

Final Program



June 3-4, 2021

Organized by



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BECAUSE OF COVID PANDEMIC TRAVEL RESTRICTIONS STILL IN FORCE IN EUROPE AND MALTA, WE HAVE DECIDED TO MOVE THE EVENT TOTALLY ONLINE AS YOUR HEALTH AND SAFETY ARE OUR MAIN CONCERN

ON THE OTHER HAND, HOWEVER, WE ARE INFORMING YOU OF THE POSSIBILITY OF REVISITING THE UNIVERSITY OF MALTA FOR A FUTURE ISC (ISC'2023)

The ISC'2021 final programme, as a tribute to the hard work of the local committee gives information on how to reach the University of Malta, Valletta Campus, but also gives you info on how to virtually attend the event, which will be the way we will proceed.

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General Information

1. Conference Location

The Conference would have been held and will be held in 2023 at



University of Malta - Valletta Campus

Old University Building
Entrances: St Paul Street and Merchants Street
Valletta, Malta

+356 2340 7511

lucienne.m.bugeja@um.edu.mt

The Valletta Campus, which is housed in the Old University Building, dates back to the founding of the Collegium Melitense in 1592. It has two entrances, one on St Paul Street and another on Merchants Street

The meeting room for the ISC'2021 conference, is the Online Meeting Room. (ZOOM information will be sent to all paying participants)

Registration will start on Thursday at 9.00 a.m. till 15.30 p.m. On Friday it will be from 09.15 a.m. to 12.30 a.m.

2. Getting to Malta - Valletta Campus

By Plane

When arriving by plane in Malta you will land at [Malta International Airport](#) [IATA: MLA, ICAO: LMML](#) which is located on the island of Malta, southwest of the Maltese capital [Valletta](#) in the town of Gudja, The airport serves as the main hub for [Air Malta](#) and Medavia besides being a base for [Ryanair](#) and its subsidiary [Malta Air](#). The airport has a single passenger terminal. The Malta International Airport air terminal operations include general passenger services, and the operation of an extensive range of retail services at the airport, airside and landside shops, restaurants and other outlets. The airport offers one VIP lounge, the La Valette Club.

Bus and Shuttle from Airport

Malta International Airport is served also by several buses operated by private transportation groups and public transport operated by [Malta Public Transport](#). Malta Public Transport buses serve the airport. A mixture of Express and local services are available, also.

There are four airport express services, X1, X2, X3 and X4. These routes make it easier for you to travel directly to and from the airport. Bus tickets are available for purchase from Malta International Airport at the below points and outlets. Additionally, tickets may be bought on all buses.

General Information

[Malta Transfer](#) is MIA's official hotel shuttle service. It offers convenient trips to and from your hotel in Malta or Gozo. More information on this [link](#).

Taxi from Airport

Taxi services between MIA and any destination in Malta are available 24 hours a day. Pre-paid tickets can be purchased at fixed rates from a booth in our Welcomers Hall. A regular taxi normally accommodates four persons, however the number of suitcases being carried must also be taken into consideration with regard to the space required in the vehicle. Taxi Rates to different destinations in Malta can be found [here](#).

Car from the Airport

The airport is located 5 km (3.1 mi) southwest of the capital, Valletta.

By Taxi

Valletta is served by a fleet of [electric taxis](#) which transport riders from 10 points in Valletta to any destination in the city.

ISC'2021 VIRTUAL PARTICIPATION AND PRESENTATION

As stated on page 3 because of the COVID pandemic travel restrictions, we are forced to hold the event online. Will hold an ISC in 2023 at the University of Malta again f2f.

Therefore we are opening up a virtual environment for the ISC'2021 presentations using the ZOOM software: <https://zoom.us/>

You can download the software from: <https://zoom.us/download>

A first trial run is envisaged on Friday the 28th of May from 14h00 to 15h00 (CET)

3. Conference Login info

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

General Information

4. Tickets

Non applicable

Extra conference dinner	€
Extra lunch ticket	€

5. Registration

The ISC'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/isc/2021/email-registration.html>

Or by using the enclosed form at the back of this programme and emailing it to philippe.geril@eurosis.org

Thursday, June 3..... 8.30 a.m. to 15.30 p.m.
 Friday, June 4.....9.15 a.m. to 12.30 p.m.

6. 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 ISC'2021)

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

Printed ISC'2021 Proceedings	€ 40 plus 30% shipping costs
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7. Meeting Rooms

The ISC'2021 conference will be held in electronic **room designated ONLINE MEETING ROOM** in this programme.

8. Need Help?

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

General Information

9. Social Event and Lunches

Non-Applicable

The Conference Dinner
Non-Applicable

9. Room Legend

The meeting rooms will be designated **ONLINE MEETING ROOM**.

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 **ISC'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.

