I3M Multiconference Program

I3M: The 14th 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

EMSS: The 29th 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 19th International Conference on Harbour, Maritime & Multimodal Logistics Modelling and Simulation

HMS General co-Chairs:
Agostino Bruzzone, DIMEG, University of Genoa, Italy
Yury Merkuryev, Riga Technical University, 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 16th International Conference on Modelling & Applied Simulation

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

MAS Program co-Chairs:
Fabio De Felice, University of Cassino, Italy
Claudia Frydman, LSIS, France
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IMAACA: The 10th International Conference on Integrated Modeling and Analysis in Applied Control and Automation

IMAACA General Chairs:
Sergio Junco, Universidad Nacional de Rosario, Argentina
Geneviève Dauphin-Tanguy, École Centrale de Lille, France
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DHSS: The 7th International Defense and Homeland Security Simulation Workshop

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

DHSS Program Chair
Robert Sottilare, Army Research Laboratory, USA
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I_WISH: The 6th International Workshop on Innovative Simulation for Health Care

I_WISH General Chair:
Marco Frascio, University of Genoa, Italy

I_WISH Program Chair:
Vera Novak, BIDMC, Harvard Medical School, USA
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SESDE: The 5th 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 3rd International Food Operations and Processing Simulation Workshop

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

FOODOPS Program co-Chairs:
Francesco Longo, Unviersity of Calabria, Italy
Miquel Angel Piera - Autonomous University of Barcelona, Spain
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I3M: The International Multidisciplinary Modelling & Simulation Multiconference involves EMSS, MAS, HMS, IMAACA, DHSS, I_WISH, SESDE, FOODOPS and related Workshops and Special Sessions; All Sessions are open to all I3M Attendees

EMSS: European Modelling & Simulation Symposium, 29th Edition, Part of I3M2017

MAS: The International Conference on Modelling & Applied Simulation, 16th Edition, Part of I3M2017

IMAACA: The International Conference on Integrated Modeling and Analysis in Applied Control and Automation, 10th Edition, Part of I3M2017

HMS: The International Conference on Harbour, Maritime & Multimodal Logistics Modelling and Simulation, 19th Edition, Part of I3M2017

DHSS: The International Defense and Homeland Security Simulation Workshop, 7th Edition, Part of I3M2017

I_WISH: The International Workshop on Innovative Simulation for Healthcare, 6th Edition, Part of I3M 2017

SESDE: The International Workshop on Simulation for Energy, Sustainable Development & Environment, 5th edition, Part of I3M2017

FOODOPS: The International Food Operations and Processing Simulation Workshop, 3rd Edition, Part of I3M 2017

Special Session: I3M Special Session freely open to all the attendees (i.e. Plenary Joint Opening, I3M 2017 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 Attendees

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Monday 2017-09-18 9:00-10:30
Joint I3M Opening, Room - Aula Magna
Welcome Address I3M, Prof.Agostino G. Bruzzone, DIME, University of Genoa, Italy

Conferences, Societies and Networks Welcome
- Welcome to Barcelona - Prof. Miquel Angel Piera, UAB, Spain
- I3M Conference - Prof. Francesco Longo, MSC-LES, University of Calabria, Italy
- EMSS Conference - Prof. Michael Affenzeller, Upper Austria University of Applied Sciences, Austria

- HMS Conference - Prof. Yuri Merkuryev, Riga Technical University, Latvia
- 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. Marco Frascio, University of Genoa, Italy
- SESDE Workshop - Prof. Janos Sebestyen Janosy, Centre for Energy Research, Hungary
- FOODOPS Workshop - Prof. Giuseppe Vignali, University of Parma, Italy
- Liophant - Dr. Marina Massei, University of Genova, Italy

- M&S Societies (IMCS, MISS, MSNet) - Prof. Emilio Jimènez, La Rioja University, Spain
- Simulation Team - Prof. Claudia Frydman, France
- I3M 2018 and Conference Updates, Prof. Janos Sebestyen Janosy, Centre for Energy Research, Hungary

Monday 2017-09-18 10:30-11:00

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

Monday 2017-09-18 11:00-12:30
Joint I3M Opening, Room - Aula Magna

Plenary Speeches
Niki Popper, Director of Dexhelpp, Austria
Analysing Complex Systems: Healthcare – from Big Data to Deep Data via System Simulation

Emilio Jimenez, University of La Rioja, Spain
Industry 4.0, the forth revolution of industrial production: A Simulation perspective

Michael Affenzeller, Upper Austria University of Applied Sciences, Austria
The best of both worlds: Combining the Flexibility of Modeling & Simulation with Optimization by Evolutionary Algorithms

Monday 2017-09-18 12:30-14:00
LUNCHEON Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Monday 2017-09-18 14:00-15:30
Room: Room 18

EMSS: Indsutrial Processes and Engineering Modeling & Simulation - Session I
Chair(s): Michael Affenzeller, University of Applied Sciences Upper Austria

EMSS_86: A simulation tool for modelling and optimization of a job-shop production system
Eleonora Bottani, Marta Rinaldi, Roberto Montanari, Massimo Bertolini, Francesco Zammori
University of Parma - Italy

EMSS_35: Investigations of a reconfigurable pressing setup for manufacturing blades of large francis turbines runners from very thick plates
Zhengkun Feng, Henri Champliaud, Louis Mathieu
Ecole de technologie superieure; GE Hydro - Canada

EMSS_36: Risk management in jackets manufacturing projects using discrete events simulation
Adolfo Lamas-Rodríguez, David Chas-Álvarez, José Antonio Muiña-Dono
Universidade da Coruña - Spain

EMSS_7: Influence of manufacturing process in mechanical behavior of injected plastic components
Manuel Muniesa, Isabel Clavería, Carlos Javierre, Daniel Elduque, Ángel Fernández
Universidad de Zaragosa - Spain

EMSS_70: Analysis of the manufacturing lead time in a Graphic Arts company
J. Eduardo Morales López, Carlos Quintero Avilés, K. Karina Ramírez Mora, Leonardo J. Cureño Torres
Technological University Fidel Velázquez - Mexico

Monday 2017-09-18 14:00-15:30
Room: Room 16
EMSS: Simulation & Optimization in Aviation
Chair(s): Miguel Mujica Mota, Amsterdam University of Applied Sciences; Idalia Flores, University of Mexico

EMSS_49: Modelling dependence of arrival sequencing and metering area transit time on airport meteorological conditions
Margarita Bagamanova, Juan José Ramos González, Miquel Àngel Piera Eroles, Jose Manuel Cordero Garcia, Alvaro Rodríguez Sanz
Autonomous University of Barcelona ; CRIDA A.I.E; Technical University of Madrid - Spain

EMSS_88: Model-based remote runway solution for a congested airport: Mexico City airport case
Miguel Mujica Mota, Paolo Scala
Amsterdam University of Applied Sciences - Holland

EMSS_90: Downsizing the air freighter: simulation-based study of KLM cargo in Schiphol airport
Miguel Mujica Mota, Abdel El Makhloufi, Pedro Gonzalez Hernandez
Amsterdam University of Applied Sciences; National Autonomous University of Mexico - Holland/ Mexico

EMSS_71: Simulation of the Mexican airport network for addressing a ground delay program
Ann Wellens, Miguel Mujica Mota
UNAM; Amsterdam University of Applied Sciences - Mexico/ Holland

Monday 2017-09-18 14:00-15:30
Room: Room 10
MAS: Production, Internal Logistics and Warehouse Simulation - Session I
Chair(s): Adriano Solis, York University

