Ron Acker
University of Central Florida; Cole Engineering Services,Inc.; U.S. Army Research Laboratory Simulation & Training Technology Center; Federal Law Enforcement Training Centers - USA

DHSS_8: CyberAIMs: a tool for teaching adversarial and systems thinking
Erjon Zoto, Stewart Kowalski, Christopher Frantz, Basel Katt, Edgar Lopez-Rojas
Norwegian University for Science and Technology - Norway

Tuesday 2018-09-18 14:00-15:30
Room: Jàzmin II
IWISH-EMSS: M&S in Healthcare and Medicine - Session III
Chair(s): Marco Frascio, University of Genoa

EMSS_13: A lumped parameter model of airway/lung mechanics
Silvia Marconi, Claudio De Lazzari
Institute of Clinical Physiology; National Institute for Cardiovascular Research - Italy

IWISH_6: Simulation study on the influence of leaflet shape on blood flow through mechanical artificial heart valve
Chatpon Sukta, Pichitra Uangpairoj
Suranaree University of Technology - Thailand

EMSS_51: A comparison of various biomechanical modelling approaches for anatomic joints included in a closed simulation loop
Ruth Leskovar, Andreas Körner, Felix Breitenecker
Vienna University of Technology - Austria

IWISH_11: Three dimensional model of left ventricle: computational investigation of flow in presence of pathology
Lina T. Gaudio, Gionata Fragomeni
Magna Graecia University - Italy

Tuesday 2018-09-18 14:00-15:30
Room: Kamilla I
IMAACA-EMSS-MAS: Robotics and Mechatronic Systems
Chair(s): Sergio Junco, Universidad Nacional de Rosario

IMAACA_9: Control of a mobile robotic manipulator: a combined design approach
Martín Crespo, Matías Nacusse, Sergio Junco, Vitalram Rayankula, Pushparaj Mani Pathak
National University of Rosario; CONICET; Indian Institute of Technology Roorkee - Argentina/ India

MAS_17: A study of foot structure for humanoid robot on rough terrain
Van-Tinh Nguyen, Hiroshi Hasegawa
Institute of Technology; University of Science and Technology - Japan/ Vietnam

MAS_15: New approach to pmsm parameters identification
Jean Claude Rakotoarisoa, Gino Hadjee, Jean N. Razafinjaka
University of Antsiranana - Madagascar

EMSS_14: Logic-dynamic model and algorithms of operation complex planning of active mobile objects
automated control system
Boris Sokolov, Aleksandr Kovalev, Vladimir Kalinin, Evgeniy Minakov, Dmitriy Petrovskiy
SPIIRAS; Military-space academy; National Research University Higher School of Economics - Russia

Tuesday 2018-09-18 14:00-15:30
Room: Kamilla III
VARE: AR/VR/MR for Training in Production and Industry - Session I
Chair(s): Egils Ginter, Riga Technical University

VARE_9: VR-technology for risk assessment of and accident prevention at machine tools
Patrick Puschmann, Franziska Klimant, Volker Wittstock, Astrid Schütz
Chemnitz University of Technology; University of Bamberg - Germany

VARE_18: A case study on induced maintenance using Unity and Vuforia7
Yu Xiao, Chuan Lv, Jie Geng, Mingyuan Li, Jin Yan, Ranran Wang,
 Chunhui Guo
Beijing University of Aeronautics and Astronautics; State Key Laboratory of Virtual Reality Technology and
System - China

VARE_20: The use of virtual reality training application to increase the effectiveness of workshops in the field
of lean manufacturing
Paweł Buń, Justyna Trojanowska, Vitalii Ivanov, Ivan Pavlenko
Poznan University of Technology; Sumy State University - Poland/ Ukraine

VARE_22: Knowledge exchange using holograms in the Teaching Factory concept
Anna Karvouniari, Dimitris Mavrikios, Kosmas Alexopoulos, Konstantinos Georgoulias, Sotiris Makris, George
Michalos, George Chryssolouris
University of Patras - Greece

Tuesday 2018-09-18 15:30-16:00

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Tuesday 2018-09-18 16:00-17:30
Room: Magnòlia