11 Paper Legend

Each paper is designated before each paper by its number. This number has to be entered on the form for the best paper award

General Information

ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL

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 responsibility 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>

THURSDAY, 3rd JUNE 2021

08.30-15.30	ONLINE REGISTRATION
09.00-09.15	ONLINE OPENING SESSION WELCOME BY LIBERATO CAMILLERI GENERAL CONFERENCE CHAIR ISC'2021
09.15-10.00	ONLINE KEYNOTE
	MEETING ROOM
	KEYNOTE ADDRESS BY PASCAL BERRUET
10.00-10.30	COFFEE BREAK
10.30-13.00	ONLINE SESSION
	MEETING ROOM
	ENHANCED ENGINEERING AND AUTOMOTIVE ENGINEERING
13.00-14.00	LUNCH BREAK
14.00-15.00	ONLINE TUTORIAL
	MEETING ROOM
	TUTORIAL BY LIBERATO CAMILLERI
15.00-15.30	COFFEE BREAK
15.30-16.30	ONLINE SESSION
	MEETING ROOM
	APPLIED SIMULATION METHODOLOGY
16.30	FREE EVENING

FRIDAY, 4th JUNE 2021

09.15-12.30	ONLINE REGISTRATION
09.30-10.30	ONLINE KEYNOTE
	MEETING ROOM
	KEYNOTE ADDRESS BY ADRIEN BÉCUE AND ISABEL PRAÇA
10.30-11.00	COFFEE BREAK
11.00-12.30	ONLINE SESSION
	MEETING ROOM
	SIMULATION IN MEDICINE
12.30-13.30	LUNCH
13.30-14.30	ONLINE TUTORIAL
	MEETING ROOM
	TUTORIAL BY MATT GLOWATZ
14.30-15.00	COFFEE BREAK
15.00-16.00	ONLINE SESSION
	MEETING ROOM
	SIMULATION IN TELECOMMUNICATIONS
16.00-16.15	ONLINE SESSION
	MEETING ROOM
	BEST PAPER AWARD AND CLOSING SESSION

Thursday, 3rd June 2021

Online Registration

08.30 - 15.30

09.00 – 09.15

ONLINE MEETING ROOM

WELCOME

Opening ISC'2021 and Welcome

Welcome Address

Prof. Liberato Camilleri, Maths and Physics Building, Faculty of Science,
University of Malta. Msida, Malta

ISC'2021, General Conference Chair

09.15 – 10.00

ONLINE MEETING ROOM -09.15-10.00

KEYNOTE

KEYNOTE SPEECH

Chair: Liberato Camilleri, University of Malta. Msida, Malta



KEY_01

[Reconfigurable Manufacturing Systems; Evaluation of Configuration KPI by Simulation and Simulation Model Generation](#)

Pascal Berruet, Universite de Bretagne Sud, Lab STICC,
Lorient Cedex, France

Welcome

Thursday, 3rd June 2021

10.00 - 10.30
COFFEE BREAK

10.30 – 13.00

ONLINE MEETING ROOM -10.30-13.00 **ENG**
ENHANCED ENGINEERING AND AUTOMOTIVE ENGINEERING
Chair: Liberato Camilleri, University of Malta. Msida, Malta

MULTI_01
Theoretical Analysis and Versatile Application of the Constraint Force
Mixing Principle in Multibody Dynamics Simulation
Tobias Osterloh and Jürgen Roßmann..... **21**

ENGIN_01
Design Review of Assembly Workstations using Virtual Prototypes
Iris Gräßler, Stefan Hillebrand and Daniel Roesmann..... **29**

SUS_01
Decision Support for Product-Specific Recycling
Iris Gräßler and Philipp Hesse..... **37**

AUTO_01
Development of a Monocoque Formula SAE Chassis using Carbon Fibre
Sandwich Panels
Daniel Sean Bezzina, Martin Muscat and Claire De Marco Muscat-Fenech **45**

AUTO_03_ENG
Simulation Studies to maximize Measurement Data Quality of Engine
Rubbing Friction – Methods based on Pressurised Motoring
Gilbert Sammut, Carl Caruana, Mario Farrugia and Emiliano Pipitone..... **53**

13.00 - 14.00
LUNCH BREAK

Thursday, 3rd July 2021

14.00 – 15.00

**ONLINE MEETING ROOM -14.00-15.00
TUTORIAL**

TUT

Chair: Liberato Camilleri, University of Malta. Msida, Malta



TUT_01

[Market Segmentation](#)

Liberato Camilleri, Faculty of Science, University of Malta,
Msida, Malta

15.00 - 15.30

COFFEE BREAK

15.30 – 16.30

ONLINE MEETING ROOM - 15.30-16.30

METH

APPLIED SIMULATION METHODOLOGY

Chair: Liberato Camilleri, University of Malta. Msida, Malta

DISC_METH_01

Insects Population Dynamics Modeling and Monitoring Strategies

Mahamadou Traore and Bernard Pottier 10

COMPLEX_01

**Statistical Optimization with Successive, Approximations taken from the
Preliminary Averages**

William Conley..... 5

FREE EVENING

Sessions - Thursday

Friday, 4th June 2021

Online Registration

09.15 - 09.30

09.30 – 10.30

ONLINE MEETING ROOM - 09.30-10.30

KEYNOTE

KEYNOTE SPEECH

Chair: David Suda, University of Malta. Msida, Malta



KEY_02

[SeCollA: Securing Collaborative Intelligent Industrial Assets](#)