MAS_11: The open architecture scheduling system for a single-armed cluster tool with PM cleaning operations
Dong-Hyun Roh, Tae-Eog Lee
Korea Advanced Institute of Science and Technology Daejeon - Republic of Korea

MAS_17: Multi-class multi-server queueing networks for production systems design
Pasquale Legato, Rina Mary Mazza
University of Calabria - Italy

MAS_23: Simulation-based optimization of a four stage hybrid flow shop with sequence-dependent setup times and availability constraints
Paul Aurich, Abdulrahman Nahhas, Tobias Reggelin, Marco Krist
Otto-von-Guericke University Magdeburg; Tectron GmbH - Germany

MAS_24: A reinforcement learning approach to scheduling dual-armed cluster tools with time variations
Ji-Eun Roh, Tae-Eog Lee
Korea Advanced Institute of Science and Technology - Republic of Korea

MAS_32: Metaheuristic and hybrid simulation-based optimization for solving scheduling problems with major and minor setup times
Abdulrahman Nahhas, Paul Aurich, Sascha Bosse, Tobias Reggelin, Klaus Turowski
Otto-von-Guericke University Magdeburg - Germany

Monday 2017-09-18 14:00-15:30
Room: Room 12
HMS-EMSS: Logistics & Manufacturing
Chair(s): Yuri Merkuryev, Riga Technical University

HMS_20: Forecast models and hierarchical combined discrete-rate/discrete-event simulation models for parcel service networks
Sebastian Lang, Tobias Reggelin, Horst Manner-Romberg
Otto-von-Guericke-University; MRU GmbH - Germany

HMS_8: Heuristic optimisation and simulation as decision support for operation and maintenance of offshore wind farms
Fariba Mostajeran, Philip Joschko, Johannes Göbel
University of Hamburg - Germany

HMS_22: Simulation-based training modules for independent training of employees in the automotive industry
Alexander Friedrichs, Tobias Reggelin, Sebastian Lang, Toralf Wunder
Otto-von-Guericke-University; BMW Group - Germany

EMSS_25: Simulation and optimization with GRASP in supply fuel in the north of Mexico City
Daniel Tello Gaete, Esther Segura Pérez
Universidad Austral de Chile; Universidad Anáhuac México - Chile/ Mexico

HMS_25: Application of discrete-rate based mesoscopic simulation models for production and logistics planning
Tobias Reggelin, Christian Schauf, Sebastian Lang, David Weigert
Otto von Guericke University Magdeburg; Volkswagen AG - Germany

Monday 2017-09-18 14:00-15:30
Room: Room 14
IWISH: Modeling & Simulation in Healthcare - Session I
Chair(s): Werner Backfrieder, Upper Austria University of Applied Sciences

IWISH_4: Hemodynamically non-significant coronary artery stenosis: a predictive model
Lina Teresa Gaudio, Salvatore De Rosa, Ciro Indolfi, Maria Vittoria Caruso, Gionata Fragomeni
Magna Graecia University - Italy

IWISH_5: Hemodynamic comparison of thin vs standard intra-aortic balloon using a patient-specific CFD modeling
Maria Vittoria Caruso, Gionata Fragomeni
Magna Graecia University - Italy

IWISH_11: Simulation of new-borns behaviours during cardio-pulmonary resuscitation
Jean-Marc Mercantini
Aix-Marseille Université - France

IWISH_2: Closed-loop verification approach for the identification of motion-based action potentials in neural bundles using a continuous symbiotic system
Volkhard Klinger, Sebastian Bohlmann
Universität Hannover - Germany

IWISH_7: Adapted ICP algorithm for surface based registration in image guided surgery
Werner Backfrieder, Gerald Zwettler, Berthold Kerschbaumer
University of Applied Sciences Upper Austria; Johannes Kepler University - Austria

Monday 2017-09-18 15:30-16:00

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

Monday 2017-09-18 16:00-17:30
Room: Room 18

EMSS: Indsutrial Processes and Engineering Modeling & Simulation - Session II
Chair(s): Michael Affenzeller, University of Applied Sciences Upper Austria

EMSS_17: Efficient product representations for automotive logistics
Daniel Fruhner, Konrad Pawlikowski, Katja Klingebiel, Michael Toth
Dortmund University of Applied Sciences and Arts; Bochum University of Applied Sciences; Dortmund University of Applied Sciences and Arts - Germany

EMSS_91: Mathematical models to simulate the process induced stress in silicon nitride thin film coatings and its positive effects on solar cells
Abderrazzak El Boukili
Al Akhawayn University in Ifrane - Morocco

EMSS_13: Validation of design solutions and materials for a high performance bearing cage
Isabel Claveria, Aleida Lostalé, Manuel Muniesa, Ángel Fernández, Carlos Javierre, Daniel Elduque, Sergio Santodomingo
University of Zaragoza - Spain

EMSS_8: The role of Reduced Order Models in Industry 4.0
Alberto Ortega, Salvador Izquierdo, Ángel Fernández, Emilio Jiménez
ItaInnova; University of La Rioja - Spain

Monday 2017-09-18 16:00-17:30
Room: Room 16
EMSS: Business, Financial and Security Simulation
Chair(s): Edgar Alonso Lopez-Rojas, Norwegian University of Science and Technology; Joni A. Amorim, University of Skövde

EMSS_40: Analysis of profitability through with the generation of I-scenarios from a hybrid method between artificial neural network and Monte Carlo simulation
Juan Bermeo, Hilda Castillo, Santiago Serrano, Diana Arce, Henry Bermeo
Universidad Politécnica Salesiana; Universidad de Cuenca - Ecuador

EMSS_54: Identifying sentiments on hotels in Tenerife published on social media by English-speaking tourists
C. A. Martin, R. M. Aguilar, J. M. Torres, A. Garcia-Aguilar
University of La Laguna - Spain

EMSS_45: Implementation of a business plan for a small software developer enterprise using discrete events simulation
Joali Evelyn Pérez Bonilla, Aida Huerta-Barrientos, Jazmin Dillarza Andrade, Héctor Bautista Martínez
National Autonomous Mexico University - Mexico

EMSS_62: MultiMAuS: A multimodal authentication simulator for fraud detection research
Luisa M. Zintgraf, Edgar A. Lopez-Rojas, Diederik M. Roijers, Ann Nowé
Vrije Universiteit Brussel; Norwegian University of Science and Technology - Belgium/ Norway

EMSS_50: Bootstrapping the PaySim financial simulator for open source
Edgar Alonso Lopez-Rojas, Katrin Franke
NTNU - Norway

Monday 2017-09-18 16:00-17:30
Room: Room 10

MAS-EMSS: Production, Internal Logistics and Warehouse Simulation - Session II
Chair(s): Tobias Reggelin, Otto von Guericke University Magdeburg

MAS_25: Holistic planning of production and intralogistics systems through automated modeling within and among the tools of the digital factory
David Weigert, Paul Aurich, Tobias Reggelin
Otto-von-Guericke University Magdeburg - Germany

MAS_27: Optimization of the logistics process in warehouse of automotive company based on simulation study
Bronislav Chramcov, Milan Jemelka
Tomas Bata University - Czech Republic

MAS_22: A stochastic risk analysis through Monte Carlo simulation applied to the construction phase of a 600 MW gas turbine plant
Fahimeh Allahi, Lucia Cassettari, Marco Mosca
University of Genoa - Italy

EMSS_63: Sugar plant simulator for energy management purposes
Cristian Pablos, Luis Felipe Acebes, Alejandro Merino
University of Valladolid; University of Burgos - Spain

EMSS_74: Comparison of a microscopic discrete-event and a mesoscopic discrete-rate simulation model for planning a production line
F. Gleye, T. Reggelin, S. Lang
Salzgitter Mannesmann Großrohr GmbH; Otto von Guericke University Magdeburg

