FINAL PROGRAM

ESM ®

27-29 October 2021

IUL
UNIVERSITÀ TELEMATICA DEGLI STUDI

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Systèmes Electroniques et Réseaux de COMmunication

BECAUSE OF THE COVID PANDEMIC IN EUROPE, STILL IMPACTING F2F PARTICIPATION WE HAVE DECIDED TO MOVE THE EVENT TOTALLY ONLINE AS YOUR HEALTH AND SAFETY ARE OUR MAIN CONCERN

The ESM'2021 final programme also gives you info on how to virtually attend the event. A personalised email with login info will be forwarded to all registered participants by IUL

Contents

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General Information

1. Conference Location

The **ESM'2021 Conference** is being held virtually at

IUL
Università Telematica degli Studi
Italy

The **online registration** will be open from Wednesday morning October the 27th onwards, where registration will start at 08.15 a.m. and will end at 5.00 p.m. On Thursday October 28th registration will be from 9.00 a.m. - 5.00 p.m. with Friday October 29th registration only from 9.00 a.m.- 9.30. a.m. Online registration info can be found further in this programme and specific info will be sent by personalized email to all registered participants by IUL.

ESM'2021 VIRTUAL PARTICIPATION AND PRESENTATION
As stated on page 3 because of COVID pandemic is still around in Europe influencing international travel, we are forced to move the event totally online. It was not our intention but reality has caught up with us.   Therefore we are opening up a virtual environment for the ESM'2021 presentations using the following software: ZOOM: https://zoom.us/   A first trial is envisaged on Friday the 22nd of October from 14h00 to 16h00

2. Login

Each registrant will receive a **name login** upon registration. **The login is personal and non-transferrable and can only be your name. Company or generic university logins are NOT allowed. Non-regular logins will be removed from the online meetings.**

3.Tickets

Non applicable

Extra conference dinner	€
Extra lunch ticket	€

4. Registration

The ESM'2021 Registration will be open online for information and registration info for those already registered and **AT CONFERENCE REGISTRATION CAN ONLY BE DONE ONLINE FOR THOSE STILL WISHING TO REGISTER AS A VIRTUAL PARTICIPANT AT THIS TIME**
https://www.eurosis.org/conf/esm/2021/email-registration.html

Wednesday, October 27 .... 8.15 a.m. to 5.00 p. m.
Thursday, October 28 .... 9.00 a.m. to 5.00 p. m.
Friday, October 29 .... 9.00 a.m. to 9.30 a.m.

5. Conference Proceedings

Each electronic paid registrant will be provided with an electronic copy of the Conference Proceedings. Fully paid onsite participants will be provided with a printed copy of the Conference Proceedings. **This is NOT applicable to students who are not authors and who have not fully registered.**
(Extra electronic or printed copies are available after **ESM'2021**)

Price: (or equivalent in another currency) for an extra copy

Printed ESM'2021 Proceedings	**€ 60 plus 30% shipping costs**

6. Meeting Rooms

The ESM'2021conference will be held in electronic **rooms designated ROOM A and ROOM B** in this programme.

7. Need Help?

Please contact EUROSIS (philippe.geril@eurosis.org) for your questions

8. Social Event and Lunches

Non-Applicable
The Conference Dinner
Non-Applicable

General Information

9. Room Legend

The parallel meeting rooms will be designated **ROOM A and ROOM B**.

10. Best Paper Award

During the conference the papers, which were accepted as **extended** papers will be judged by the committee and conference participants in order to choose the best paper of the ESM'2021 conference.