Adrien Bécue, Airbus Cybersecurity, Elancourt, France and Isabel Praça, ISEP/GECAD, Porto, Portugal

10.30 - 11.00

COFFEE BREAK

11.00 – 12.30

ONLINE MEETING ROOM - 11.00-12.30

MED

SIMULATION IN MEDICINE

Chair: David Suda, University of Malta. Msida, Malta

SIM_MED_01

Modeling Survival Durations of Patients undergoing Aortic Valve Replacement

Liberato Camilleri and Lawrence Grech **75**

SIM_MED_04

Prediction of Brain Tumors using Data Mining Techniques

Rafaela Machado, Diana Ferreira, Cristiana Neto, António Abelha and José Machado **80**

Friday, 4th June 2021

12.30 - 13.30
LUNCH BREAK

13.30 – 14.30

ONLINE MEETING ROOM - 13.30-14.30 **TUT**
TUTORIAL

Chair: David Suda, University of Malta. Msida, Malta



TUT_02

[AR Learning](#)

Matt Glowatz, UCD, Quinn School of Business, Dublin, Ireland

14.30 - 15.00
COFFEE BREAK

15.00 – 16.00

ONLINE MEETING ROOM - 11.00-12.30 **TELCOM**
SIMULATION IN TELECOMMUNICATIONS

Chair: David Suda, University of Malta. Msida, Malta

TEL_01

Fault Diagnosis in Computer Networks Topology: A Literature Review

George Galanos and C. Angeli..... 63

TEL_03

Web-Based Expert System for Fault Diagnosis in Computer Networks

George Galanos and C. Angeli..... 67

Sessions - Friday

Friday, 4th June 2021

16.00 - 16.15

ONLINE MEETING ROOM - 16.00-16.15 **BEST PAPER**
CLOSING SESSION AND BEST PAPER AWARD
Chairs: David Suda, University of Malta. Msida, Malta

Liberato Camilleri and Philippe Geril will announce the best paper for ISC'2021 and will end the event with some announcements related to ISC'2022 and ISC'2023

ISC'2022

**SEE YOU ALL
At ISC'2022
June 1-3, 2022,
UCD, Dublin, Ireland
<http://www.ucd.ie/>**



**Track proposals and tutorial proposals can be sent in
by September 1st, 2021 to philippe.geril@eurosis.org**

ISC'2023, May 31-June 2, 2023, [University of Malta](#), Valletta, Malta

**If you are interested in hosting an ISC conference from 2024 onward, just
contact EUROISIS.**

Other confirmed EUROISIS conferences for 2022 so far
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

NOTES

ISC'2021 at Conference Registration Form

Please legibly print or type and fill out completely. (Check appropriate boxes where necessary)

FIRST NAME	LAST NAME	M.I.
COMPANY OR AFFILIATION		
Mailing address (tick one): <input type="checkbox"/> HOME <input type="checkbox"/> BUSINESS		
STREET		
CITY		
ZIPCODE	COUNTRY	
TELEPHONE	FAX	
E-MAIL		
DATE	SIGNATURE	
1. <input type="checkbox"/> EUROSIS member € 210 Member Number: _____		€ _____
2. <input type="checkbox"/> Members of Sponsor or Affiliate Society € 210		€ _____
3. <input type="checkbox"/> Non-Member Participant € 275		€ _____
4. <input type="checkbox"/> Students, <u>who are not authors</u> but who wish to attend the conference, or ONE DAY PARTICIPANTS pay: € 185		€ _____
(Above registration fees include, one copy of the PROCEEDINGS, all midday meals, cocktail, refreshments, coffees and social program,) One Day Participants and Non-Author Students cannot participate in the conference dinner. – NOT APPLICABLE		
5. <input type="checkbox"/> Conference Dinner Ticket for Companion € N/A <input type="checkbox"/> Lunch Ticket for Companion € N/A/day		€ _____
6. <input type="checkbox"/> Extra Conference Proceedings € N/A Cash and Carry		€ _____
VAT Number if applicable: _____		
TOTAL AMOUNT DUE		€ _____
		€ _____
TOTAL AMOUNT REMITTED		€ _____

Pay by **CREDIT CARD** and fill in the information below:

Charge my (tick one): Visa Euro/Mastercard American Express

CARD NO: _____ : _____ : _____ : _____ EXP.DATE: ____ / ____

Authorizing Signature:

Print Signature in CAPITALS



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 EUROSIS is to set up 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.

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

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Please send me info on EUROSIS:

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