Monday 2017-09-18 16:00-17:30
Room: Room 12

HMS: Ports and Terminals Modeling & Simulation
Chair(s): Eleonora Bottani, University of Parma

HMS_16: Simulation study on dynamic variable gate setting condition of container port
Zijian Guo, Qi Zhang, Wenyuan Wang
Dalian University of Technology - China

HMS_17: Bunching index for bulk cargo ports
Hai-Yan Xu, Xiuju Fu, Ruthu Shree Ragavan, Lee Jek Suen, Xiao Feng Yin, Rick Siow Mong Goh
Institute of High Performance Computing; Jurong Port Pte Ltd, Singapore - Singapore

HMS_18: A branch-and-bound algorithm for the block relocation problem to minimize total crane operation time
Yuki Inaoka, Shunji Tanaka
Kyoto University - Japan

HMS_3: A simulation approach for the transshipment operations at maritime container terminals
Iván Castilla-Rodríguez, Christopher Expósito-Izquierdo, Rosa M. Aguilar-Chinea, Belén Melián-Batista, J. Marcos Moreno-Vega
Universidad de La Laguna - Spain

Monday 2017-09-18 16:00-17:30
Room: Room 14

IWISH-MAS: Modeling & Simulation in Healthcare - Session II
Chair(s): Marco Frascio, University of Genoa

IWISH_12: The medical point of view into a simulation project of management for safety and security in disasters and emergercies of industrial plants (DIEM-SSP Project)
Francesca Mandolfino, Antonella Petrillo, Marco Frascio
University of Genoa; Parthenope University of Naples - Italy

IWISH_10: Spatial psychiatric hospitalization modelling in an international setting – an agent based approach
Günther Zauner, Christoph Urach, Martin Bicher, Niki Popper, Florian Endel
DWH simulation services; TU Wien; DEXHELPP; IMEHPS.research - Austria

MAS_20: Simulation of virtual human hand evolution after stroke
Esteban Peña-Pitarch, NeusTicó-Falguera
Escola Poltècnica Superior d'Enginyeria de Manresa; XarxaAssistencialAlthaia - Spain

IWISH_13: Generator of diets for individuals with diabetes with minimization of glycemic index
Maximino Navarro Mentado, Esther Segura Pérez
UNAM - Mexico

Monday 2017-09-18 17:30-18:30
Room: Room 18

Special Session: W-ARTEMYS Project Meeting
Chair(s): Giuseppe Vignali, University of Parma; Luciano di Donato, INAIL

Social Event
Monday 2017-09-18 20:00-21:00
20:00, I3M Welcome Ceremony @ Palau Robert, Passeig de Gràcia, 107 08008 Barcelona

Welcome adresses from I3M, UAB and Spanish Simulation Community Representatives

Tuesday 2017-09-19 9:00-10:30
Room: Room 18
EMSS: Modeling & Simulation in Manufacturing and Forecasting
Chair(s): Luciano Di Donato, INAIL; Francesco Longo, University of Calabria; Antonio Padovano, University of Calabria

EMSS_69: Building Information modelling and simulation integration for modular construction manufacturing performance improvement
Beda Barkokebas, Youyi Zhang, Chelsea Ritter, Mohamed Al-Hussein
University of Alberta - Canada

EMSS_84: Holistic planning of production and intralogistics systems through automated modeling within and among the tools of the digital factory
David Weigert, Paul Aurich, Tobias Reggelin
Otto von Guericke University Magdeburg - Germany

EMSS_38: Using simulation and reliability concepts to set starting times in multitask projects with random duration and a common deadline
Angel A. Juan, Laura Calvet, Carles Serrat, Sara Hatami
University of Catalonia - Spain

EMSS_14: Simulation model of prefabricated house from manufacturing to on-site installation
Mohammed Sadiq Altaf, Mohamed Al-Hussein
University of Alberta - USA

EMSS_79: Demand prediction model of an organization
Oroselfia Sanchez, Idalia Flores
Universidad Nacional Autónoma de México - Mexico

Tuesday 2017-09-19 9:00-10:30
Room: Room 16
EMSS: Simulation & Optimization in Aviation and Transportation
Chair(s): Miquel Angel Piera, UAB

EMSS_47: Complex networks of the air passenger traffic in Mexican airports
Olivia Sashiko Shirai Reyna, Idalia Flores De La Mota
UNAM - Mexico

EMSS_80: Simulation of boarding pedestrian in Mexican subway: the case of Pantitlan terminal station
Yazmin Dillarza-Andrade, Aida Huerta-Barrientos, Geraldo Salazar-Diaz, Joali Evelyn Pérez-Bonilla
UNAM - Mexico

EMSS_34: Air traffic simulator for passive ADS-B surveillance system
Jiri Kratochvil, Karel Simerda
University of Pardubice - Czech Republic

EMSS_76: A comparative analysis of different methods for identification of the evolution of number of possible conflict-free airspace configurations including multiple aircraft and single conflict
Julia de Homdedeu, Maria del Mar Tous, Miquel Angel Piera, Thimjo Koca, Marko Radanovic
Autonomous University of Barcelona - Spain

Tuesday 2017-09-19 9:00-10:30

Room: Room 10

MAS: Decision Support Systems
Chair(s): Alessio Ishizaka - University of Portsmouth

MAS_1: AHP-K-GDSS: a new sorting method based on AHP for group decisions
Alessio Ishizaka, Francesco Lolli, Rita Gamberini, Bianca Rimini, Elia Balugani
University of Modena and Reggio Emilia; University of Portsmouth - Italy/ UK

MAS_7: A risk management model for measuring project complexity
Fabio De Felice, Antonella Petrillo, Federico Zomparelli, Marco Esposito
University of Cassino; University of Naples "Parthenope" - Italy

MAS_10: Heuristic modules multi-lift planning tool for industrial site
Mahmoud Farajmandi, Ulrich Hermann, Hosein Taghaddos, Simaan M. AbouRizk
University of Alberta; University of Tehran - Canada/ Iran

MAS_19: Modeling supply chain quality management performance
Juan Miguel Cogollo Flórez, Alexander Alberto Correa Espinal
Instituto Tecnológico Metropolitano; Universidad Nacional de Colombia - Colombia

MAS_28: Validation of a cost model for the superstructure service in juvenile prisons in Brazil by means of the Monte Carlo simulation
Camila Isaton, Antônio Edésio Jungles, Jamil José Salim Neto
Federal University of Santa Catarina - Brazil

Tuesday 2017-09-19 9:00-10:30

Room: Room 12

HMS-EMSS: Ports and Terminals Modeling & Simulation - Session II
Chair(s): Manfred Gronalt, BOKU University

HMS_21: Port competitiveness evauation by fuzzy logic of major port in Asia
Veerachai Gosasang, Jiravich Klomperee, Pitinoot Kotcharat
Port Authority of Thailand - Thailand

HMS_19: Truck gate simulation for inland terminals
Jana Vögl, Manfred Gronalt
University of Natural Resources and Life Sciences - Austria

HMS_14: A simulation model for estimating the carbon footprint of vehicles in the terminal operating processes
Wenhe Yang, Soemon Takakuwa
Chuo University - Japan

EMSS_83: The intelligent decision support system prototype for port informational integration
Ana X. Halabi-Echeverry, Sardar M. N. Islam, Hugo L. Nino-Vergara, Nelson Obregon-Neira
Universidad de La Sabana; Victoria University
City Flinders Campus; Universidad Javeriana - Colombia/ Australia

Tuesday 2017-09-19 9:00-10:30
Room: Room 14
IMAACA: Modeling & Control - Session I
Chair(s): Sergio Junco, Universidad Nacional de Rosario

