Final Program

May 31 - June 1, 2017

Organized by

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European Technology Institute

Hosted by

iBS PAN

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UNIVERSITY OF SKÖVDE
EUROSIS
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General Information

1.1 Conference Location

The Conference is held at

Polish Academy of Sciences,
Palais Staszic,
Nowy Świat 72,
00-001 Warsaw, Poland
☎️ +48 (22) 182 61 00
✆ +48 (22) 182 70 50
Email: akademia@pan.pl

The meeting room for the conference is in the KOLLATAJ ROOM, NR 167, 1st Floor; up the grand stairs beyond the mezzanine and left from big foyer. Registration will start on Wednesday at 8.30 a.m. till 15.30 p.m. On Thursday it will be from 8.30 a.m. – 14.00 p.m.

1.2 Getting to Warsaw and the Polish Academy of Sciences

By Plane

When arriving by plane in Warsaw you will do so either at one of the two international airports. Namely, Warsaw Chopin Airport, located just 10 kilometres from the city centre, and Warsaw-Modlin Airport, located 35 kilometres to the north.

From Warsaw Chopin Airport you can take a train to the city. This is the best option to reach Warsaw City Centre. A rail link has been recently built that connects airport's Warsaw Chopin Airport railway station (built as part of Terminal A) to Warsaw city centre. The service is provided by two companies: Szybka Kolej Miejska – SKM (Fast Urban Railway- Lines, S2 and S3) and Koleje Mazowieckie (Masovian Railways).

A taxi to the city centre from one of the following companies ELE Taxi, Sawa Taxi and Super Taxi the staff of whom wear a blue uniform to indicate that they are official carriers.

A bus to the city centre. The Warsaw city center can be reached by the bus lines: 175 and 188 during the day and N32 at night. There is also an additional line 148 that provides access to Ursynów (a southern part of Warsaw) and Praga (an eastern part of Warsaw).

Bus 331 connects with underground station Metro Wilanowska. The fare is PLN 4.40 one-way (and the reduced fare is 50% of that) for all the lines (day and night).
General Information

In Warsaw airport there’s a new terminal for buses and coaches. It’s located on the arrivals level, in front of the south pier.

From Warsaw-Modlin Airport to reach Warsaw's city centre you have three main options for transport: grab a cab or private shuttle, take a bus to the capital, or board one of the green and yellow shuttles that will take you to Modlin Train Station where you then take a train to your destination.

- A train. The Koleje Mazowieckie train route is economical (19zł total for shuttle and train), though slightly time consuming (50 minutes total); buy a ticket from one of their stands located in the baggage hall or at Arrivals near the exit doors. Of the many bus transfer services, Modlin Bus is the most comfortable and convenient; tickets range from 9zł (if booked ahead online) to 33zł (at the airport - look for their stand in the baggage hall or near the Arrivals terminal exit).

- A bus. By Bus. Click the link.

A taxi. The airport's official taxi partners Sawa Taxi and Taxi Modlin offer transport to the city centre from 159zł (199zł between 24:00 and 06:00).

By Train

When coming to Warsaw by train you will most probably arrive at Warsaw Central Station. The station is located in the strict city centre, at the Al. Jerozolimskie and al. Jana Pawła II crossroads. In the vicinity, there is the Centrum subway station, the Warszawa Śródmieście Commuter Train Station and a number of tram and bus stops, which makes it a perfect hub. The building has a great commercial and service offer and is adjacent to the Zlote Tarasy shopping mall. There are hotels, restaurants and cafés next to the station.

By Metro

The Tram and Metro systems are run by ZTM Warsaw. You can find all relevant information of routes and charges on their website.

ALL MAPS ARE AT THE BACK OF THIS PROGRAMME

1.3 Badges

Each registrant will receive a name badge upon registration. The badge must be worn in order to be admitted to the technical sessions, lunches and social event.
General Information

1.4 Tickets
Extra tickets for the social event and lunches are available from the Registration desk. (at conference prices)

Price: (or equivalent in another currency) for extra tickets. All participants will be issued with tickets for lunch and the conference dinner. Or just the badge will apply.

<table>
<thead>
<tr>
<th>conference dinner:</th>
<th>€ 50</th>
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<tr>
<td>lunch</td>
<td>€ 15/lunch</td>
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1.5 Registration
The ISC’2017 Registration Desk will be open for information and registration:
Wednesday, May 31 ..............8.30 a.m. to 15.30 p. m.
Thursday, June 1 ..............8.30 a.m. to 14.00 p. m.

1.6 Conference Proceedings
Each fully paid registrant will be provided with a copy of the Conference Proceedings (printed format). (Extra copies are available on a cash and carry basis at special rates during ISC-2017)

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

<table>
<thead>
<tr>
<th>ISC’2017 Proceedings</th>
<th>€ 35</th>
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<tr>
<td>Other Proceedings –see price list at desk</td>
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Other Proceedings can be ordered using the forms available at the conference.

1.7 Meeting Room
The ISC’2017 meeting room is in the KOLATAJ ROOM, NR.167, 1st Floor. Directions to the rooms will be signposted.

