

I3M 2020

The International Multidisciplinary Modeling & Simulation Multiconference

(Conference Time: CEST)

Program

Organized by



Summary

SCIENTIFIC PARTNERS	4
INDUSTRIAL SPONSORS	4
MEDIA PARTNERS	4
THE INTERNATIONAL MULTIDISCIPLINARY MODELLING & SIMULATION MULTICONFERENCE (I3M 2020)	5
ORGANIZATION COMMITTEES	6
PROCEDURE FOR ONLINE PARTICIPATION	8
PROCEDURE FOR ONLINE SESSION CHAIR	9
PROCEDURE FOR SPEAKERS ONLINE PRESENTATION	10
PROCEDURE FOR SESSION ATTENDEES	11
I3M Welcome Ceremony	12
I3M Plenary Session Speeches	13
Session: Modeling & Simulation of Manufacturing Processes	14
Session: Modelling & Simulation for Inventory Management and Logistics	14
Session: Advances in Applied Modeling & Simulation.....	15
Session: Simulation-based Intelligent Solutions in Biomedical Applications	15
Session: Modelling & Simulation in the Industry 4.0 era.....	16
Session: Planning Sustainable Transport Systems	16
Session: Simulation-Optimization Models: Theory and Applications.....	17
Session: New Approaches and Technologies in Public Health and Emergency Medicine	18
Session: Applications of Modeling & Simulation in Industrial Engineering.....	19
Session: Logistic Networks and Supply Chain Simulation-based Design	20
Session: Modelling & Simulation for Food & Beverage Industrial Processing	20
Session: Advanced Simulation-based Methods in Healthcare Applications	21
Session: Discrete-Event Simulation Applications in Industrial Engineering	22
Session: Advanced Simulation in Rail Transport Systems.....	22
Session: Simulation-based approaches for manufacturing and logistics of food and food-related items.....	23
Session: Modelling & Simulation for Healthcare and Public Health.....	23
Session: Human-centred and Human-focused Modelling and Simulation.....	24
Session: Simulation and Optimization Approaches for Road Traffic Management	25
Session: Modeling and Simulation in Advanced Physics Technologies (Session I)	25
Special Session: STRATEGOS Master Degree Program	26
Special Session: ALACRES Research Project.....	26
Special Session: NASA, Simulation Exploration Experience.....	26
Session: Virtual and Augmented Reality in Education.....	27

Session: Simulation Optimization Approaches in Air, Maritime and Rail Transport	28
Session: Modeling and Simulation in Advanced Physics Technologies (Session II).....	28
Special Session: I4D3A2 Research Project – Immersive, Interoperable, Intuitive, Interactive virtual environment for Developing and Delivering training by simulation to operators in Dangerous Areas & Activities.....	29
Special Session: MISS/MSNet Meeting and I3M 2021 in Cracow, Poland.....	29
Session: Applications of Modelling & Simulation for Decision Support in Transportation and Logistics	30
Session: Soft Computing and Modelling & Simulation	31
Session: Modeling and Simulation in Advanced Physics Technologies (Session III).....	31
Session: Simulation for Energy, Environment and Sustainable Development	32
Session: Artificial Intelligence, Mathematical Modeling & Simulation: Theory and Applications	33
Session: Modeling & Simulation in Business, Economy, Finance and Commerce	33
I3M PROCEEDINGS PUBLICATION	34
INTERNATIONAL JOURNAL SPECIAL ISSUES	34
I3M AWARDS CEREMONY.....	35
I3M 2020 AUTHORS AND CHAIRS GUIDELINE	36
I3M 2021 AS EVOLVING FRAMEWORK.....	36
WAMS 2021.....	37
ISM 2021	37
SIREN M&S COURSES.....	38
SILENI	38

I3M 2020 Partners

The I3M 2020 Organization Committee thanks all the partners and institutions for their support to the event.

Scientific Partners



Industrial Sponsors



Media Partners



I3M 2020

List of Conferences and Workshops

The International Multidisciplinary Modelling & Simulation Multiconference (I3M 2020) involves EMSS, MAS, HMS, IWISH, SESDE, FOODOPS, VARE Conferences, Workshops and related Special Sessions; All Sessions are open to all I3M Attendees.

- EMSS: European Modelling & Simulation Symposium, 32nd Edition, Part of I3M 2020.
- HMS: The International Conference on Harbour, Maritime & Multimodal Logistics Modelling and Simulation, 22nd Edition, Part of I3M 2020.
- MAS: The International Conference on Modelling & Applied Simulation, 19th Edition, Part of I3M 2020.
- IWISH: The International Workshop on Innovative Simulation for Healthcare, 9th Edition, Part of I3M 2020.
- SESDE: The International Workshop on Simulation for Energy, Sustainable Development & Environment, 8th Edition, Part of I3M 2020.
- FOODOPS: The International Food Operations and Processing Simulation Workshop, 6th Edition, Part of I3M 2020.
- Special Session: I3M Special Session freely open to all the attendees (i.e. Plenary Joint Opening, I3M 2020 Special session, etc.).

13M 2020

Organization Committees

Organization Committees

General co-Chairs

Agostino G. Bruzzone - DIME - University of Genoa, Italy

Yuri Merkurjev - Department of M&S, Riga TU, Latvia

Program Co-Chairs

Francesco Longo - MSC-LES, DIMEG, University of Calabria, Italy

Miquel Angel Piera - Autonomous University of Barcelona, Spain

EMSS: The 32nd European Modelling & Simulation Symposium

EMSS General Chair:

Francesco Longo, MSC-LES, DIMEG, University of Calabria, Italy

EMSS Program co-Chairs:

Michael Affenzeller, Upper Austria University of Applied Sciences, Austria

Antonella Petrillo, Parthenope University of Naples, Italy

HMS: The 22nd International Conference on Harbour, Maritime & Multimodal Logistics Modelling and Simulation

HMS General co-Chairs:

Agostino Bruzzone, DIMEG, University of Genoa, Italy

Yury Merkurjev, Riga Technical University, Latvia

HMS Program co-Chairs:

Eleonora Bottani, University of Parma, Italy

Miquel Angel Piera - Autonomous University of Barcelona, Spain

MAS: The 19th International Conference on Modelling & Applied Simulation

MAS General co-Chairs:

Marina Massei, Liophant Simulation, Italy

Adriano Solis, York University, Canada

MAS Program Chair:

Fabio De Felice, University of Cassino, Italy

IWISH: The 9th International Workshop on Innovative Simulation for Health Care

IWISH General co-Chairs:

Marco Frascio, University of Genoa, Italy

Vera Novak, BIDMC, Harvard Medical School, USA

SESDE: The 8th International Workshop on Simulation for Energy, Sustainable Development & Environment

SESDE General co-Chairs:

Janos Sebestyeny 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

FOODOPS: The 6th International Food Operations and Processing Simulation Workshop

FOODOPS General Chair:

Giuseppe Vignali, University of Parma, Italy

FOODOPS Program Chair:

Francesco Longo, University of Calabria, Italy

I3M 2020

Online Virtual Conference

Due to the Covid-19 emergency and for the health and safety of our Attendees, this year the I3M conference will be an online Virtual Conference.