IMAACA_1: Unknown input observer for MIMO systems with stability
Joel Abraham Gonzalez, Christophe Sueur
Ecole Centrale de Lille - France

IMAACA_2: A new approach to the derivation of a single set of implicit state space equations from a fixed causality bond graph of a hybrid model
Wolfgang Borutzky
Bonn-Rhein-Sieg University of Applied Sciences - Germany

IMAACA_7: Anti-Wind-Up solution for a two degrees of freedom controller
Lucrecia Gava, Anibal Zanini
Universidad de Buenos Aires - Argentina

IMAACA_11: A novel port-Hamiltonian based design of stabilizing controller for DC-DC buck converter
Juan Tomassini, Alejandro Donaire, Sergio Junco
Universidad Nacional de Rosario; Queensland
University of Technology - Argentina/ Australia

IMAACA_13: Bond graph model conditioning for analysis, simulation and control system design: application to a planar mobile robotic manipulator
Matías Nacusse, Martín Crespo, Sergio Junco, Vitalram Rayankula, Pushparaj Mani Pathak
National University of Rosario; CONICET; Indian Institute of Technology Roorkee - Argentina/ India

Tuesday 2017-09-19 10:30-11:00

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

Tuesday 2017-09-19 11:00-12:30
Room: Room 18
EMSS: Human Centered & Human Focused M&S
Chair(s): Emilio Jemènez, University of La Rioja; Peer Olaf Siebers, University of Nottingham

EMSS_100: Innovative modelling of social networks for reproducing complex scenarios
Agostino G.Bruzzone, Riccardo di Matteo, Marina Massei, Ivan Vianello
University of Genoa; Simulation Team; SIM4Future; NATO Joint Warfare Center - Italy/ Norwey

EMSS_72: Stimulation model - a multilayer social network generator
Alexander Tarvid
University of Latvia - Latvia

EMSS_12: Quantum cognition models of ethical decision-making in human behavior simulation
Levent Yilmaz
Auburn University - USA

EMSS_28: Evidence-based evaluation of psychosocial risk factors and the interaction of their stressors using system dynamics
Hossein Abaeian, Mohamed Al-Hussein, Osama Moselhi
Concordia University; University of Alberta - Canada

EMSS_92: Sociotechnical systems acceptance and sustainability assessment using dynamic simulation model
Dace Aizstrauta, Egils Ginters
Riga Technical University - Latvia

Tuesday 2017-09-19 11:00-12:30
Room: Room 16

EMSS: Modelling and Simulation Approaches in and for Education
Chair(s): Maja Atanasijevic-Kunc, University of Ljubljana; Andreas Körner, Vienna University of Technology

EMSS_68: Robot soccer strategy adaptation
Vaclav Svaton, Jan Martinovic, Katerina Slaninova, Vaclav Snasel
Technical University of Ostrava - Czech Republic

EMSS_16: Educational animation as a complementary tool to convey knowledge to civil construction workers
Leiliane Santana, Ailton Freire, Marília Dagostin, Antônio Jungles
Instituto Federal da Bahia; Instituto Federal do Piauí; Universidade Federal de Santa Catarina; Universidade Federal de Santa Catarina - Brazil

EMSS_27: Simulation for teaching the production cell concept in civil production engineering
Daniela Matschulat Ely, Ana Carolina Brandão Taroni
Centro Federal de Educação Tecnológica de Minas Geriais - Brazil

EMSS_9: Use of games to student training in the civil engineering undergraduation course: a bibliometric analysis
Ailton Freire, Daniela Ely, Leiliane Santana, Antônio Jungles, Marcos Dalmau
Instituto Federal do Piauí; Centro Federal de Educação Tecnológica de Minas Gerais; Instituto Federal da Bahia; Universidade Federal de Santa Catarina - Brazil

EMSS_93: Analytical review and the analysis of educational programs with computer modelling and simulation engineering content
Borut Zupancic, Yuri Senichenkov, Gašper Mušic
University of Ljubljana; Peter the Great Saint-Petersburg Polytechnic University - Slovenia/ Russia

Tuesday 2017-09-19 11:00-12:30
Room: Room 10

FOODOPS: M&S of Food Processing, Scheduling and Distribution - Session I
Chair(s): Marco Better, OptTek Systems, Inc.

FOODOPS_9: Sustainable distribution system in food retail sector - a simulation modelling approach
Sameh Saad, Ramin Bahadori, Jishnu Ravisankar
Sheffield Hallam University - UK

FOODOPS_11: Advanced approaches to solving critical and complex production scheduling problems
Marco Better, James P. Kelly, Manuel Laguna, Ross Palmer
OptTek Systems; University of Colorado at Boulder - USA

FOODOPS_12: Discrete event simulation of a pigmeat packing plant
Lluis Miquel Plà-Aragones, Adela Pagès-Bernaus, Eva Novoa-Tufet, Jordi Mateo-Fornés, Pedro Terrafeta, Daniel Mendiroiz, Lorea Pérez-Cànovas, Sandy López-Nogales
University of Lleida; Carnicas Iruña-Velasco - Spain

FOODOPS_15: Market analysis of dairy products produced in the Parmigiano-Reggiano area
Rodolfo Mantione, Giuseppe Vignali
University of Parma - Italy

FOODOPS_10: Drying process simulation in food industry using lattice boltzmann method
Mohammad Mobarak, Mohamed Hussein, Antonio Delgado
Friedrich-Alexander-Universität Erlangen-Nürnberg; Cairo University - Germany/ Egypt

Tuesday 2017-09-19 11:00-12:30
Room: Room 12
DHSS-MAS: Defense and Homeland Security - Session I
Chair(s): Erdal Cayirci, University of Stavanger

DHSS_19: An underwater buoyancy-driven glider simulator with Modelling & Simulation as a Service architecture
Manlio Oddone, Agostino Bruzzone, Emanuel Coelho, Daniele Cecchi, Bartolome Garau
NATO STO CMRE; Simulation Team, University of Genoa - Italy

DHSS_8: Requirement specification method based on SES and DEVS formalism in defense system simulation
Jiyong Yang, Jaewoong Choi, Inho Jung, Changbeom Choi
Handong Global University - Republic of Korea

DHSS_15: Modeling and simulation of forced population displacement flows using colored Petri Nets
Jenaro Nosedal-Sanchez, Ali Asgary, Adriano Solis, Francesco Longo
York University; University of Calabria - Canada/ Italy

MAS_9: Simulation of a readiness-based sparing optimization
John Wray, Arnold Buss, Javier Salmeron
Naval Postgraduate School - USA

DHSS_7: Test case base for dynamic verification of defense simulation model based on system entity structure and model base
Jaewoong Choi, Jiyong Yang, Inho Jung, Changbeom Choi
Handong Global University - Republic of Korea

Tuesday 2017-09-19 11:00-12:30
Room: Room 14
IMAACA-EMSS-MAS: Modeling & Control - Session II
Chair(s): Sergio Junco, Universidad Nacional de Rosario

IMAACA_3: Development of a rules-based fuzzy algorithm for deviation of obstacles
Lucas Alves Dias, Roger William de Oliveira Silva, Paulo César da Silva Emanuel, André Ferrus Filho, Rodrigo Teixeira Bento
Faculdade de Tecnologia Termomecanica - Brazil

IMAACA_5: Well-formed Petri Net based patterns for modeling logic controllers for autonomous trains
Yuchen Xie, Manel Khlif-Bouassida, Armand Toguyéni
Univ. Lille Nord de France - France