SESDE-EMSS-MAS: M&S for Energy and Sustainable Development - Session II
Chair(s): Janos Sebestyen Janosy, Centre for Energy Research

SESDE_7: Hyperspectral data processing and adaptive modelling for the Natural Objects properties
detection
Olga V. Grigoreva, Viktor F. Mochalov, Vjasheslav A. Zelentsov
Military Space Academy named after A.F. Mozhaisky; St.Petersburg Institute for Informatics and Automation
of RAS - Russia

EMSS_54: Modeling and environmental assessment of structural solutions for a single-family home
Esteban Fraile-Garcia, Javier Ferreiro-Cabello, M. del Mar Villamil, Emilio Jimenez Macias
University of La Rioja - Spain

MAS_29: Bim-enabled health & safety analysis of cross laminated timber onsite assembly process
Tsvetomila Duncheva, Samer BuHamdan, Robert Hairstans, Mohamed Al-Hussein
Edinburgh Napier University; University of Alberta - UK/ Canada

SESDE_18: Modelling and control of a photovoltaic energy system with battery storage
Carlos Y. García-Ramos, Jose M. González-Cava, José F. Gómez González, Sara González Pérez,
Benjamín González Díaz, Juan Albino Méndez-Pérez
University of La Laguna - Spain

Tuesday 2018-09-18 16:00-17:30
Room: Jázmin I
EMSS-MAS-HMS: Modeling & Simulation for Business & Technology Transfer
Chair(s): Eleonora Bottani, University of Parma

EMSS_49: Assessing the performance of a restaurant through discrete simulation in Simio
António AC Vieira, Luís MS Dias, Guilherme AB Pereira, José A Oliveira
University of Minho - Portugal

EMSS_42: An agent based modelling approach for the Office Space Allocation problem
Alexandra Dediu, Dario Landa Silva, Peer-Olaf Siebers
University of Nottingham - United Kingdom

EMSS_60: Automatic detection of sentiments in tourist reviews by using Long Short-Term Memory recurrent
neural networks
Carlos A. Martin, Rosa M. Aguilar, J.M. Torres, S. Díaz
University of La Laguna - Spain

MAS_21: Simulation improves service and resource allocation at a salon
Ganapathi Baliada Ramesh, Brittany Harju, Daniel Scipione, Kristina Vujic, Edward J Williams
University of Michigan – Dearborn - USA

HMS_17: Business ecosystem dynamics in ITS: an agent based modelling for a deep understanding of
intangible flows between stakeholders
Juan José Ramos González, Isidoros A. Passas, Viara Bojkova, Xavier Leal, Xavier Verge
Autonomous University of Barcelona; INTELSPACE S.A.; Ortelio Ltd - Spain/ Greece/ United Kingdom

Tuesday 2018-09-18 16:00-17:30
Room: Jázmin II
Special Session: I3M 2019 and MISS-MSNet Board of Directors Meeting
Chair(s): Francesco Longo, University of Calabria; Guilherme Pereira, Universidade do Minho

This special session is open to all the attendees and will present I3M 2019 in Portugal. All those people
interested to take an active role in the organization of the conference, to join the International Program
Committee, to organize tracks and special sessions are strongly invited to attend the session.

Tuesday 2018-09-18 16:00-17:30
Room: Kamilla I
MAS: Logistics and Supply Chain Simulation
Chair(s): Adriano Solis, York University

MAS_23: An agent-based model for robustness testing of freight train schedules
Matthias Rößler, Matthias Wastian, Michael Landsiedl, Niki Popper
dwh GmbH - Austria

MAS_31: Simulation-based planning and optimization of an automated laundry warehouse using a genetic
algorithm
Marcel Müller, Tobias Reggelin, Stephan Schmidt
Otto von Guericke University Magdeburg - Germany

MAS_22: A study on passenger-to-deck assignment rules for multi-deck elevator systems
Satoshi Goto, Shunji Tanaka
Kyoto University - Japan

MAS_26: Rule-based modeling of supply chain quality management
Juan Miguel Cogollo Flórez, Alexander Alberto Correa Espinal
Instituto Tecnológico Metropolitano-ITM; Universidad Nacional de Colombia - Colombia