All the sessions will be held online through Microsoft TEAMS.

Procedure for online Participation

Below you can find a procedure for the online participation to all the I3M conferences.

- > If you do not already have a Microsoft TEAMS account, please sign-up for free at the following website to create an account:
<https://www.microsoft.com/en-US/microsoft-365/microsoft-teams/group-chat-software>
- > You will be also invited to download the Microsoft TEAMS application for Desktop and/or mobile. Alternatively, you can download them from:
<https://www.microsoft.com/en-ww/microsoft-365/microsoft-teams/download-app>
- > Please provide the email address you use for your Microsoft TEAMS account to the I3M Conference Organization (write to Prof. Francesco Longo, f.longo@unical.it). You will be invited as Guest to join the I3M TEAMS.
- > Once you receive the invitation please follow the instructions and you will be allowed to access the I3M TEAMS. Please check if you see correctly the I3M TEAMS and related Channels, namely: Plenary Room, Room1, Room2, Room3 and Room4.
- > All the I3M sessions will be scheduled in the above mentioned rooms. Within the program you will find a link to each session.
- > Once you access the session, please be sure to keep your microphone and camera switched OFF unless you are one of the Speakers or the Session Chair (check the next page for speakers and Session Chairs guidelines). You will be allowed to use your microphone or the chat during the question time.

Online Virtual Conference

Due to the Covid-19 emergency and for the health and safety of our Attendees, this year the I3M conference will be an online Virtual Conference.

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Procedure for online Session Chair

[A Session Assistant will be available during the session. You can identify him/her with the name "Session Assistant" among the participants joining the online session. Please refer to the Session Assistant for any problem during the Session.](#)

If you are a Session Chair, below you can find the procedure you are required to follow to manage your session.

- 1) Please be sure to join the online Session at least 15 minutes before the Session scheduled time. Familiarize yourself with the Microsoft TEAMS meeting functionalities (e.g. camera and microphone controls, desktop sharing, chat, list of participants, etc.). You can easily find all these functionalities on the screen.
- 2) Keep your camera and microphone switched ON. At the time of the session you can introduce yourself as Session Chair and you can start the Session.
- 3) Ask the first speaker to switch the microphone and the camera ON and introduce the speaker.
- 4) Ask the speaker to share his/her screen and start the presentation. According to the number of Speakers in your session, please remember the Speaker the time available for the presentation:
 - a. 15-17 minutes for presentation + 5 minutes questions (if your session includes 4 papers).
 - b. 10-13 minutes for presentation + 5 minutes questions (if your session includes 5 papers).
- 5) After the presentation, please check if there are questions from Attendees by looking at the "raised hand" symbols in the list of participants and let them (one by one, calling their names) to make their questions and receive the answers from the speaker. After question time, remember the speaker to switch the camera and the microphone OFF. If there are no questions, please be prepared to "break the ice" by doing the first question.
- 6) Please repeat steps 3 to 5 for the remaining speakers.
- 7) After all the presentations, please take a couple of minutes to thank everyone and close the session.

I3M 2020

Online Virtual Conference

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All the sessions will be held online through Microsoft TEAMS.

Procedure for Speakers online presentation

A Session Assistant will be available during the session. You can identify him/her with the name "Session Assistant" among the participants joining the online session. Please refer to the Session Assistant for any problem during the Session.

If you are a Speaker, below you can find the procedure you are required to follow to make your presentation.

- 1- Please join the session at least 15 minutes before the scheduled time and present yourself to the Session Chair (you can switch your camera and microphone ON). You can easily find the name of the Session Chair within the Conference Program. After presenting yourself to the Session Chair, please switch your camera and microphone OFF.
- 2- At a certain point in time (according to the scheduling of the presentations in the session), the Session Chair will call your name, present you and invite you to make your presentation. At this time, please switch your microphone and your camera ON and share you screen to show your presentation. We suggests you to use PDF file for presentation.
- 3- Make your presentation and be sure to respect the time given for the presentation and to leave some minutes for questions.
- 4- After the presentation, please be sure to switch again your microphone and camera OFF.

I3M 2020

Online Virtual Conference

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All the sessions will be held online through Microsoft TEAMS

Procedure for Session Attendees

[A Session Assistant will be available during the session. You can identify him/her with the name "Session Assistant" among the participants joining the online session. Please refer to the Session Assistant for any problem during the Session.](#)

If you are a Session Attendee, below you can find the procedure you are required to follow during the Session.

- 1- Please join the Session at the scheduled time according to the conference program. Once you join the Session, please be sure to switch your microphone and camera OFF.
- 2- You will be allowed to make questions at the end of each presentation. Please be sure to raise your hand in case of question (you have to click on the "raised hand" symbol in Microsoft TEAMS. The Session Chair will allow you to make the question by calling your name.
- 3- When you ask the question remember to switch your microphone and camera ON.
- 4- After the interaction with the Speaker please remember to switch your microphone and camera OFF.

I3M 2020

Activities and Sessions Details

Wednesday, September 16th

09:00 am – 10:30 am CEST, <i>Online Plenary Room</i>	Wed 16th, 2020
<i>Microsoft Teams, Session Link:</i>	
Access the Online Session	
I3M Welcome Ceremony <i>Chair: Agostino Bruzzone, DIME, University of Genoa</i>	
<ul style="list-style-type: none">• I3M Multiconference – Prof Agostino Bruzzone, DIME, University of Genoa, Italy• EMSS Conference – Prof. Francesco Longo, MSC-LES, University of Calabria, Italy• HMS Conference – Prof. Yuri Merkurjev, Riga Technical University, Latvia• MAS Conference – Prof. Adriano Solis, York University, Canada• IWISH 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 – Prof. Miquel Angel Piera, Autonomous University of Barcelona, Spain• Simulation Team – Prof. Emilio Jimenez, La Rioja University, Spain• I3M 2021 and Conference Updates, Prof. Agostino Bruzzone, University of Genoa, Italy	