MAS_29: Power distribution control algorithm for fuel economy optimization of 48V mild hybrid vehicle
Seongmin Ha, Theho Park, Wonbin Na, Hyeongcheol Lee
Hanyang University - Korea

EMSS_4: Fractional positive and stable time-varying continuous-time linear electrical circuits
Tadeusz Kaczorek

University of Technology - Poland

Tuesday 2017-09-19 12:30-14:00
LUNCHEON Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Tuesday 2017-09-19 14:00-15:30
Room: Room 18
EMSS: VV&A, Simulation Experiments and ICT Applications
Chair(s): Emilio Jemènez, University of La Rioja

EMSS_60: Analyzing for measure characteristics of nash-sutcliffe efficiency type indicators used for model validation
Kai-Bin Zhao, Ke Fang, Ming Yang
Harbin Institute of Technology - China

EMSS_39: Estimation of expectations in two-level nested simulation experiments
David Fernando Muñoz
Instituto Tecnológico Autónomo de México - Mexico

EMSS_11: A method for obtaining the credibility of a simulation model
Ke Fang, Ming Yang, KaiBin Zhao
Harbin Institute of Technology - China

EMSS_57: A method for factor screening of simulation experiments based on association rule mining
Lingyun Lu, Wei Li, Ping Ma, Ming Yang
Harbin Institute of Technology - China

EMSS_18: Information management on the example of features of IT system "sindbad"
Mariusz Nepelski, Dominik Hryszkiewicz, Grzegorz Gudzbeler
Police Academy in Szczytno - Poland

Tuesday 2017-09-19 14:00-15:30
Room: Room 16
EMSS-MAS: Advances in Combined, Parallel and Distributed Simulation
Chair(s): Chair(s): Gasper Music, University of Ljubljana; Thomas Wiedemann, HTW Dresden FB Informatik

EMSS_26: Synchronization algorithm for peer-to-peer interactive distributed simulation implemented in a single-threaded web application
Stepan Kartak
University of Pardubice - Czech Republic

EMSS_89: Combined synthesis/simulation approach to design and verification of production control strategies
Juliana Keiko Sagawa, Gasper Music
Federal University of Sao Carlos; University of Ljubljana - Brazil/ Slovenia

EMSS_94: Using High Level Architecture to combine simulations in company context: mobile factory
Simon Gorecki, Gregory Zacharewicz, Nicolas Perry
University of Bordeaux; ENSAM of Bordeaux - France

EMSS_3: Use of CPANS for grouping DNA sequence fragments in the construction of gnomes
Mario Rossainz López, Manuel I. Capel, Roberto Hernández-Munive, Ivan Olmos Pineda, J. Arturo Olvera López
University of Puebla; University of Granada - Mexico/ Spain

MAS_3: A Java library for easing the distributed simulation of space systems
Alberto Falcone, Alfredo Garro
University of Calabria - Italy

Tuesday 2017-09-19 14:00-15:30
Room: Room 10
FOODOPS-SESDE: M&S of Food Processing, Scheduling and Distribution - Session II
Chair(s): Giuseppe Vignali, University of Parma

SESDE_7: Life cycle assessment of a spreadable cream made from parmesan cheese
David Mosna, Giuseppe Vignali
University of Parma - Italy

FOODOPS_4: Can Regional Organic Agriculture Feed The Regional Community? A Case Study For Hamburg And North Germany
Sarah Joseph
Kühne Logistics University - Germany

FOODOPS_1: Computational Fluid Dynamics (CFD) simulation of hot-air flow profile and temperature distribution in a CECH dryer
Adesoji Matthew Olaniyan, Samuel Kehinde Oyeniyi, Abraham Olusola Oloye, Oluwole Idowu Ogunniyi, Ezinne Winnifred Igwegbe
Federal University Oye-Ekiti; University of Ibadan; Union Bank of Nigeria Plc - Nigeria

FOODOPS_13: CFD model validation of a bag filter for air filtration in a milling plant
Federico Solari, Giorgia Tagliavini, Roberto Montanari, Eleonora Bottani, Nicola Malagoli, Mattia Armenzoni
University of Parma - Italy

Tuesday 2017-09-19 14:00-15:30
Room: Room 12
DHSS: Adaptive and Predicting Computer Based Tutoring
Chair(s): Robert Sottilare, US Army Research Laboratory

DHSS_2: Lessons learned for affective data and intelligent tutoring systems
Keith Brawner
United States Army Research Laboratory - USA

DHSS_3: Utilizing intelligent tutoring systems and the generalized intelligent framework for tutoring (GIFT) for research
Anne Sinatra
United States Army Research Laboratory - USA

DHSS_5: Task allocation and automation level in the design of intelligent tutoring system authoring tools
Scott Ososky, Robert Sottilare, Keith Brawner
United States Army Research Laboratory; Oak Ridge Associated Universities - USA

DHSS_6: Adaptive instructional methods to accelerate learning and enhance learning capacity
Robert Sottilare
United States Army Research Laboratory - USA

DHSS_10: Knowledge acquisition versus skill development: pedagogical considerations from an intelligent tutoring perspective
Benjamin Goldberg, Benjamin Bell, Debbie Brown
United States Army Research Laboratory - USA

Tuesday 2017-09-19 14:00-15:30
Room: Room 14
MAS-EMSS: Simulation Based Design
Chair(s): Adriano Solis, York University; Yilin Huang, Delft University of Technology

MAS_4: Effect of ankle joint position on biped robot walking behaviour
Van-Tinh Nguyen, Ngoc-Linh Tao, Hiroshi Hasegawa
Shibaura Institute of Technology; Hanoi University of Science and Technology - Japan/ Vietnam

EMSS_78: Modified rate equation models for understanding performance limits of vertical and in-plane compound cavity VCSELS
Naser F.G. Albugami, Eugene A. Avrutin
University of York - UK

MAS_8: Simulation-based design with UQ for creating new combination of functions considering uncertainty
Takahiro Ichimaru, Hiroshi Hasegawa, Yuji Kado
Shibaura Institute of Technology; Japan Aerospace Exploration Agency - Japan

MAS_16: Design by contract of cyber-physical systems driven by simulation and based on properties modeling
Andrea Tundis, Max Mühlhäuser
Technische Universität Darmstadt - Germany

MAS_21: Multi-pole modelling and intelligent simulation of a fluid power feeding system with a pneumo-hydraulic accumulator
Mait Harf, Gunnar Grossschmidt
Tallinn University of Technology - Estonia

Tuesday 2017-09-19 15:30-16:00

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

Tuesday 2017-09-19 16:00-17:30
Room: Room 18
EMSS-MAS: Simulation Based Optimization
Chair(s): Pasquale Legato, University of Calabria; Rina Mary Mazza, University of Calabria

EMSS_58: Evolution strategy - testing different tournament selection strategies
Pavel Raska, Zdenek Ulrych
University of West Bohemia - Czech Republic

EMSS_46: Avoiding rule explotion and making approximate inverse reasoning in computing with words applications
Oscar G. Duarte
Universidad Nacional de Colombia - Colombia

EMSS_33: Theory and practice of information fusion models' quality estimation and models' quality control
Boris Sokolov, Stanislav Micony, Alevtina Ziuban, Vadim Burakov, Iliya Pimanov, Dmitri Ivanov
Russian Academy of Sciences; ITMO University; Berlin School of Economics and Law - Russia/ Germany

MAS_12: ACO topology optimization: The geometrical constraint method by learning overlaid optimal ants route
Nanami Hoshi, Hiroshi Hasegawa
Shibaura Institute of Technology - Japan

MAS_18: Energy optimization of a wind system with small power by fuzzy MPPT algorithm
Jean Claude Rakotoarisoa, Sonia Moussa, Jean Nirinarison Razafinjaka
University of Antsiranana; University El Manar - Madagascar/ Tunisia