Tuesday 2018-09-18 16:00-17:30
Room: Kamilla III
VARE: AR/VR/MR for Training in Production and Industry - Session II
Chair(s): Egils Ginter, Riga Technical University

VARE_36: Virtual Skill Teacher – platform for effective learning of technical skills
Filip Gorski, Przemyslaw Zawadzki, Pawel Bun
Poznan University of Technology - Poland

VARE_37: Virtual Quality Toolbox – learning of quality management in immersive environment
Filip Gorski, Beata Starzynska, Pawel Bun, Agnieszka Kujawinska
Poznan University of Technology - Poland

VARE_40: Discussing the application potentials of Microsoft HoloLensTM in production and logistics: a
literature review and case study
Sebastian Lang, Mohammed Saif Sheikh Dastagir Kota, David Weigert, Fabian Behrendt
Otto von Guericke University Magdeburg; Fraunhofer Institute for Factory Operation and Automation IFF;
SRH Mobile University - Germany

VARE_12: Development and evaluation of work support system by AR using HMD
Kohjiro Hashimoto, Tadashi Miyosawa, Mai Higuchi
Suwa University of Science - Japan

Social Event

Tuesday 2018-09-18 20:00-23:00
**20:00, I3M Gala Dinner @ DANUBIUS HEALTH SPA RESORT MARGITSZIGET,
BUDAPEST, HUNGARY**

**During Gala Dinner the I3M Best Paper Awards and Gianni Cantice Award will be
presented**

Wednesday 2018-09-19 9:00-10:30
Room: Magnòlia
EMSS: Simulation & Optimization in Services and Supply Chains
*Chair(s): Idalia Flores, University of Mexico; Miguel Mújica Mota, Amsterdam University of Applied
Sciences*

EMSS_19: State of the art for the optimization and simulation of the distribution of hydrocarbons
Emilio Sampayo Trujillo, Idalia Flores De La Mota
UNAM - México

EMSS_6: More than just chocolate: supply chain model of production of cocoa crops in Côte d'Ivoire
Miguel Mujica Mota, Abdel El Makhloufi, Nico De Bock, Paolo Scala
Amsterdam University of Applied Sciences - The Netherlands

EMSS_69: Population Behavior, Social Networks, Transportations, infrastructures & Urban Simulation for
Decision Makers
Agostino G. Bruzzone, Kirill Sinelshchikov, Riccardo Di Matteo
Simulation Team, University of Genoa; SIM4Future - Italy

EMSS_48: Simulation of an automotive Supply Chain in Simio: data model validation
António AC Vieira, Luís MS Dias, Maribel Y Santos, Guilherme AB Pereira, José A Oliveira
University of Minho - Portugal

Wednesday 2018-09-19 9:00-10:30
Room: Jàzmin I
EMSS: Modeling and Simulation in Advanced Physics Technologies
Chair(s): Alexander S. Sigov, Moscow Technological University; Mikhail E. Belkin, Moscow State Technological University

EMSS_43: Ultra-wideband radio-beam direction finder based on microwave photonics and all-optical processing
Mikhail E. Belkin, Tatiana N. Bakhvalova, Igor V. Gladyshev, Alexander S. Sigov
MIREA - Russian Technological University - Russian Federation

EMSS_44: Modeling multi-core fiber-optic waveguide
Mikhail E. Belkin, Vladislav Golovin, Yuriy Tyschuk, Alexander S. Sigov
MIREA - Russian Technological University; Sevastopol State University (SevSU) - Russian Federation

EMSS_46: Modeling of waveguide modes excitation in thin-film multilayer structures by TM-polarized Gaussian light beam
Viktor I. Sokolov, Alexander S. Akhmanov, Ivan O. Goriachuk
Russian Academy of Sciences - Russian Federation

EMSS_47: Analysis of multilayer metal-dielectric thin-film structures using prism coupling technique
Ivan O. Goriachuk, Vladislav N. Glebov, Andrey M. Maliutin, Viktor I. Sokolov
Russian Academy of Sciences - Russian Federation

Wednesday 2018-09-19 9:00-10:30
Room: Jàzmin II
VARE: Data visual Analytics and Semantics Visualization
Chair(s): Egils Ginter, Riga Technical University