10:30 am – 11:00 am CEST

Coffee Break

11:00 am – 12:30 pm CEST Online Plenary Room	Wed 16th, 2020
<p><i>Microsoft Teams, Session Link:</i></p> <div style="border: 1px solid black; background-color: #FFD700; padding: 5px; display: inline-block;"> Access the Online Session </div>	
<p>I3M Plenary Session Speeches</p> <p>Chair: Prof. Agostino G. Bruzzone, DIME, University of Genoa</p> <ul style="list-style-type: none"> > Prof. Miguel Mujica Mota, Associate Professor, Aviation Academy of the Amsterdam University of Applied Sciences, Netherlands <i>Blending Simulation with Optimization for Logistics and Transport Systems under a sociotechnical perspective</i> > Prof. Dimitris MOURTZIS, Deputy Head of the Mechanical Engineering and Aeronautics Department, University of Patras, Greece <i>Moving from CPS to Machine Tool 4.0: A New Era in Digital Manufacturing</i> > Prof. Bernard P. Zeigler, RTSync Corp, University of Arizona, USA <i>How system theory helps Modeling and Simulation close the gap between cognition and neurons</i> 	

12:30 pm – 2:00 pm CEST

Lunch Break

2:00 pm – 3:30 pm CEST Online Room 1	Wed 16th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Modeling & Simulation of Manufacturing Processes Chair: <i>Emilio Jiménez, La Rioja University, Spain</i></p> <ul style="list-style-type: none"> > Stability analysis of the TIG-MIG hybrid welding process based on digital signal processing (EMSS_34) <i>David Rodríguez Izquierdo, Manuel Eulogio García Álvarez, Angel Sánchez Roca, Mario Sánchez Orozco, Julio Blanco Fernandez, Hipólito Carvajal Fals and Emilio Jiménez Macías</i> > An experimental and modeling approach to estimate the minimum miscibility pressure of nitrogen-crude oil using dead oil samples (MAS_8) <i>Ahmad S. Y. Suleiman, Ali Al Bemani, G. Reza Vakili-Nezhaad</i> > Circumferential cracking in conventional metal spinning process (EMSS_28) <i>Huy Hoan Nguyen, Henri Champiaud and Van Ngan Lê</i> > Simulation of elements of Industry 4.0 applied to the production processes of a company dedicated to the manufacture of plastic products (EMSS_17) <i>A. M. Pérez Silva, V. Olvera Rodríguez, I. Flores de la Mota, F. Soler Anguiano</i> 	

2:00 pm – 3:30 pm CEST Online Room 2	Wed 16th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Modelling & Simulation for Inventory Management and Logistics Chair: <i>Adriano Solis, York University, Canada</i></p> <ul style="list-style-type: none"> > Agent-based modeling for decision making support: case of transport logistics in oil company (EMSS_9) <i>Elena Serova and Daniil ShklyaeV</i> > Dynamic control of multiple vehicles moving along the same rail in automated vehicle storage and retrieval systems (MAS_4) <i>Andreas Hahl, Anna Rautenberg, Johannes Fottner</i> > Design, simulation and performance of a highly-dynamic, hybrid pallet storage and retrieval system (MAS_11) <i>Giulia Siciliano, Thomas Lienert and Johannes Fottner</i> > A storage assignment simulation model for optimizing processes in an e-commerce warehouse of a fashion supply chain (HMS_8) <i>Eleonora Bottani, Letizia Tebaldi, Mariachiara Rossi, Giorgia Casella</i> 	

2:00 pm – 3:30 pm CEST Online Room 3	Wed 16th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Advances in Applied Modeling & Simulation <i>Chair: Marina Massei, University of Genoa, Italy</i></p> <ul style="list-style-type: none"> > Effective use of verification and validation resources (MAS_7) <i>Steven Darcy, Daniel Maxwell and Andrew Loerch</i> > KPI design as a simulation project (EMSS_21) <i>Ella Roubtsova</i> > Applied modelling and simulation: a comparison of two course concepts.educational course concepts for applied modelling and simulation (EMSS_24) <i>Stefanie Winkler, Martin Bicher and Andreas Körner</i> > Methodology for evaluating optimization experiments (EMSS_12) <i>Pavel Raska and Zdenek Ulrych</i> <p>Town Protection Simulation (MAS_23) <i>Agostino G Bruzzone, Kirill Sinelshchikov, Marco Gotelli, Giuliano Fabbrini</i></p>	

2:00 pm – 3:30 pm CEST Online Room 4	Wed 16th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Simulation-based Intelligent Solutions in Biomedical Applications <i>Chair: Ines CHIHI, National Engineering School of Bizerta, Tunisia</i></p> <ul style="list-style-type: none"> > Design of robust, ergonomic myoelectric handwriting prosthesis (IWISH_7) <i>S. Naffeti, W. Khadher, R. Laabidi, I. Chihi, T. Rezgui</i> > Design of a controlled remote hand based on radio frequency protocol (IWISH_8) <i>Roua Baccouche and Dhafer Mezghanni</i> > Handwriting prototype based on FPGA hardware implementation (IWISH_9) <i>Ichrak Jeridi, Ines Chihi, Lilia Sidhom, and Ernest Nlandu Kamavuako</i> > Non-invasive online PSI signal acquisition from a patient monitor for depth-of-anesthesia assessment (IWISH_10) <i>Gorazd Karer</i> 	

3:30 pm – 4:00 pm CEST

Coffee Break

4:00 pm – 5:30 pm CEST Online Room 1	Wed 16th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
Session: Modelling & Simulation in the Industry 4.0 era <i>Chair: Francesco Longo, University of Calabria</i>	
<ul style="list-style-type: none">> A simulation of autonomous robot movement directed by reinforcement learning (EMSS_4) <i>Andrew Greasley</i>> A decision-making tool to integrate lean 4.0 in windows manufacturing using simulation and optimization models (EMSS_23) <i>Anas Itani, Mohammed Alghamdy, Haroon Nazir, Saurabh Sharma, Rafiq Ahmad</i>> Integrated dynamic planning and scheduling of enterprise information system modernization (EMSS_49) <i>Boris Sokolov, Valerii Zakharov, Oleg Kofnov and Saluhov Vladimir</i>> Application of 3D printing in the development of training simulations for nursing students (IWISH_4) <i>Lori Lioce, Gary Maddux, Norven Goddard, Ishella Fogle, Makenzie Fogle, Sidney Gunter, Bernard Schroer</i>	

4:00 pm – 5:30 pm CEST Online Room 2	Wed 16th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
Session: Planning Sustainable Transport Systems <i>Janos Sebestyen Janosy, Centre for Energy Research</i>	
<ul style="list-style-type: none">> Analysing the environmental impact of transport activities on the last mile for in-store and online shopping from a system dynamics perspective (SESDE_8) <i>Susanne Feichtinger, Sonja M. Russo and Manfred Gronalt</i>	