Tuesday 2017-09-19 16:00-17:30
Room: Room 16
EMSS-HMS: M&S in Railway Networks
Chair(s): Eleonora Bottani, University of Parma

EMSS_42: Utilization of railway network model for dynamic calculation of train delays
Jan Fikejz, Jan Merta
University of Pardubice - Czech Republic

EMSS_53: Calculation of the capacity of switch area within railway stations with the use of simulation methods
Michael Bažant, Josef Bulicek, Pavel Krýže, Petr Veselý
University of Pardubice; SZDC - Czech Republic

EMSS_31: Unitary hybrid model of railway traffic
Radek Novotny, Antonin Kavicka
University of Pardubice - Czech Republic

EMSS_24: Nested simulations supporting traffic optimizations related to railway stations
Roman Divis, Antonin Kavicka
University of Pardubice - Czech Republic

HMS_26: Railway planning: an integrated approach using discrete event simulation
Carlos Henrique Fernandes de Faria, Marta Monteiro da Costa Cruz
Federal University of Minas Gerais; Federal University of Espirito Santo - Brazil

Tuesday 2017-09-19 16:00-17:30
Room: Room 10

FOODOPS: M&S of Food Processing, Scheduling and Distribution - Session III
Chair(s): Giuseppe Vignali, University of Parma

FOODOPS_5: Drying characteristics of soybean (glycine max) using continuous drying and intermittent drying
Hyeon Woo Park, Won Young Han, Hwang-Won Kang, Won Byong Yoon
Kangwon National University; National Institute of Crop Science - Korea

FOODOPS_6: Developing a linearization method to determine an optimum formulation in surimi blend with varied moisture content using linear programming
Hyeon Woo Park, Jae W. Park, Won Byong Yoon
Kangwon National University; Oregon State University - Republic of Korea/ USA

FOODOPS_7: Accurate prediction of heat penetration of a surimi paste with various salt and moisture contents using numerical simulation with temperature dependent thermal property functions
Hyeon Woo Park, Myeong-Gi Lee, Jae W. Park, Won Byong Yoon
Kangwon National University; Oregon State University - Korea/ USA

FOODOPS_8: Effect of inulin in Jerusalem Artichoke (Helianthus Tuberosus L.) flour on the viscoelatic behavior of cookie dough and quality of cookies
Youn Ju Lee, Ok-Hwan Lee, Won Byong Yoon
Kangwon National University - Korea

Tuesday 2017-09-19 16:00-17:30
Room: Room 12
HMS-EMSS: M&S in Logistics, Traffic and Transportation, Session I
Chair(s): Yuri Merkuryev, Riga Technical University

HMS_10: Applying Monte Carlo simulation in an indicator-based approach to evaluate freight transportation scenarios
Laura Baumann, Fabian Behrendt, Niels Schmidtke
Fraunhofer Institute for Factory Operation and Automation; Otto von Guericke University Magdeburg - Germany

HMS_24: A decision support tool for strategic conflict management through assignment of calculated take-off times
Nina Schefers, Juan José Ramos González, Pau Folch
Universitat Autònoma de Barcelona; Aslogic - Spain

EMSS_65: Optimal stochastic control of an aluminum recycling unit in reverse logistics
Franck Eric Kemi Yotat, Jean Pierre Kenne, Victor Songmene
University of Quebec - Canada

HMS_6: Variable-depth adaptive large neighbourhood search algorithm for open periodic vehicle routing problem with time windows
Binhui Chen, Rong Qu, Hisao Ishibuchi
The University of Nottingham; Southern University of Science and Technology; Osaka Prefecture University UK/ China/ Japan

EMSS_5: Analysing collaborative performance and cost allocation for the joint route planning problem
Lotte Verdonck, Katrien Ramaekers, Benoît Depaire, An Caris, Gerrit K. Janssens
Uhasselt; Research Foundation Flanders - Belgium

Tuesday 2017-09-19 16:00-17:30
Room: Room 14
Special Session: I3M 2018 and MISS-MSNet Board of Directors Meeting
Chair(s): Francesco Longo, University of Calabria; Janos Sebestyen Janosy, Centre for Energy Research Hungarian Academy of Sciences

Social Event

Tuesday 2017-09-19 18:30-23:00
20:00, I3M Gala Dinner @ Restaurant La Gavina, Placa Pau Vila, 1 Edifici Palau du Mar, Barcelona

During Gala Dinner the I3M Best Paper Awards will be presented

Wednesday 2017-09-20 9:00-10:30
Room: Room 18
EMSS-MAS: Agent Directed Simulation
Chair(s): Levent Yilmaz, Auburn University

EMSS_44: An agent-based modelling and simulation framework to assess small businesses' recovery from flooding
Meshal Alharbi, Graham Coates
Durham University - UK

EMSS_6: Supporting organisational decision making in presence of uncertainty
Vinay Kulkarni, Souvik Barat, Tony Clark, Balbir Barn
Tata Consultancy Services Research; Sheffield Hallam University; Middlesex University London - India/ UK

EMSS_52: Simulation of an evolutionary game for a wealth distribution model structured in a small world network
Javier Lara De Paz, Gabriel Policroniades, Idalia Flores
Universidad Nacional Autónoma de México - Mexico

EMSS_67: Agent based modeling architecture with BPMN and DEVS network
Mariem Sbayou, Youssef Bouanan, Gregory Zacharewicz, Julien Francois
Univ. Bordeaux - France

MAS_15: An execution model for exception handling in a multi-agent system
Zina Houhamdi, Belkacem Athamena
Al Ain University of Science and Technology - UAE

Wednesday 2017-09-20 9:00-10:30
Room: Room 16
EMSS-HMS: M&S in Logistics, Traffic and Transportation, Session II
Chair(s): Miquel Angel Piera, UAB

EMSS_23: Agent-based micro simulation to assess the performance of roundabouts considering different variables and performance indicators
António A. C. Vieira, Luís M. S. Dias, Guilherme A. B. Pereira, José A. Oliveira
University of Minho - Portugal

EMSS_1: A simulation optimization method for design and control of signalized intersections in urban areas
Yuan Chen, Ling Li, Yinghua Shen, Bingsheng Liu
University of Alberta; Tianjin University - Canada/ China

EMSS_19: Parameter selection for PCMA* using surrogate-assisted black-box optimization and microscopic traffic simulation
Bernhard Werth, Erik Pitzer, Michael Affenzeller, Christian Backfrieder
University of Applied Sciences Upper Austria; Johannes Kepler University - Austria

HMS_2: An efficient heuristic for multi-objective train load planning: a parameter sensitivity analysis
Hilde Heggen, Kris Braekers, An Caris
Uhasselt; Maastricht University; Research Foundation Flanders - Belgium/ Holland

EMSS_97: Controlled triangular batches petri nets: a highway case study
Leonardo Brenner, Isabel Demongodin
LSIS - France

Wednesday 2017-09-20 9:00-10:30
Room: Room 10
IWISH-EMSS: Data Driven System Simulation - Modelling & Simulation of Complex Systems
Chair(s): Niki Popper, Dexhelpp

IWISH_1: Quality assessment of input data for emergency department simulation
Lien Vanbrabant, Niels Martin, Katrien Ramaekers, Kris Braekers
Uhasselt; Research Foundation Flanders - Belgium

IWISH_3: Towards standards based health data extraction facilitating process mining
Emmanuel Helm, Barbara Franz, Andreas Schuler, Oliver Krauss, Josef Küng
University of Applied Sciences Upper Austria; Johannes Kepler University - Austria