VARE_17: Alternatives generation via data analytics for decision making using VR
Fernando Suarez-Warden, Nora Argelia Aguilera González, Silvia Gonzalez, Samira Hosseini
Monterrey Institute of Technology - México

VARE_33: Juxtaposing visual layouts – an approach for solving analytical and exploratory tasks through arranging visual interfaces
Kawa Nazemi, Dirk Burkhardt
Darmstadt University of Applied Sciences - Germany

VARE_34: Visualizing law - a Norm-graph visualization approach based on semantic legal data
Dirk Burkhardt, Kawa Nazemi
Darmstadt University of Applied Sciences - Germany

DHSS_14: Holovulcano: Augmented Reality simulation of volcanic eruptions
Ali Asgary
York University - Canada

Wednesday 2018-09-19 9:00-10:30
Room: Kamilla I
MAS-EMSS: Production Simulation, Safety and Cloud Computing in Industry
Chair(s): Adriano Solis, York University

MAS_4: Drone based inspection services in industrial contexts: risk assessment and market opportunities
Giuseppe Aiello, Fabrizio Hopps, Mario Venticinque, Domenico Santisi
Università di Palermo; CNR-ISAFOM; Leonardo Engineering and Research s.r.l. - Italy

MAS_7: Methods of constructing the systems of monitoring the technological process execution
Kholopov Vladimir, Kashirskaya Elizaveta, Shmeleva Anna, Kurnasov Evgeny
Moscow Technological University - Russia

MAS_18: Categoric simulation of production flows
David Kruml, Jan Paseka
Masaryk University - Czech Republic

MAS_37: Guidelines for reliability allocation methods
Luca Silvestri, Domenico Falcone, Giuseppina Belfiore
Niccolò Cusano University; University of Cassino and Southern Lazio - Italy

EMSS_37: Exploitation of HPC infrastructure services for real-time critical small requests
Jiří Ševčík, Martin Golasowski, Jan Martinovič, David Vojtek, Jan Faltýnek
VŠB - Technical University of Ostrava - Czech Republic

Wednesday 2018-09-19 9:00-10:30
Room: Kamilla III
HMS: Ports, Terminals AND Ships Modeling
Chair(s): Marina Massei, University of Genoa

HMS_3: Modeling and dynamic simulation of propulsion plant for ocean-going fishing vessel
Li Ren, Yun Peng, Zijian Guo
Dalian Ocean University; Dalian University of Technology - China

HMS_8: Prediction of times and delays for ship handling process based on a transition system
Julia Rudnitckaia, Tomáš Hruška
Faculty of Information Technology IT4Innovations - Center of excellence Brno
 - Czech Republic

HMS_15: The block relocation problem under a realistic model of crane trajectories
Yuki Inaoka, Shunji Tanaka
Kyoto University - Japan

HMS_13: Spatio-temporal evolution of ecosystem service values in port areas
Zijian Guo, Zhen Diao, Wenyuan Wang, Yun Peng
Dalian University of Technology - China

Wednesday 2018-09-19 10:30-11:00

COFFEE BREAK Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Wednesday 2018-09-19 11:00-12:30
Room: Magnòlia
EMSS: Mechanical and Industrial Modeling & Simulation
Chair(s): Emilio Jemènez, University of La Rioja

EMSS_20: Dynamic finite element modeling of metal spinning process with a stationary mandrel and a
rotating tool
Hoan Huy Nguyen, Henri Champliaud, Van Ngan Lê
École de Technologie Supérieure - Canada

EMSS_35: Rapid 3D shape forming computation with piecewise heating lines using a fifth order spline
formulation
Henri Champliaud, Valentin Vieillot, David Provencher, Ngan Van Lê
École de technologie supérieure - Canada

EMSS_40: Processability analysis of an injected part in virgin or recycled polypropylene
José Galve, Daniel Elduque, Carmelo Pina, Isabel Clavería, Carlos Javierre
BSH Electrodomésticos España; University of Zaragoza - Spain

EMSS_15: Influence in tonal noise and pressure fluctuation of mechanical components placed downstream
of a centrifugal blower in the refrigeration system of an induction cooktop
Maria Valencia Betrán, Carmelo Pina Gadea, Beatriz Sánchez Tabuenca, Cristian Albero Posac, Juan Lladó
Paris
BSH Home Appliances; University of Zaragoza - Spain