- > Routing optimization software for electric vehicles applied to charging stations (HMS_11)
Andrea Pastorelli, Michela Longo, Fabio Borghetti and Federica Foiadelli
- > Ecological footprint analysis of the port of Thessaloniki as a tool for an environmental management system (HMS_14)
Eleni Bintoudi, Mackenzie Baert and Maria Drakaki
- > Improved load planning of ro-ro vessels by adopting blockchain and internet-of-things (HMS_17)
Lawrence Henesey, Yulia Lizneva, Robert Philipp, Christopher Meyer and Laima Gerlitz

<p>4:00 pm – 5:30 pm CEST Online Room 3</p>	<p style="text-align: right;">Wed 16th, 2020</p>
<p><i>Microsoft Teams, Session Link:</i></p> <div style="border: 1px solid black; background-color: #FFD700; padding: 5px; display: inline-block; margin: 5px 0;"> Access the Online Session </div>	
<p>Session: Simulation-Optimization Models: Theory and Applications <i>Chairs: Pasquale Legato, Rina Mary Mazza, University of Calabria, Italy</i></p> <ul style="list-style-type: none"> > Will Artificial Intelligences be our Judges and Arbiters in the future and what role it will be taken by Simulators? (MAS_24) <i>Agostino Bruzzone, Paolo Gaggero</i> > Hyper-parameter handling for gaussian processes in efficient global optimization (MAS_10) <i>Bernhard Werth, Johannes Karder, Andreas Beham and Stefan Wagner</i> > Attaining global optimized solution by applying Q-learning (EMSS_20) <i>Ghulam Muhammad Ali, Asif Mansoor, Shuai Liu, Jacek Olearczyk, Ahmed Bouferguene, Mohamed Al-Hussein</i> > Using a virtual dataset for deep learning: improving real-world environment re-creation for human training (MAS_6) <i>Troyle Thomas, Jonathan Hurter, Terrence Winston, Dean Reed and Latika “Bonnie” Eifert</i> > Artificial Intelligence to Support Retail Sales Optimization (EMSS_67) <i>Agostino G Bruzzone, Kirill Sinelshchikov, Marina Massei, Wolfhard Schmidt</i> 	

<p>4:00 pm – 5:30 pm CEST Online Room 4</p>	<p style="text-align: right;">Wed 16th, 2020</p>
<p><i>Microsoft Teams, Session Link:</i></p> <div style="border: 1px solid black; background-color: #FFD700; padding: 5px; display: inline-block; margin: 5px 0;"> Access the Online Session </div>	
<p>Session: New Approaches and Technologies in Public Health and Emergency Medicine <i>Chair: Paweł Gawłowski, Anna Kołcz – Wrocław Medical University, Poland.</i></p> <ul style="list-style-type: none"> <li data-bbox="215 539 1430 651"> <p>> Application-based IoT-system for pandemic prevention based on platform-approach (IWISH_14) <i>Volkhard Klinger and Sebastian Bohlmann</i></p> <li data-bbox="215 696 1430 763"> <p>> Analysis of obesity epidemic modelling: is there a solution? (EMSS_39) <i>Maja Atanasijvić-Kunc and Tina Sentočnik</i></p> <li data-bbox="215 808 1430 920"> <p>> Distance learning - new educational challenges in the field of emergency medicine (IWISH_18) <i>Paweł Gawłowski, Jan Nikodem, Maciej Nikodem and Anna Kołcz</i></p> <li data-bbox="215 965 1430 1077"> <p>> Hybrid simulation modeling for analyzing the impact of RFID scrubs' distribution in operating rooms (MAS_12) <i>Yasmina Maïzi, Ygal Bendavid</i></p> 	

I3M 2020

Activities and Sessions Details

Thursday, September 17th

9:00 am – 10:30 am CEST Online Room 1	Thu 17th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
Session: Applications of Modeling & Simulation in Industrial Engineering <i>Chair: Antonio Padovano, University of Calabria</i>	
<ul style="list-style-type: none">> Modeling and implementation of an ADC based grid-connected voltage source inverter for real-time simulation based on FPGA (EMSS_42) <i>Chunyu Zhang, Shouxiang Wang, Yanan Zhou and Guoqiang Zu</i>> Deep learning for quality prediction in dissimilar spot welding DP600-AISI304, using convolutional neural network and infrared imagen processing (EMSS_32) <i>Bárbara Dora Ross Veitía, Alejandro Espinel Hernández, Louriel Oliveira Villarinho, Mario Sánchez Orozco, Angel Sánchez Roca, Hipólito Carvajal Fals and Emilio Jiménez Macías</i>> Fuzzy logic-based inference system for prediction of energy input in laser metal deposited AISI316 single-beads (EMSS_33) <i>Daniel R. Tase Velazquez, Andre Luis Helleno, Maria Celia de Oliveira, Hipolito Carvajal Fals, and Emilio Jimenez Macias</i>> Modeling of discrete controllers for smart manufacturing systems (EMSS_66) <i>Armand Toguyéni</i>	

9:00 am – 10:30 am CEST Online Room 2	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Logistic Networks and Supply Chain Simulation-based Design Chair: <i>Eleonora Bottani, University of Parma, Italy</i></p> <ul style="list-style-type: none"> > Capacitated vehicle routing problem with time windows: a linear model and a case study of express courier (HMS_10) <i>Giorgia Casella, Sara Carattini, Teresa Murino, Letizia Tebaldi, Eleonora Bottani</i> > A tool-independent generalized description for sustainable supply chain design <i>Daniel Fruhner, David Grimm, Saskia Sardesai, Axel Wagenitz, Andrea Vennemann and Tobias Hegmanns (MAS_15)</i> > Exploring the topology of the maritime transport network in a large-scale archipelago: a complex network approach (HMS_13) <i>Arry Rahmawan Destyanto, Yilin Huang and Alexander Verbraeck</i> > Determinants for port cities design (HMS_9) <i>Robert Bartłomiejski, Monika Klein and Monika Spsychalska-Wojtkiewicz</i> 	

9:00 am – 10:30 am CEST Online Room 3	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Modelling & Simulation for Food & Beverage Industrial Processing Chairs: <i>Giuseppe Vignali, University of Parma, Italy</i></p> <ul style="list-style-type: none"> > Data-based herbs contamination prediction and harvest recommendation (FOODOPS_4) <i>Stefan Anlauf, Andreas Haghofer, Nina Affenzeller and Stephan Winkler</i> > Optimization of a perishable inventory system: A simulation study in a Ho.Re.Ca. company (FOODOPS_7) <i>Elena Piva, Letizia Tebaldi, Giuseppe Vignali and Eleonora Bottani</i> > The effects of different packaging and pressures on a dairy product treated with the high pressure processing (FOODOPS_6) <i>Roberta Stefanini and Giuseppe Vignali</i> > Economics of Dairy Farm: Simulation Study (EMSS_52) <i>Nedvěďová Marie, Marek Jaroslav, Pozdílková Alena and Haloun Tomáš</i> 	