The best paper author of the conference receives a certificate and a free registration to any EUROSIS event held within 2 years **after receiving the best paper award. This** registration waiver **is only** VALID FOR 2 YEARS AFTER RECEIPT AND FOR 1 (ONE) PERSON**. In case of multiple authors, one (1) author only can use the registration waiver.**

Session Chairs information

Session Chairs are chosen on a voluntary basis by proposals by either authors or local committee members or are appointed by the Track Chairs, General Program Chair or General Conference Chair. They are responsible for their assigned session. They make sure their speakers are available, take care of the timing within the session, chair the discussion after each presentation and introduce each speaker based on the CV's given to them by the authors. **If a session chair is not available then the first author takes on the responsiblity to chair** In case they chair a session featuring **extended papers**, then they are required to distribute and collect the reviews of that or those papers at the beginning and end of the session. If they have time they should also indicate in their papers the number of session participants.

THE NUMBERS NEXT TO THE PRESENTATIONS DENOTE THE PAGE-NUMBERS IN THE PROCEEDINGS. IF NO NUMBERS ARE MENTIONED THEN THIS PAPER IS NOT PUBLISHED IN THE PROCEEDINGS

THE AUTHORS WHO ARE UNDERLINED ARE NORMALLY THE PRESENTERS

ONLY PAPERS IN GREY BOXES ARE THE EXTENDED PAPERS ELIGIBLE FOR THE BEST PAPER AWARD

CHECK OUT THE OTHER EUROSIS EVENTS ON OUR WEBSITE:
http://www.eurosis.org

WEDNESDAY, 27th OCTOBER 2021	
08.30-17.00	ONLINE REGISTRATION
09.00-09.10	WELCOME BY STEFANO ARMENIA AND BARBARA TURCHETTA – ESM'2021 CONFERENCE CHAIRS - ROOM A
09.10-09.40	KEYNOTE SPEECH BY ADRIEN BÉCUE - ROOM A
09.40-10.10	KEYNOTE SPEECH BY ISABEL PRACA - ROOM A
10.10-10.30	COFFEE BREAK
10.30-11.00	KEYNOTE SPEECH BY SERGI GARCIA - ROOM A
11.00-11.30	KEYNOTE SPEECH BY JARNO SALONEN - ROOM A
11.30-13.00	PARALLEL SESSIONS

	ROOM A	ROOM B
	CYBER SIMULATION IN INDUSTRIAL ENVIRONMENTS	SOCIAL MEDIA DETECTION SIMULATION

13.00-14.00	LUNCH BREAK
14.00-15.30	PARALLEL SESSIONS

	ROOM A	ROOM B
	FACTORY LAYOUT OPTIMIZATION	EMERGENCY SIMULATION

15.30-16.00	COFFEE BREAK
16.00-17.30	PARALLEL SESSIONS

	ROOM A	ROOM B
	TUTORIAL MATT GLOWATZ	SIMULATION IN BIOLOGY AND MEDICINE I

17.30	END OF DAY I

THURSDAY, 28th OCTOBER 2021		
08.30-17.00	ONLINE REGISTRATION	
09.00-10.00	PARALLEL SESSIONS	
	ROOM A	ROOM B
	SIMULATION IN LOGISTICS AND TRAFFIC MANAGEMENT	SIMULATION IN BIOLOGY AND MEDICINE II
10.00-10.30	COFFEE BREAK	
10.30-12.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
	ASSEMBLY SYSTEMS SIMULATION	ELECTRONIC NETWORKS SIMULATION
12.30-13.30	LUNCH BREAK	
13.30-15.00	PARALLEL SESSIONS	
	ROOM A	ROOM B
	SIMULATION AND DATA ANALYTICS	
15.00-15.30	COFFEE BREAK	
15.30-17.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
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	IOT AND SMART INDUSTRY	
12.30-12.45	**CLOSING SESSION AND BEST PAPER AWARD ROOM A –**	
12.45	**END OF CONFERENCE**	

NOTES

Notes

NOTES

Wednesday, 27th October 2021

Online Registration

08.30 - 17.00

ROOM A

09.00 – 09.10
Opening ESM'2021 and Welcome

Welcome Address

Prof. Stefano Armenia, IUL - Università Telematica degli Studi, Rome, Italy

Prof. Barbara Turchetta, IUL - Università Telematica degli Studi, Rome, Italy

ESM'2021 General Conference Chairs

09.15 – 10.15

ROOM A – 09.15-09.45   **KEY**
KEYNOTE SPEAKER
Chair: Marco Angelini, CIS, Sapienza University of Rome, Rome, Italy