EMSS_4: Beyond SOI - The NOI nanotransistor -Simulations results and new challenges
Cätälin Pârvulescu, Cristian Ravariu, Elena Manea, Florin Babarada, Alina Popescu
National Institute for Research and Development in Microtechnologies- IMT Bucharest;
"Politehnica"University of Bucharest - Romania

Wednesday 2018-09-19 11:00-12:30
Room: Jàzmin I
EMSS-MAS: Simulation for Engineering and Services
Chair(s): Michael Affenzeller, University of Applied Sciences Upper Austria

EMSS_3: Integrating weather in modelling earthmoving mining operation using distributed simulation with
HLA standards
Mubarak AL-Alawi, Yasser Mohamed, Ahmed Bouferguene
Sultan Qaboos University; University of Alberta - Oman/ Canada

EMSS_31: Resource constrained project scheduling: a real-world extension for steel industry
Viktoria A. Hauder, Andreas Beham, Sebastian Raggl, Michael Affenzeller
University of Applied Sciences Upper Austria; Johannes Kepler University Linz - Austria

MAS_20: Evaluation of RFID technology for real time drill pipes efficient management in harsh environments:
a discrete event simulation model
Yasmina Maizi, Ygal Bendavid, Tarik Belarbi
Université du Québec à Montréal; Mystone Energy - Canada

MAS_8: Linear regression and agent-based modeling approach for equipment market value predic
Lingzi Wu, Mostafa Ali, Estacio Pereira, Simaan M. AbouRizk
University of Alberta - Canada

Wednesday 2018-09-19 11:00-12:30
Room: Jàzmin II
VARE-EMSS: AR/VR for Training in Healthcare
Chair(s): Egils Ginter, Riga Technical University; Marco Frascio, University of Genoa

VARE_32: The Role of Augmented Reality Technology in Live Interactive Surgical Teaching
D. Reissis, P. Macneal, Y. Loo, E. Cardiff, A. Mosahebi, N. Hachach-Haram
NHS Foundation Trust - UK

VARE_38: Virtual reality application for presurgical support in urology
Magdalena Zukowska, Filip Gorski, Pawel Bun, Gabirel Brominski
Poznan University of Technology; Poznan University of Medical Science - Poland

VARE_41: Proximie: Augmented Reality Providing a Global Response to Local Surgical Challenges
Dimitris Reissis, Peter MacNeal, Edward Cardiff, Tim Halsey, Ghassan Abu Sitta, Assem El Hajj, Afshin
Mosahebi, Nadine Hachach-Haram
NHS Foundation Trust - UK

EMSS_8: E-Health bubble: an e-health system for caregiving services dedicated to elderly

Marco Frascio, Francesca Mandolfino, Marco Sguanci, Franco Borasi, Leo Bordignon, Giuseppe Molinari
Univesity of Genoa; Technology For Edge Applications srl; Telemedico srl Telecardiology Center - Italy

Wednesday 2018-09-19 11:00-12:30
Room: Kamilla I
M&S in Defense and Homeland Security - Session II
Chair(s): Bob Sottilare, US Army

DHSS_11: Machine learning for approximated sensors for Marksmanship training
Keith Brawner
United States Army Research Laboratory - USA

DHSS_15: Intelligent tutoring in the wild: leveraging mobile app technology to guide live training
Benjamin Goldberg, Nicholas Roberts, William Gabe Powell, Elyse Burmester
Natick Soldier Research and Development Center; Dignitas Technologies; United States Military Academy - USA

DHSS_16: A hybrid machine learning approach to Automated Scenario Generation (ASG) to support adaptive instruction in virtual simulations and games
Robert A. Sottilare
US Army Natick Soldier Center - USA

DHSS_9: Model and simulation of a real water distribution network to support emergency plans
Luisa Lavalle, Tatiana Patriarca, Bernard Daulne, Olivier Hautier, Ester Ciancamerla
ENEA; SWDE - Italy/ Belgium

Wednesday 2018-09-19 11:00-12:30
Room: Kamilla III
Special Session: The NASA Simulation Exploration Experience
Chair(s): Agostino Bruzzone, University of Genoa