<p>9:00 am – 10:30 am CEST Online Room 4</p>	<p style="text-align: right;">Thu 17th, 2020</p>
<p><i>Microsoft Teams, Session Link:</i></p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Advanced Simulation-based Methods in Healthcare Applications <i>Chair: Marco Frascio, University of Genoa, Italy</i></p> <ul style="list-style-type: none"> > Sharing is caring: a multidisciplinary first aid program (IWISH_11) <i>Marco Chirico, Simone Bazzurro, Andrea Calandrino, Manuela Chessa, Federica Imperiale, Serena Ricci, Alessio Riitano, Anna Siri, Giancarlo Torre</i> > A multi-level simulation framework for IoT-based elderly care systems (MAS_17) <i>Rina Mary Mazza, Pasquale Legato and Giancarlo Fortino</i> > Peer collaboration in Italy during COVID-19 pandemic: the experience of an online bottom-up backed platform designed for medical students (IWISH_13) <i>Andrea Calandrino, Alessio Riitano, Serena Ricci, Giancarlo Torre and Marco Chirico</i> > Standardized objective exam vs. high fidelity simulation: two models, same content (IWISH_5) <i>Araceli Hambleton Fuentes and Jesus Alfonso Beltran-Sanchez</i> > Epidemic Simulation based on Intelligent Agents (IWISH_19) <i>Agostino G Bruzzone, Kirill Sinelshchikov, Marina Massei</i> 	

10:30 am – 11:00 am

Coffee Break

11:00 am – 12:30 pm CEST Online Room 1	Thu 17th, 2020
<p><i>Microsoft Teams, Session Link:</i></p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Discrete-Event Simulation Applications in Industrial Engineering <i>Chair: Thomas Wiedemann, HTW Dresden FB Informatik, Germany; Gasper Music, University of Ljubljana, Slovenia</i></p> <ul style="list-style-type: none"> > Discrete event simulation for the investment analysis of offshore wind nodes automatised workshop (SESDE_7) <i>Adolfo Lamas-Rodríguez, Inés Taracido-López and Javier Pernas-Álvarez</i> > Constrained-based discrete-event simulation of an assembly job shop in the offshore wind industry (EMSS_13) <i>Adolfo Lamas-Rodríguez, Javier Pernas-Álvarez and Inés Taracido-López</i> > Simulation analysis of a new semi-continuous chemical facility with automated production lines: an industrial case study (EMSS_37) <i>Adrián Marcelo Aguirre, Daniel Fernández Huerga and Iris Albajez Celma</i> 	

11:00 am – 12:30 pm CEST Online Room 2	Thu 17th, 2020
<p><i>Microsoft Teams, Session Link:</i></p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Advanced Simulation in Rail Transport Systems <i>Chair: Yuri Merkurjev, Riga Technical University, Latvia</i></p> <ul style="list-style-type: none"> > Railway station capacity assessment utilizing simulation-based techniques and the UIC406 method (EMSS_10) <i>Antonín Kavička, Roman Diviš and Petr Veselý</i> > Train overtaking at railway stations within simulation models of railway lines (EMSS_8) <i>Tomáš Vyčítal and Michael Bažant</i> > Selection of railway line segments that allow occupation by more trains based on simulation (EMSS_45) <i>Josef Bulíček and Michael Bažant</i> > Train schedule analysis and optimization with the Max-Plus Automaton (EMSS_27) <i>Alexander Edthofer, Martin Bicher and Felix Breiteneker</i> 	

11:00 am – 12:30 pm CEST Online Room 3	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Simulation-based approaches for manufacturing and logistics of food and food-related items</p> <p><i>Chair: Giuseppe Vignali, University of Parma, Italy</i></p> <ul style="list-style-type: none"> > Study of environmental alternatives of improvement for the preparation of vermouth formulations (EMSS_29) <i>Emilio Jimenez, Jorge Luis Garcia-Alcaraz, Eduardo Martinez-Camara and Julio Blanco</i> > A tube-in-tube food pasteurizer modelling for a digital twin application (FOODOPS_8) <i>Vignali Giuseppe, Bottani Eleonora</i> > The milk collection problem with time constraint: an optimization study integrating simulation (FOODOPS_5) <i>Marta Rinaldi, Eleonora Bottani, Federico Solari and Roberto Montanari</i> > Influence of steam cleaning processes on the geometry of finished cork stoppers (EMSS_31) <i>Francisco Javier Flor-Montalvo, Juan Ignacio Latorre Biel, Eduardo Martinez-Camara, Julio Blanco and Emilio Jiménez</i> 	

11:00 am – 12:30 pm CEST Online Room 4	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Modelling & Simulation for Healthcare and Public Health</p> <p><i>Chair: Marco Frascio, University of Genoa, Italy</i></p> <ul style="list-style-type: none"> > Management in the prevention of psychosocial risks in the Technological University of Cotopaxi (IWISH_3) <i>Rommel Velastegui, Paúl Pullas, Elizabeth Velastegui, Isabel Pullas Tapia</i> > Electronic Health Bubble: The caregiving services at the time of the COVID-19 outbreak (IWISH_15) <i>Marco Frascio, C. Stabilini, F. Borasi, L. Bordignon, G. Molinari, Vera Novak and R. Fornaro</i> > HospiT'Win: a digital twin framework for patients' pathways real-time monitoring and hospital organizational resilience capacity enhancement (IWISH_17) <i>Abdallah Karakra, Elyes Lamine, Franck Fontanili and Jacques Lamothe</i> > Multitask learning for medical image classification using VGG architecture (IWISH_6) <i>Yuan Yang, Lin Zhang, Lei Ren and Yuanjun Lali</i> 	

12:30 pm – 2:00 pm CEST

Lunch Break

2:00 pm – 3:30 pm CEST

Online Room 1

Thu 17th, 2020

Microsoft Teams, Session Link:

[Access the Online Session](#)