KEY_01
CyberFactory#1 – Attack Simulation on Manufacturing System Digital Twin
Adrien Bécue, Head of Innovation, Airbus Cybersecurity, Elancourt, France

Wednesday, 27th October 2021

ROOM A – 09.45-10.15 **KEY**
KEYNOTE SPEAKER
Chair: Marco Angelini, CIS, Sapienza University of Rome, Rome, Italy

KEY_02
Holistic Correlation of Events from increased Security and Safety of Factories of the Future
Isabel Praça, Professor at ISEP and Researcher at GECAD, Porto, Portugal
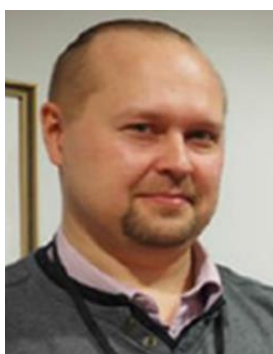
10.15 - 10.30
COFFEE BREAK

10.30 – 11.30

ROOM A – 10.30-11.00 **KEY**
KEYNOTE SPEAKER
Chair: Marco Angelini, CIS, Sapienza University of Rome, Rome, Italy

KEY_04
Increasing the FoF Resilience with Modelling and Simulation Tools
Jarno Salonen, Industrial Cybersecurity, VTT Technical Research Centre of Finland, Tampere, Finland

ROOM A – 11.00-11.30 **KEY**
KEYNOTE SPEAKER
Chair: Marco Angelini, CIS, Sapienza University of Rome, Rome, Italy

Wednesday, 27th October 2021

KEY_03
Realistic Simulation-based Fleet of Cobots for FoF Optimization in Complex Scenarios
Sergi Garcia, PAL Robotics, Barcelona, Spain

ROOM A – 11.30-13.00   **CYBER**
CYBER SIMULATION IN INDUSTRIAL ENVIRONMENTS
Chair: Isabel Praça, ISEP, Porto, Portugal

ROOM B – 11.30-13.00   **MEDIA**
SOCIAL MEDIA DETECTION SIMULATION
Chair: Stefano Armenia, IUL, Rome, Italy

Wednesday, 27th October 2021

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Wednesday, 27ᵗʰ October 2021

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EMERG_03
Complex Activities Analyzer as a Software Tool for Modelling and Simulation in Crisis Management

15.30 - 16.00
COFFEE BREAK

16.00 – 17.30

ROOM A – 16.00-17.30	**TUTORIAL**
AR LEARNING	
Chair: Matt Glowatz, UCD, Dublin, Ireland	

TUT_01
AR Learning
Prof. Matt Glowatz, UCD, Quinn School of Business, Dublin, Ireland

- This tutorial focusses on research addressing the opportunities and challenges of creating innovative learning spaces for the 21st century. In particular, we will be discussing
- The new learner characteristics
- Opportunities and challenges for the education sector
- Creating innovative learning spaces for the 21st century
- Augmented Reality (AR) in education
  - An overview
  - Technologies
  - Opportunities
  - Case Study

Wednesday, 27th October 2021

ROOM B – 16.00-17.30   **BIO**
SIMULATION IN BIOLOGY AND MEDICINE I
Chair: Stefano Armenia, IUL, Rome, Italy

17.30

END OF DAY I

Thursday, 28ᵗʰ October 2021

Online Registration

08.30 - 17.00

09.00 – 10.00

10.00 – 10.30
COFFEE BREAK

Thursday, 28ᵗʰ October 2021

10.30 - 13.00

ROOM A- 10.30-12.30   **CIM**
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Chair: Davide Secchi, Univ. of Southern Denmark, Odense, Denmark

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13.30 - 15.00

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Thursday, 28th October 2021

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NO SESSION WILL BE HELD IN ROOM B IN THIS TIME SLOT
Chair: none