Wednesday 2018-09-19 12:30-14:00
LUNCHEON Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Wednesday 2018-09-19 14:00-15:30
Room: Magnòlia
EMSS: Numerical Modeling, Validation & Experimentations
Chair(s): Emilio Jemènez, University of La Rioja

EMSS_18: A model validation method with Bootstrap approach and Bayes estimation for small sample
Ting Song, Ping Ma, Yuchen Zhou, Ke Fang, Ming Yang
Harbin Institute of Technology - China

EMSS_67: A multivariate model validation method based on kernel principal components analysis
Yuchen Zhou, Ke Fang, Ping Ma, Ming Yang
Harbin Institute of Technology - China

EMSS_39: An efficient global sensitivity analysis method based on sequential Latin hypercube sampling
Lingyun Lu, Wei Li, Ping Ma, Ming Yang
Harbin Institute of Technology - China

EMSS_55: Uncertainty in two-stage measurement: explanation using simulation studies
Jaroslav Marek, Marie Nedvĕdová
University of Pardubice - Czech Republic

Wednesday 2018-09-19 14:00-15:30
Room: Jàzmin I
IWISH-EMSS-SESDE: M&S in Healthcare and Medicine - Session IV
Chair(s): Gionata Fragomeni, Magna Graecia University of Catanzaro

IWISH_7: The spread of AI, coming changes in healthcare delivery and the implications for simulation in healthcare
C. Donald Combs
School of Health Professions - Eastern Virginia Medical School - USA

EMSS_41: Agent-based model for tumor-analysis using Python+Mesa
Ghazal Tashakor, Remo Suppi
Autonomous University of Barcelona - Spain

IWISH_15: A Study on Simulation for Capability Assessment and Safety: Mitigating the Impact of Neurodegenerative Diseases
Agostino G. Bruzzone, Paolo Fadda, Marina Massei, Gianfranco Fancello, Kirill Sinelshchikov
Simulation Team, University of Genoa; University of Cagliari - Italy

IWISH_12: DEXHELPP health care atlas of Austria
Matthias Wastian, Matthias Rößler, Irene Hafner, Christoph Urach, Nadine Weibrecht, Niki Popper, Gottfried Endel, Michael Gyimesi
dwh GmbH; DEXHELPP; Main Association of Austrian Social Security Institutions; Gesundheit Österreich GmbH - Austria

SESDE_15: Modeling and simulation of blood flow and vessel stress in human brain during strenuous exercise
Luhan Ma, Ang Chen, Yongbo Zhong, Zhichao Ren, Ye Lang, Jiazheng Zhao, Zhifeng Dong
University of Mining and Tech. - China

Wednesday 2018-09-19 14:00-15:30
Room: Jàzmin II
VARE: AR/VR in Cultural Heritage and other domains
Chair(s): Egils Ginter, Riga Technical University

VARE_13: Development and evaluation of the museum support system using an AR technology
Tadashi Miyosawa, Kohjiro Hashimoto
Suwa University of Science - Japan

VARE_24: The use of augmented reality to promote tourism in Thailand
Salin Boonbrahm, Poonpong Boonbrahm, Charlee Kaewrat, Prasert Pengkaew
Walailak University - Thailand

VARE_42: Virtual reality and augmented reality low cost: an experience of heritage education in primary school
Demetrius Lacet, Isis Fernandes Braga, Juliana Lemos Lacet
University Center of João Pessoa; Federal University of Rio de Janeiro - Brazil

VARE_11: Educational augmented reality systems: benefits of implementation and government support
Hovhannes Mayilyan, Shushan Poghosyan, Hakob Avetisyan
YoungZone Culture Ltd; University of Armenia; Czech Technical University in Prague - Armenia/ Czech Republic

Wednesday 2018-09-19 14:00-15:30
Room: Kamilla I
DHSS-HMS: Modeling & Simulation for Strategic Engineering
Chair(s): Agostino Bruzzone, University of Genoa

DHSS_13: Disaster Mutual Assistance Simulation (DMASim) for Hydro Companies
Ali Asgary, Mehdi Faraji
York University - Canada