Session: Human-centred and Human-focused Modelling and Simulation

Eleonora Bottani, University of Parma, Italy

- > On school grounds: simulation of a school lockdown (EMSS_14)
Kenecia Streeter, Anastasia Angelopoulou and Konstantinos Mykoniatis
- > Society 5.0: a simulation study of self checkout operations in a grocery store (EMSS_15)
Konstantinos Mykoniatis, Samira Shirzaei, Michail Katsigiannis, Athanasios Aris Panagopoulos, Sahana Deb, Timothy Potter and Anastasia Angelopoulou
- > A Shannon entropy graph-based model to evaluate the operator mental workload involved in procedure-guided tasks (EMSS_19)
Andrea Lucchese, Giorgio Mossa, Giovanni Mummolo, Francesco Paolo Sisto
- > Introduction to human error investigation and remedy in oil & gas industry (MAS_16)
A. Galloro, A. Bellezza, L. Marino, D. Amelio

2:00 pm – 3:30 pm CEST Online Room 2	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Simulation and Optimization Approaches for Road Traffic Management <i>Chair: Miguel Mújica Mota, Amsterdam University of Applied Sciences, Netherlands</i></p> <ul style="list-style-type: none"> > Longitudinal and lateral control using global decentralized strategy with a comparison of different approaches for autonomous vehicles convoy (MAS_13) <i>M-M.Mohamed-Ahmed and Aziz Naamane</i> > Proposals for optimizing a selected traffic hub in the city Brno (MAS_14) <i>Radek Dvoracek and Katerina Vichova</i> > Using of discrete-event modeling in throughput capacity analysis of a toll plaza at the exit of the interurban toll road (EMSS_43) <i>Alexander Talavirya and Michael Laskin</i> > Multi-agent based traffic light management for privileged lane (SESDE_3) <i>Ikidid Abdelouafi, El Fazziki Abdelaziz</i> 	

2:00 pm – 3:30 pm CEST Online Room 3	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Modeling and Simulation in Advanced Physics Technologies (Session I) <i>Alexander S. Sigov, Moscow Technological University (MIREA), Russian Federation; Mikhail E. Belkin, Moscow State Technological University (MIREA), Russian Federation</i></p> <ul style="list-style-type: none"> > The high-speed random number generator with the specified two-dimensional probability distribution (EMSS_5) <i>Oleg Chernoyarov, Vladimir Litvinenko, Boris Matveev, Serguei Dachian and Kirill Melnikov</i> > Digital algorithm for determining the root-mean-square signal (EMSS_6) <i>Oleg Chernoyarov, Vladimir Litvinenko, Boris Matveev, Serguei Dachian and Kirill Melnikov</i> > Evaluation of information protection against leakage through the compromising electromagnetic emanations during data exchange via USB interface (EMSS_36) <i>Denis Radchenko, Anton Tokarev, Alexander Makarov, Artem Gulmanov and Kirill Melnikov</i> > Analysis of co-simulation design approach for RF photonics-based electronic systems (EMSS_50) <i>Mikhail E. Belkin, Dmitriy Fofanov and Aleksei Alyoshin</i> 	

2:00 pm – 2:30 pm CEST Online Room 4	Thu 17th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
<p>Special Session: STRATEGOS Master Degree Program <i>Chair: Prof. Agostino G. Bruzzone, University of Genoa, Italy</i></p> <p>This special session is devoted to present the new Master Degree Program in Strategic Engineering (STRATEGOS). The session is also an opportunity to set-up new collaborations at Academic Level, new agreements for students/professors exchanges.</p>	

2:30 pm – 3:00 pm CEST Online Room 4	Thu 17th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
<p>Special Session: ALACRES Research Project <i>Chair: Prof. Agostino G. Bruzzone, University of Genoa, Italy</i></p> <p>ALACRES2 is a research project that aims at creating a Permanent Laboratory capable of identifying, testing and validating integrated emergency management procedures in the event of accidents, crises or significant claims occurring in marine ports. During the session the ALACRES research project and its results will be presented. The session is an opportunity for research project dissemination activities and also for setting-up new opportunities for joint research projects.</p>	

3:00 pm – 3:30 pm CEST Online Room 4	Thu 17th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
<p>Special Session: NASA, Simulation Exploration Experience <i>Chair: Prof. Agostino G. Bruzzone, University of Genoa, Italy</i></p> <p>The Simulation Exploration Experience (SEE) joins students, industry, associations, and faculty in breaking down barriers to employability, building career confidence and capability. The experience creates collaborative college-level modeling and simulation learning as highly-dispersed inter-university teams design, develop, test and execute a simulated lunar mission.</p>	

3:30 pm – 4:00 pm

Coffee Break

4:00 pm – 5:30 pm CEST

Online Room 1

Thu 17th, 2020

Microsoft Teams, Session Link:

[Access the Online Session](#)

Session: Virtual and Augmented Reality in Education

Antonio Padovano, University of Calabria

- > Spatial design education with digital technologies in the period of pandemic contingency (MAS_19)
N. Aguilera, E. Reyes, M. Rodriguez, H. Quintero and S. Hosseini
- > Next level training in logistics: evaluation of a virtual reality-based serious game for warehouse logistics (MAS_20)
Christoph Schlüter and Veronika Kretschmer
- > User as a bitter tastant: immersive experience within the binding region of a bitter taste receptor (MAS_21)
Tommy Dang, Anuththara Lokubandara, Ngan N.V. Nguyen, Peter C. Lai, Vinh T. Nguyen and Chiquito Crasto
- > Categorization of the benefits and limitations of immersive environments for education (MAS_22)
Polina Häfner
- > Extended Reality Technologies for Industrial Innovation (EMSS_68)
Agostino G Bruzzone, Kirill Sinelshchikov, Marina Massei, Marco Gitelli, Giuliano Fabbrini

4:00 pm – 5:30 pm CEST Online Room 2	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Simulation Optimization Approaches in Air, Maritime and Rail Transport <i>Chairs: Idalia Flores, University of Mexico, Mexico; Miguel Mújica Mota, Amsterdam University of Applied Sciences, Netherlands; Paolo Scala, Amsterdam University of Applied Sciences Netherlands</i></p> <ul style="list-style-type: none"> > Efficiency of increasing of the track speed using simulation in Opentrack (EMSS_22) <i>Petr Nachtigall and Erik Tischer</i> > Creating the future airport passenger experience: IMHOTEP (EMSS_35) <i>Miguel Mujica Mota, Paolo Scala, Ricardo Herranz, Michael Schultz and Edgar Jimenez</i> > Design of railway network model reflecting data structure non-oriented graph using Oracle spatial database for simulation of traffic (EMSS_41) <i>Jan Fikejz</i> > Improvement of APOC Operations by using Simulation and Experimental Economics: Conceptual Approach (EMSS_40) <i>Sashiko Shirai Reyna, Miguel Mujica Mota, Daniel Delahaye and José M. Ortiz</i> 	