IWISH_9: Deterministic record linkage of health data as preparatory work in modelling and simulation – use case: hospitalizations in Austria
Barbara Glock, Florian Endel, Gottfried Endel
DWH simulation services; TU Wien; Main Association of Austrian Social Security Institutions; DEXHELPP - Austria

EMSS_30: Deep learning approaches for small dimensional biomedical data
Karin Proell
University of Applied Sciences Hagenberg - Austria

Wednesday 2017-09-20 9:00-10:30
Room: Room 12
DHSS-MAS: Defense and Homeland Security - Session II
Chair(s): Chamnan Kumsap, Thailand Ministry of Defense

DHSS_18: Interoperable Simulation and Serious Games for creating an Open Cyber Range
Agostino G. Bruzzone, Riccardo Di Matteo, Marina Massei, Enrico Russo, Mirko Cantilli, Kirill Sinelshchikov, Giovanni Luca Maglione
University of Genoa; DIBRIS; Simulation Team; Simulation Team, Sim4Future; Liophant - Italy

DHSS_4: The compliance of project management with corporate's research and development strategies: DTI's virtual shooting range case study
Gp Capt Chamnan Kumsap
Defense Technology Institute - Thailand

MAS_30: U.S. Army mobile augmented and virtual reality training systems for handheld IED detectors
Dean Reed, Latika Eifert, Shane Reynolds, Travis Hillyer, Clive Hoayun
University of Central Florida; Army Research Laboratory - USA

DHSS_17: Methodology of shooting training using modern IT techniques
Grzegorz Gudzbeler, Jaroslaw Struniawski
Police Academy in Szczytno - Poland

DHSS_1: Joint military space operations simulation: a survey
Erdal Cayirci, Hakan Karapinar, Lutfu Ozcakir, Erdem Yazgan
University of Stavanger; HAVELSAN; Hacettepe University; TED University - Norway/ Turkey

Wednesday 2017-09-20 9:00-10:30
Room: Room 14
EMSS-MAS-IWISH: Industry and Industry 4.0 Applications
Chair(s): Francesco Longo, University of Calabria

EMSS_98: Smart maintenance lifecycle management: a design proposal
Jan Zenisek, Letizia Nicoletti, Francesco Longo, Gabriele Traugott, Antonio Padovano, Michael Affenzeller
University of Applied Sciences Upper Austria; University of Calabria; CAL-TEK - Austria/ Italy

MAS_34: Immersive, interoperable and intuitive mixed reality for service in industrial plants
Agostino G. Bruzzone, Marina Massei, Francesco Longo, Kirill Sinelshchikov, Riccardo di Matteo, Marina Cardelli, Praveen Kuman Kandunuri
Simulation Team, University of Genoa; University of Calabria; Simulation Team, Liophant Simulation; Simulation Team, SIM4Future; Simulation Team, MAST - Italy

MAS_35: A strategic serious game addressing system of systems engineering
Agostino G. Bruzzone, Marina Massei, Giovanni Luca Maglione, Kirill Sinelshchikov, Riccardo di Matteo
Simulation Team, University of Genoa; Simulation Team, Liophant Simulation; Simulation Team, SIM4Future - Italy

EMSS_101: Autonomous systems & safety issues: the roadmap to enable new advances in industrial application
Agostino G. Bruzzone, Marina Massei, Matteo Agresta, Riccardo di Matteo,
Kirill Sinelshchikov, Francesco Longo, Letizia Nicoletti, Luciano di Donato, Laura Tommasini, Carla Console, Alessandra Ferraro, Marco Pirozzi, Daniele Puri, Leonardo Vita, Fabio Cassara, Canio Mennuti, Giuseppe Augugliaro, Corrado Delle Site, Francesco Di Palo, Paolo Bragatto
Simulation Team; Sim4future; University of Calabria; CAL-TEK; INAIL - Italy

IWISH_14: Hyperbaric plant simulation for industrial applications
Agostino G. Bruzzone, Matteo Agresta, Kirill Sinelshchikov
Simulation Team, University of Genoa, - Italy

Wednesday 2017-09-20 10:30-11:00

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

Wednesday 2017-09-20 11:00-12:30
Room: Room 18
HMS: Forecasting, Replenishment, Warehouses and Distribution Simulation
Chair(s): Manfred Gronalt, BOKU University

HMS_11: The effect of storage and routing policies on picker blocking in a real-life narrow-aisle warehouse
Teun van Gils, An Caris, Katrien Ramaekers
Uhasselt - Belgium

HMS_13: Reducing workload imbalance in parallel zone order picking systems
Sarah Vanheusden, Teun van Gils, Katrien Ramaekers, An Caris
UHasselt - Belgium

HMS_12: The impact of replenishment frequency on the logistics Cost - A simulation approach
Sameh Saad, Ramin Bahadori
Sheffield Hallam University - UK

HMS_4: The impact of risks on the deliveries of a logging company: simulation model case study
Peter Mensah, Yuri Merkuryev, Eric Klavins, Francesco Longo
Riga Technical University; University of Calabria - Latvia

HMS_23: Simulation and visualization to support material flow planning in a metal construction company
Gaby Neumann, Thomas Masurat

Wednesday 2017-09-20 11:00-12:30
Room: Room 16
SESDE: Simulation For Energy, Environment and Sustainable Development

Chair(s): Janos Sebestyen Janosy, Centre for Energy Research Hungarian Academy of Sciences

SESDE_1: Agent-based modeling of urban land-use development: modelling and simulating households and economic activities location choice in Bordeaux, France
Youssef Bouanan, Seghir Zerguini, Nathalie Gaussier
Univ. Bordeaux - France

SESDE_3: A simulation tool to assess the integration of cargo bikes into an urban distribution system
Wladimir Hofmann, Tom Assmann, Parisa Dolati Neghabadi, Van-Dat Cung, Jurijs Tolujevs
Fraunhofer IFF; Univ. Grenoble Alpes; Transport and Telecommunication Institute - Germany/ France/ Latvia

SESDE_4: Economic and environmental sustainability of a large-scale retail store
Eleonora Bottani, Simona Arabia, Giorgia Casella
University of Parma - Italy

SESDE_5: Simulation of autonomous systems collaborating in industrial plants for multiple tasks
Agostino G. Bruzzone, Marina Massei, Ian Mazal, Riccardo di Matteo, Matteo Agresta, Giovanni Luca Maglione
Simulation Team, University of Genoa; NATO M&S COE; Simulation Team, SIM4Future; Simulation Team, Liophant - Italy

SESDE_6: Simulation as decision support system for disaster prevention
Agostino G. Bruzzone, Matteo Agresta, Kirill Sinelshchikov
University of Genova; Simulation Team - Italy

Wednesday 2017-09-20 11:00-12:30
Room: Room 10
Special Session: Demonstration of the GIFT System for Adaptive Computer Based Tutoring
Chair(s): Robert Sottilare, US Army Research Laboratory

Wednesday 2017-09-20 11:00-12:30
Room: Room 12

Special Session: Presenting the Book "Robust Modelling and Simulation"
Chair(s): Miguel Mujica Mota, Amsterdam University of Applied Sciences; Idalia Flores, University of Mexico

Wednesday 2017-09-20 11:00-12:30
Room: Room 14
IMAACA-MAS: Energy Management
Chair(s): Geneviève Dauphin-Tanguy, École Centrale de Lille; Sergio Junco, Universidad Nacional de Rosario

IMAACA_8: Optimum fuel consumption strategy for series-parallel hybrid electric vehicles: modelling and approaches
Ivan Miguel Trindade, Agenor de Toledo Fleury
University of Sao Paulo - Brazil