15.00 - 15.30
COFFEE BREAK

15.30 – 17.30

ROOM A – 15.30-17.30   **TUT**
SILICO.APP TUTORIAL
Chair: Stefano Armenia, IUL, Rome, Italy

TUT_02
System Dynamics Modeling & Simulation with SILICO.APP
Prof. Stefano Armenia, IUL - Università Telematica degli Studi, Rome, Italy

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ANALYTICAL AND NUMERICAL MODELLING TECHNIQUES
Chair: Philippe Geril, ETI, Ostend, Belgium

ANMT_01
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Thursday, 28th October 2021

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END OF DAY II

Friday, 29th October 2021

Online Registration

09.00 - 09.30

There will only be presentations in ROOM A on Friday

09.00 – 10.00

ROOM A – 09.00-10.00   **IOT**
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Chair: Abderrazak Jemai, INSAT, Tunis, Tunisia

IOT_SMART_10
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SIM-AI_09
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10.00 - 10.30
COFFEE BREAK

10.30 – 12.30

ROOM A – 10.30-12.30   **IOT**
IOT AND SMART INDUSTRY
Chair: Abderrazak Jemai, INSAT, Tunis, Tunisia

IOT_SMART_05
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IOT_SMART_03_METH
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Friday, 29th October 2021

IOT_SMART_07
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Combined Blockchain and IoT High Level Architecture for Patient Monitoring Systems

ROOM A – 12.30 - 12.45   **BEST PAPER**
CLOSING SESSION AND BEST PAPER AWARD
Chair: Stefano Armenia, IUL, Rome, Italy

Prof. Stefano Armenia, IUL - Università Telematica degli Studi, Rome, Italy
Philippe Geril, EUROSIS, Ostend, Belgium

12.45

END OF CONFERENCE

ESM'2022

SEE YOU ALL AT

ESM'2022, ISEP, University of Porto, Portugal, October 2022
(exact dates to be confirmed shortly)

Track proposals and tutorial proposals can be sent in by
January 15th, 2022
Proposals for future ESM locations can be emailed to
philippe.geril@eurosis.org

Other upcoming EUROSIS conferences
MESM'2021 (more info to follow soon)
SCIFI-IT'2022, April 3-6, 2022, **University of Leuven/Ghent Research Centre**, Ghent, Belgium
FOODSIM'2022, April 3-6, 2022, **University of Leuven/Ghent Research Centre**, Ghent, Belgium
ISC'2022, June 1-3, 2022, **UCD Dublin**, Ireland.
GAME-ON'2022, September 14-16, 2022, **Laboratorio de Humanidades Digitais**, Universidade Nova de Lisboa, Lisbon (more info to follow soon)
(other upcoming events)
SCIFI-IT'2023, Royal Military Academy, Brussels, Belgium (TBC)
ISC'2023, May 31-June 2, 2023, **University of Malta**, Valletta, Malta.
GAME-ON'2023, September 2023, Carlow, Ireland (TBC)
ESM'2023, October, 2023, **ISAE-SUPAERO** Toulouse, France
SCIFI-IT'2024, April 2024, **University of Leuven/Ghent Research Centre**, Ghent, Belgium
FOODSIM'2024, April 2024, **University of Leuven/Ghent Research Centre**, Ghent, Belgium
ESM'2025, October 2025 **University of Leuven/Ghent Research Centre**, Ghent, Belgium

EUROSIS was borne out of discussions with the European Community to set up a new kind of Society, which would be project-driven instead of driven by pure membership and conferences.

The aim of the Society is to set up and manage topic related Technical Committees which will link directly to European Projects in the field of computer simulation and related areas and to act as a knowledge pool for future European Networks of Excellence, like MOSAIC, HORIZON2020, ERASMUS+ by seeking out the latest innovations in simulation, modelling and AI research.

If you would like to receive more information about EUROSIS, please contact

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EUROSIS Info