4:00 pm – 5:30 pm CEST Online Room 3	Thu 17th, 2020
<p>Microsoft Teams, Session Link:</p> <p style="text-align: center;">Access the Online Session</p>	
<p>Session: Modeling and Simulation in Advanced Physics Technologies (Session II) <i>Alexander S. Sigov, Moscow Technological University (MIREA), Russian Federation; Mikhail E. Belkin, Moscow State Technological University (MIREA), Russian Federation</i></p> <ul style="list-style-type: none"> > Calculation of refractive index and extinction coefficient of perfluorinated polymer films using new numerical algorithm in prism coupling technique (EMSS_53) <i>Viktor I. Sokolov, Ivan O. Goriachuk and Alexander S. Akhmanov</i> > Interaction of ultrashort light pulses with waveguide Bragg gratings: a class of exactly solvable mathematical problems (EMSS_55) <i>Ivan O. Goriachuk, Ilya M. Asharchuk and Viktor I. Sokolov</i> > Converging optical-to-MMW wireless links in fiber-wireless access network of 5G communication system (EMSS_59) <i>Mikhail E. Belkin, Dmitriy Fofanov, and Aleksei Alyoshin</i> > Machine learning for optical sensing with grating nanostructures (EMSS_61) <i>E.D. Chubchev, I.A.Nechepurenko, A.V. Dorofeenko, K. A. Tomyshev, O.V.Butov, D.P. Kulikova, E.M. Sgibnev, G.M. Yankovsky, A.V. Baryshev, A.S. Baburin, I.A. Rodionov</i> 	

4:00 pm – 4:30 pm CEST Online Room 4	Thu 17th, 2020
<p><i>Microsoft Teams, Session Link:</i></p> <p style="text-align: center;">Access the Online Session</p>	
<p>Special Session: I4D3A2 Research Project – Immersive, Interoperable, Intuitive, Interactive virtual environment for Developing and Delivering training by simulation to operators in Dangerous Areas & Activities</p> <p><i>Chair: Prof. Agostino G. Bruzzone, University of Genoa, Italy</i></p> <p>I4D3A2 is a research project that aims at developing a training solutions based on the use of Interoperable, Intuitive and Interactive Virtual Environments and Simulation. The new training platform will be mainly devoted to support training of operators working in dangerous areas and activities.</p> <p>During the session the I4D3A2 research project and its results will be presented. The session is an opportunity for research project dissemination activities and for setting-up new opportunities for joint research projects.</p>	

4:30 pm – 5:00 pm CEST Online Room 4	Thu 17th, 2020
<p><i>Microsoft Teams, Session Link:</i></p> <p style="text-align: center;">Access the Online Session</p>	
<p>Special Session: MISS/MSNet Meeting and I3M 2021 in Cracow, Poland</p> <p><i>Chair: Prof. Agostino G. Bruzzone, University of Genoa, Italy</i></p> <p>This session hosts the traditional meeting of MISS and MSNet Centers’ Directors. The session is also an opportunity to introduce I3M 2021 that will be held in Cracow, Poland. All the I3M Attendees are invited to participate and take an active role in the scientific organization of the 2021 edition of I3M.</p>	

I3M 2020

Activities and Sessions Details

Friday, September 18th

9:00 am – 10:30 am CEST Online Room 1	Fri 18th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
Session: Applications of Modelling & Simulation for Decision Support in Transportation and Logistics <i>Chair: Fabio De Felice, University of Cassino, Italy; Antonella Petrillo, Università degli Studi di Napoli "Parthenope", Italy</i>	
<ul style="list-style-type: none">> Optimization approaches to manage congestions for the phenomenon "Luci d'artista" in Salerno" (EMSS_58) <i>Luigi Rarità</i>> Application of multi-perspective modeling and holistic simulation to Urban Transportation Systems (EMSS_18) <i>Youssouf Koné, Oumar Maïga, Mamadou K. Traoré</i>> Synchronization of public passenger transport subsystems using stochastic simulation: the case of lines with longer headway times (EMSS_46) <i>Josef Bulíček, Pavel Drdla and Jaroslav Matuška</i>> Inland terminals: competitive advantage as a need for new entrants (HMS_15) <i>Sonja Maria Russo, Manfred Gronalt</i>> Modelling of the microrelief impact to the cross country movement (HMS_18) <i>Jan Mazal, Marian Rybanský, Agostino G. Bruzzone, Libor Kutěj, Radomir Scurek, Pavel Foltin, Daniel Zlatník</i>	
9:00 am – 10:30 am CEST Online Room 2	Fri 18th, 2020

Microsoft Teams, Session Link:

[Access the Online Session](#)

Session: Soft Computing and Modelling & Simulation

Chair: Michael Affenzeller, Upper Austrian University of Applied Sciences, Austria

- > Extending the modelling approaches for dynamic hybrid systems to accommodate contact model (EMSS_25)
Andreas Körner, Milena Sipovac and Stefanie Winkler
- > Using hybrid bayesian networks to detect audience behaviour changes in youtube (EMSS_44)
Ezequiel Leonardo Castaño and Guillermo Leale
- > Using Deep Learning for Depth Estimation and 3D Reconstruction of Humans (EMSS_51)
Alexander Freller, Dora Turk and Gerald A. Zwettler
- > Towards a stream based machine learning testbed (EMSS_56)
Jan Zenisek, Josef Wolfartsberger, Norbert Wild and Michael Affenzeller

9:00 am – 10:30 am CEST

Online Room 3

Fri 18th, 2020

Microsoft Teams, Session Link:

[Access the Online Session](#)

Session: Modeling and Simulation in Advanced Physics Technologies (Session III)

Alexander S. Sigov, Moscow Technological University (MIREA), Russian Federation; Mikhail E. Belkin, Moscow State Technological University (MIREA), Russian Federation

- > Microstructured fibers with high birefringence and a wide spectral range of single-mode guidance (EMSS_62)
Alexander N. Denisov and Sergei L. Semjonov
- > Silicon nitride photonic crystal cavity coupled with NV-centers in nanodiamonds (EMSS_63)
Ilia Elmanov, Anna Elmanova, Vadim Kovalyuk, Pavel An and Gregory Goltsman
- > Silicon nitride focusing grating coupler for input and output light of NV-centers (EMSS_64)
Aleksei Kuzin, Ilia Elmanov, Vadim Kovalyuk, Pavel An and Gregory Goltsman
- > Integrated contra-directional coupler for NV-centers photon filtering (EMSS_65)
Anna Elmanova, Ilia Elmanov, Vadim Kovalyuk, Pavel An and Gregory Goltsman

10:30 am – 11:00 am CEST

Coffee Break

11:00 am – 12:30 pm CEST

Online Room 1

Fri 18th, 2020

Microsoft Teams, Session Link:

[Access the Online Session](#)

Session: Simulation for Energy, Environment and Sustainable Development

Chair: Janos Sebestyén Janosy, Centre for Energy Research, Hungary

- > Assessment and impact of CO2 emissions attributable to rebar used in building columns to withstand climatic loads (EMSS_30)
Esteban Fraile-Garcia, Javier Ferreiro-Cabello, Diego Sainz Prado and Emilio Jimenez
- > Humid air condensation in heat exchanger (MAS_9)
Jan Barak, Karel Frana
- > Co-simulation of energy transition in residential sectors of Chinese lower-tier cities (SESDE_5)
Daniel van Bilsen, Yilin Huang and Li Fen
- > A model for adjusting dietary estimates of greenhouse gases towards OECD food estimates (SESDE_6)
Susan J. Lincke and Joy Wolf

11:00 am – 12:30 pm CEST Online Room 2	Fri 18th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
<p>Session: Artificial Intelligence, Mathematical Modeling & Simulation: Theory and Applications <i>Chair: Michael Affenzeller, Upper Austrian University of Applied Sciences, Austria</i></p> <ul style="list-style-type: none"> > Automatic Modeling Method of Support Behavior for Work Support System Based on Variational Deep Embedding–Generative Adversarial Networks (MAS_18) <i>Kohjiro Hashimoto, Tadashi Miyosawa and Tetsuyasu Yamada</i> > Effects of arrival uncertainty on solver performance in dynamic stacking problems (EMSS_38) <i>Sebastian Raggl, Andreas Beham, Stefan Wagner and Michael Affenzeller</i> > The synthesis of the control function in optimal tasks as a N-dimensional area using parallel projection on 2D plane (EMSS_48) <i>Oleg Kofnov, Boris Sokolov and Vitaly Ushakov</i> > Comparing classification methods for the building plan components (EMSS_26) <i>Daniel Wilfing and Oliver Krauss</i> > Optimization of the ground observation (HMS_19) <i>Jan Mazal, Agostino G. Bruzzone, Libor Kutěj, Radomir Scurek, Pavel Foltin, Daniel Zlatník</i> 	

11:00 am – 12:30 am CEST Online Room 3	Fri 18th, 2020
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
<p>Session: Modeling & Simulation in Business, Economy, Finance and Commerce <i>Chair: Manfred Gronalt, Boku University</i></p> <ul style="list-style-type: none"> > Which trading agent is best? Using a threaded parallel simulation of a financial market changes the pecking-order (EMSS_47) <i>Michael Rollins and Dave Cliff</i> > Trading electricity markets using neural networks (EMSS_57) <i>Laura Pozzetti and John Cartlidge</i> > Simulation improves amusement park customer service (HMS_12) <i>Edward J. Williams</i> > Discrete event simulation applied to the software testing in a bank (MAS_5) <i>Martina Kuncova and Kristian Janitor</i> 	

I3M Proceedings Publication

The I3M organization Committee is carrying out a major effort to improve the visibility of the I3M article.

Therefore, starting from this year, all the I3M proceedings will be published as open access and will be available at <https://www.cal-tek.eu/proceedings/>.

The I3M Proceedings will be indexed in SCOPUS and will be also provided with a DOI. The DOI will be also communicated to SCOPUS to allow link connection between the SCOPUS webpage of the article and the webpage where the PDF of the article is available for download.

International Journal Special Issues

The authors of the best papers submitted and presented at I3M will be invited to extend their work and contribute to Special Issues hosted by the following International Journals.

- **International Journal of Simulation and Process Modeling**
- **International Journal of Food Engineering**
- **International Journal of Privacy and Health Information Management**



I3M 2020 Awards Ceremony

The I3M 2020 Awards will be delivered in a special online session that will be held on September 17th, at 6 pm in the online Plenary Room.

6:00 pm – 7:00 pm CEST Online Plenary Room	I3M
<i>Microsoft Teams, Session Link:</i> Access the Online Session	
I3M Awards Ceremony I3M Best Paper Awards The I3M 2020 Best Paper Award is assigned by the I3M 2020 Best Paper Award International Committee and selected among the top quality papers presented at I3M based on originality, scientific quality and impact on the manufacturing domain. Gianni Cantice Award for Gifted Simulation Students The "Gianni Cantice Research Award for Gifted Simulation Students" will be announced during the I3M Awards Ceremony 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 and a free registration to the next I3M conference. Further information at www.liophant.org/i3m/cantice Norbert Giambiasi Award The Norbert Giambiasi Award is entitled to Prof. Norbert Giambiasi as recognition for very highly qualified contribution in Conceptual Modeling and DEVS within International Simulation Community. The Norbert Giambiasi Award Certificate Board selects the paper among best Conceptual Modeling contributions to I3M Conference.	

I3M 2020 Authors and Chairs Guideline

Author and Chair Guidelines for the I3M2020 Virtual Conference are available in the conference website at:

www-msc-les.org/conf/i3m2020

Please check them in order to properly deliver your presentation in the best way avoiding any inconvenience.

I3M 2021 as evolving framework

Dear attendee, the 2021 edition of I3M will be held in Cracow, Poland. Please check the website for additional information at:

www.msc-les.org/conf/i3m2021

Alternatively you can write to Prof. Francesco Longo (f.longo@unical.it).

The whole I3M 2020 Organization Committee is glad to see you for this online edition of the conference and for your support to this important event. We really hope you will enjoy the online conference, therefore we are looking forward to further develop and improve it in 2021.

By participating in I3M it is evident that a major stronghold of this Multi-Conference is its capability to mix very experienced people with young blood. So we will be glad if you could consider to be more involved in the 2021 edition 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.

I3M Synergies & Other Opportunities

The I3M organization Committee is working in synergies with other International Conferences to provide attendee with additional publication opportunities and professional training.

WAMS 2021

WAMS 2021, the International Workshop in Applied Modeling & Simulation will be held in Linz (Austria). 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/wams2021>

You can also write to Dr. Marina Massei (marina.massei@liophant.org)

ISM 2021

The ISM 2021 will be held in Linz (Austria) and provides a unique opportunity to meet scientists, researchers and company managers who are working in the area of Smart Manufacturing and Industry 4.0. For further information please check the web site:

<http://www.msc-les.org/conf/ism2021>

You can also write to Dr. Antonio Padovano (antonio.padovano@unical.it)

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 or by inviting companies and managers to attend the ISM 2021 event.

Synergies & Other Opportunities

The I3M organization Committee is working in synergies with other International Conferences to provide attendee with additional publication opportunities and professional training.

SIREN M&S Courses

The Modeling & Simulation Professional Courses are organized with scientific sponsorship 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