IMAACA_12: Optimal sizing of a hybrid cooling system
Farah Kojok, Rachid Outbib, Oussama Ibrahim, Rafic Younes, Farouk Fardoun
Aix-Marseille University; Lebanese University; Versailles Saint Quentin University; University Institute of Technology - France/ Lebanon

IMAACA_9: PHM oriented behavior modeling for PEM fuel cell systems via delayed feedback reservoir computing model
Zhongliang Li, Rachid Outbib
Aix-Marseille University - France

MAS_6: Fuzzy-variable gain PI control of WECS based on a doubly FED induction generator
Tsiory Patrick Andrianantenaina, Zazad d'Edissak Tsaralahy, Jean Nirinarison Razafinjaka, Hervé Mangel
University of Antsiranana; University of Brest - Madagascar/ France

Wednesday 2017-09-20 12:30-14:00
LUNCHEON Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Wednesday 2017-09-20 14:00-15:30
Room: Room 18
EMSS: M&S in Photonics and Industrial Technologies
Chair(s): Alexander S. Sigov, Moscow Technological University; Mikhail E. Belkin, Moscow State Technological University

EMSS_55: Numerical algorithm for waveguiding properties reconstruction from intensity-only measurements in multicore fibers with strong mode coupling
Alexey Andrianov, Nikolay Kalinin, Arkady Kim
Institute of Applied Physics of RAS; Nizhny Novgorod State University - Russia

EMSS_56: Electro-optical composite polymer layers for high speed radiophotonics modulators, experiment and modeling
Maxim M. Nazarov, Viktor I. Sokolov, Eugeny V.Polunin, Yulia E. Pogodina
Russian Academy of Sciences; Kurchatov Institute National Research Center - Russia

EMSS_73: Compact integrated-optical amplifiers for the telecommunication C-band on the basis of polymer waveguides with embedded NALUF4/YB3+/ER3+/CE3+ nanocrystals
Ilya M. Asharchuk, Alexander S. Akhmanov, Ivan O. Goryachuk, Maxim M. Nazarov, Andrey V. Nechaev, Kirill V. Khaydukov, Victor I. Sokolov
Russian Academy of Sciences; Kurchatov Institute National Research Center; Moscow state university of fine chemical technologies - Russia

EMSS_51: Modeling key photonics components based on off-the-shelf microwave-electronics computer tool
Mikhail Belkin, Vladislav Golovin, Yuri Tyschuk, Alexander Sigov
Moscow State Technological University; Sevastopol State University - Russia

EMSS_43: Modeling photonics-based microwave frequency converter
Mikhail Belkin, Alexander Sigov
Moscow State Technological University - Russia

Wednesday 2017-09-20 14:00-15:30
Room: Room 16
HMS-EMSS: Construction and Distribution in Logistics
Chair(s): Miquel Angel Piera, UAB

HMS_27: Intermodal logistics: supporting planning and scheduling services of freight forwarder
Francesco Longo, Letizia Nicoletti, Antonio Padovano, Agostino G. Bruzzone, Adriano O. Solis, Beatrice Zaccaro
University of Calabria; CAL-TEK; York University - Italy/ Canada

HMS_28: Agile solutions & data analytics for logistics providers based on simulation
Agostino G. Bruzzone, Marina Massei, Matteo Agresta, Kirill Sinelshchikov, Riccardo di Matteo
Simulation Team University of Genoa; Simulation Team Liophant Simulation; Simulation Team Sim4Future - Italy

HMS_15: Methods and algorithms of ship-building manufactory operation and resources scheduling
Boris Sokolov, Vyacheslav Zelentsov, Nikolay Mustafin, Alexander Kovalev, Vladimir Kalinin
SPIIRAS; ITMO University; Arsenal Design Bureau; Military-space academy - Russia

EMSS_15: A hybrid simulation-based optimization approach for scheduling dynamic block assembly in shipbuilding
Natalia P. Basán, Victoria G. Achkar, Carlos A. Méndez, Alejandro García-del-Valle
INTEC; University of A Coruña and UMI Navantia-UDC - Argentina/ Spain

EMSS_32: DES techniques applied to the design of a training session about lean methodology in a shipbuilding process
José Antonio Muiña-Dono, Adolfo Lamas-Rodriguez, Ángel Fernández Rodriguez, David Chas-Álvarez
Universidade da Coruña - Spain

Wednesday 2017-09-20 14:00-15:30
Room: Room 10
Special Session: The NASA Simulation Exploration Experience
Chair(s): Agostino Bruzzone, University of Genoa

Wednesday 2017-09-20 15:30-16:00
COFFEE BREAK Co-Sponsored by CAL-TEK, MAST, LIO-TECH, SIM4FUTURE

Wednesday 2017-09-20 16:00-17:30
Room: Room 18
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 Budapest
I3M2018
If you are interested in being active in I3M2018 in Budapest, Hungary, please visit:
www.msc-les.org/conf/i3m2018
and/or contact the Program Chair Dr.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

-International Journal of Food Engineering
Special Issue on: "Modeling & Simulation of food processing and operations"

-International Journal of Simulation and Process Modelling
Special Issue on: "Concepts and Methdologies for the Next Generation of Modeling & Simulation Techniques"

-International Journal of Simulation and Process Modelling
Special Issue on: "System Modeling and Real-World Industry 4.0 Applications"

-International Journal of Service and Computing-Oriented Manufacturing
Special Issue on: "Smart Manufacturing system: theories advances and applications"

-International Journal of Privacy and Health Information Management
Special Issue on: "Theories and Applications in Healthcare Management"

-International Journal of Oil, Gas and Coal Technology
Special Issue on: "Modeling, Simulation and Computer Software developments in petroleum, production and processing industries"

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 10, 2017). 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 2017 multiconference will be held at Casa de la Convalescència, Barcelona, Spain

Further Information are available on the web site www.msc-les.org/conf/i3m2017

The Casa de La Convalescència,
Sant Antoni Mª Claret, 171
08041 Barcelona, Spain
Tel.: +93 433 50 00
Fax: +93 446 45 08
Info.casa.convalescencia@uab.cat
http://www.uab-casaconvalescencia.org/en/

Directions to the Case de La Convalescència:

Underground:
Yellow line (L4) - GUINARDÓ – HOSPITAL DE SANT PAU station
Blue line (L5) - SANT PAU – DOS DE MAIG station
By bus
Lines: 15, 19, 20, 45, 47, 50, 51, 92 and 192.
For the GPS
Introduce the following coordinates:
Latitude: 41.413702 (41° 24' 49.33" N)
Longitude: 2.177482 (2° 10' 38.94" E)
From the airport
* Train + Underground. At the RENFE station, take the train to Sants-Estació. Once there take the Underground's blue line (L5) till SANT PAU – DOS DE MAIG station.
* Bus + Underground. Outside the airport terminal, take the AEROBUS to Plaça Catalunya. Walk one corner till Plaça Urquinaona and take the Underground's yellow line (L4) to GUINARDÓ – HOSPITAL DE SANT PAU station.

Information about Hotel Accomodation can be found in the conference website at: http://www.msc-les.org/conf/i3m2017/venue.html

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

Author and Chair Guidelines for I3M2017

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.

I3M2018, Budapest, Hungary

I3M2018 will be held next year in Budapest, Hungary. 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/i3m2018 or write to I3M2018 Program Chair Francesco Longo (f.longo@unical.it)

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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

Synergies & Other Opportunities

WAMS 2018

WAMS 2018, the Interntaional Workshop in Applied Modeling & SImulation willl be held in Prague, Czech Republic, co-located with the MESAS Conference and with the Future Forces Event. 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/wams2018 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/i3m2018