DHSS_17: Modelling and simulation of a fire department's response to emergency incidents
Adriano O. Solis, Jenaro Nosedal-Sánchez, Ali Asgary, Francesco Longo, Beatrice Zaccaro
York University; Universidad Autónoma del Estado de México Cerro de Coatepec; University of Calabria; University of Genoa - Canada/ México/ Italy

DHSS_18: Simulation of C2 Maturity Levels respect Crisis affecting Critical Infrastrures and Industrial Plant
Agostino G. Bruzzone, Marina Massei, Matteo Agresta, Riccardo di Matteo
Simulation Team, DIME University of Genoa; SIM4Future - Italy

HMS_20: Design of Critical Solutions for Industrial Plants, Oil Rigs and Underwater Facilities
Agostino G. Bruzzone, Riccardo di Matteo, Matteo Agresta, Kirill Sinelshchikov
SimulationTeam; SIM4Future; DIME University of Genoa - Italy

Wednesday 2018-09-19 15:30-16:00

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Wednesday 2018-09-19 16:00-17:30
Room: Magnòlia
I3M Closing Ceremony
Chair(s): Agostino Bruzzone, University of Genoa; Francesco Longo, University of Calabria

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I3M Next Year

Be Ready for I3M in Lisbon
I3M2019
If you are interested in being active in I3M2019 in Lisbon, Portugal, please visit:
www.msc-les.org/conf/i3m2019
and/or contact the Program Chair Prof. Francesco Longo (f.longo@unical.it)

International Journal Special Issues for I3M

The I3M Organization has finalized an agreement to publish most interesting I3M papers in International Journals and to provide the opportunity to I3M authors to submit papers on International journals featuring Special Issues on simulation topics. The following Special Issues will include a collection of best papers submitted and presented at I3M or will feature topics in the area of Modeling & Simulation.

-Computer & Industrial Engineering
-Annals of Operations Research
-IEEE Transaction on Engineering Management
-International Journal of Food Engineering
-International Journal of Simulation and Process Modelling
-International Journal of Service and Computing-Oriented Manufacturing
-International Journal of Privacy and Health Information Management

I3M Best Paper Awards
In the I3M Best Paper Awards will be delivered during I3M at the Gala Dinner; these are assigned by the I3M Best Paper Award International Committee and selected among the top quality papers of each Conference based on their originality, scientific quality and impact on each specific domain.

Gianni Cantice Award for Gifted Simulation Students

The "Gianni Cantice Research Award for Gifted Simulation Students" will be announced during the I3M Gala Dinner and attributed to the best simulation student applicants; the Award is entitled to Col.Cantice as recognition for his long activity in Simulation; the Gianni Cantice Award Winner will receive the Award Certificate, a financial contribution (e.g. free registration to the next I3M conference) and the opportunity to spend a period in a M&S Excellence Center world wide, as visiting researcher of the Simulation Team. The Master and PhD students interested, in applying for this competition, need to submit their application, as described on the web site (www.liophant.org/i3m/cantice), to Dr.Marina Massei (massei@itim.unige.it) before the deadline (September 8, 2018). For information about next edition of Gianni Cantice Award, please visit the web site www.liophant.org/i3m/cantice.

I3M Hotel and Venue

The I3M 2018 multiconference will be held at Danubius Health & SPA Resort Margitsziget, Budapest, Hungary

Further Information are available on the web site www.msc-les.org/conf/i3m2018

Budapest-Margitsziget, 1007 Budapest, Hungary.
www.danubiushotels.com,
Tel. +36-1-889-4700,
email: msz.reservation@danubiushotels.com

Directions to the Danubius Health and SPA Resort Margitsziget:

AIRPORTS
Budapest Ferenc Liszt International Airport is about 26 km from the hotel. There are various ways of getting to Danubius Grand Hotel Margitsziget.
Taxi fare from the airport:
Approximately EUR 35.
Public transport from the airport:
2 buses and metro
Fee: EUR 3-4
BUS STATIONS
Árpád Híd Bus terminal - 2 km - 25 min on foot
Margitsziget, Árpád híd megálló Line 106 and 34 - 750 m - 8 min
 Szállodák/Zenélőkút Line 26 - 750 m - 8 min
TRAIN STATIONS
Budapest Keleti (eastern) railway station - 7 km - 16 min
Visit website: http://www.bkk.hu/menetrendek
Budapest Nyugati (western) railway station - 4 km - 9 min
Budapest Déli (southern) railway station - 8 kn - 21 min
SUBWAY STATIONS
Árpád híd Metro station M3 - 2 km - 25 min on foot

Information about Hotel Accomodation can be found in the conference website at: http://www.msc-les.org/conf/i3m2018/venue.html

Lunches, coffee breaks and a gala dinner will be provided to all conference attendees with regular full registration.

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Author and Chair Guidelines for I3M2018

On the I3M web site guidelines for Track / Session Chairs and for Authors / Presenters are available please check them in order to proper deliver your presentation in best way avoiding any inconvenience.
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I3M as Evolving Framework

Dear attendee, the whole I3M Organization is very glad for having you here and for your support to this important event; we really hope you enjoyed the conference, therefore we are looking forward to further develop and improve it; by participating in I3M it is evident that a major stronghold of this Multiconference is its capability to mix very experience people with young blood. So we will be glad if you could consider to be more involved in future events by submitting session or track proposals, by proposing new topics or by providing your availability for being candidate for paper review; in addition you can find on the web site I3M Quality Assessment Forms for providing your feedback, thanks in advance for your support.

I3M2019, Lisbon, Portugal
I3M2019 will be held next year in Lisbon, Portugal. Please consider to be active and to participate in this important event by submitting a paper or even by proposing a track and/or a session to the I3M Organization and Conference Chairs; for further information please check the web site: www.msc-les.org/conf/i3m2019 or write to I3M2019 Program Chair Francesco Longo (f.longo@unical.it)

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I3M2018 Media Partners
InderScience Publisher - International Journal of Simulation and Process Modelling
InderScience Publisher - International Journal of Service and Computing Oriented Manufacturing
SAGE - Simulation Transaction of SCS
IGI Global Disseminator of Knowledge - International Journal of Privacy and Health Information Management (IJPHIM)
Halldale - The Journal of Healthcare, Education, Simulation and Training
Halldale - The Military Simulation and Training Magazine
De Gruyter - International Journal of Food Engineering
MDPI - Sustainability
EUROMERCI - The Italian Monthly Logistics Journal

Synergies & Other Opportunities

WAMS 2019
WAMS 2019, the Interntaional Workshop in Applied Modeling & SImulation. Please consider to be active and to participate in this thematic workshop; for further information please check the web site: http://www.msc-les.org/conf/wams2019 or write to Dr.Marina Massei (marina.massei@liophant.org)

SIREN M&S Courses

The Modeling & Simulation Professional Courses are organized with scientific sponsorization of MITIM-DIME University of Genoa, Simulation Team, MSC-LES University of Calabria and Liophant. Attendees have the opportunity to select among different M&S courses levels (i.e. Fundamentals, Regular, Advanced Educational Package) and categories (i.e. M&S, VV&A, PM and Interoperability). Each M&S course includes lecturing and exercises provided by world-wide experts, with several years of experience, from major center of excellence, i.e. MITIM-DIME University of Genoa, Virginian Modeling & Simulation Center (VMASC), GrVa Universidad Federal de Rio de Janeiro, LSIS Marseille, MAST, MSC-LES, National Center for Simulation (NSC), NASA, Riga TU, UAB, University of Arizona, etc. If you are interested in next SIREN Courses please visit www.mastsrl.eu/mscourses or contact info@mastsrl.eu

SILENI
SILENI (SImulation LEarning iNItiative) is an initiative devoted to promote M&S applied to real problems with special attention to Defense and Industry; SILENI promotes Seminars, Courses and Lectures on application of M&S. The name SILENI (SImulation LEarning iNItiative) is inspired by Greek mythology where Sileni (companions of Dionysus) were said to possess special knowledge and power of prophecy such as Modeling & Simulation. If you are interested in next SILENI Initiatives and Seminars please visit www.liophant.org/sileni or contact info@liophant.org

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Further details on I3M Conferences are available in www.liophant.org/i3m, www.msc-les.org/conf/i3m2019