1.8 Internet Connection
There is full free WIFI at the conference site.

1.9 Need Help?
Please see the conference desk for your questions
1.10 Social Events and Lunches

All registrants are invited:
To the Coffee Breaks and the lunches for 2 days (Wednesday and Thursday) which will be served at the restaurant of the Polish Academy of Sciences.

To the Conference Dinner

The conference dinner will be held on the Wednesday the 31st of May at 8.00 p.m. at Restaurant "Dawne Smaki" ("Ancient Tastes"), Nowy Swiat 49 (200 metres southwards from Palais Staszic).

1.11 Best Paper Award

During the conference the papers, which were accepted as extended papers will be judged by the committee and participants in order to choose the best paper of the ISC’2017 conference. The best paper candidate receives a certificate signed by the General Conference and Program Chairs and also a free registration to any EUROSIS conference within 2 years of receipt of the prize.

1.12 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.

The room has an LCD projector
General Information

SESSION CHAIRPERSONS

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.

Sessions with extended papers: If you are a session chair in a session with extended papers make sure the session participants have a copy of the best paper award form and ask them to return them to you at the end of the session. After the session hand over the collected forms to Philippe Geril.

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
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<td>09.15-10.00</td>
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<td>KEYNOTE ADDRESS BY TATJANA JAWORSKA</td>
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<td>SOFTWARE TOOLS AND METHODS SIMULATION</td>
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**THURSDAY, 1**\(^{\text{ST}}\) **JUNE 2017**

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<td><strong>MARTA GANZHA</strong></td>
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Wednesday, 31st May 2017

HALLWAY FIRST FLOOR
Registration
08.30 - 15.30

09.00 – 09.15
MEETING ROOM
Opening ISC’2017 and Welcome

Welcome Address

Jan Owsinski, Polish Academy of Sciences, Warsaw, Poland
ISC’2017, General Conference Chair

09.15 – 10.00

MEETING ROOM -09.15-10.00
KEYNOTE

KEYNOTE SPEECH
Chair: Marcin Paprzycki, Polish Academy of Sciences, Warsaw, Poland

KEY_03
Visual Information Retrieval - from Research to Practice
Tatjana Jaworska, Tatiana Jaworska, Systems Research Institute, Polish Academy of Sciences, Warsaw, Poland
Wednesday, 31st May 2017

10.00 - 10.30
COFFEE BREAK

10.30 – 12.30

MEETING ROOM -10.30-12.30
SOFTWARE TOOLS AND METHODS SIMULATION
Chair: Marcin Paprzycki, Polish Academy of Sciences, Warsaw, Poland

METH_09
A Toolbox for fuzzy Logic Functions Synthesis on a Choice Table
Dmitry A. Zaitsev ........................................................................................................... 11

COMPLEX_01
Modelling Multi-Component predictive Systems as Petri Nets
Manuel Martin Salvador, Marcin Budka and Bogdan Gabrys ..................................... 17

OPT_04
Computing Spatial Charging Needs using an Agent Based Demand Model
Daniel Krajzewicz, Michael Hardinghaus, Matthias Heinrichs
and Sigrun Beige .......................................................................................................... 24

MANUF_01
Linear Layout Design using the Software Tool visTABLE
Nikola Banduka, Ivan Peko, Marina Crnjac, Igor Bošnjak and Stefan Đurić ............ 102

LOGIS_01
A stochastic linear programming Model for the reverse Supply Chain Planning
A. Fall, J. François and R. Dupas ................................................................................ 30

12.30 - 13.30
LUNCH BREAK
Wednesday, 31st May 2017

13.30 – 14.30

MEETING ROOM -13.30-14.30
SIMULATION OPTIMIZATION
Chair: Jan Studzinski, Polish Academy of Sciences, Warsaw, Poland

COMPLEX_03
Structural Optimization and Lay-up Design for Composite Shell like Cowling through Virtual Wind Tunnel Testing and Peak Stress Reduction
Sergey N. Shevtsov, Igor V. Zhilyaev, Paul A. Oganesyan, Natalia G. Snezhina, Elena N. Lyashenko and Jiing-Kae Wu ................................................................. 56

COM_01
Evaluating a Simulation based PLC Processor Optimization
Johannes Kohl, Wolfgang Bauer, Dietmar Fey and Jürgen Bäsig ......................... 61

OPT_03
Optimizing Maintenance Works for Hydroelectric Power Plants by Genetic Algorithms
Vlad Florin Pîrăianu, Constantin Drăgoi, Nicolae Vasiliu and Gabriel Lazaro Pavel ........................................................................................................ 51

14.30 - 15.00
COFFEE BREAK

15.00 – 17.00

MEETING ROOM - 15.00-17.00
TUTORIAL
Chair: Jan Owsinski, Polish Academy of Sciences, Warsaw, Poland

TUT_01
Simulating Computer Networks by colored Petri Nets
Dmitry A. Zaitsev, International Humanitarian University, Odessa, Ukraine

Participants who wish to take part in the tutorial can download the CPN Tools and models here.
Wednesday, 31st May 2017

17.00 – 17.30

MEETING ROOM - 17.00-17.30
DATA MANAGEMENT SIMULATION
Chair: Jan Owsinski, Polish Academy of Sciences, Warsaw, Poland

METH_04
Political Polls Market Research and Business Optimization
William Conley

METH_05
Controlling Costs by taking the shortest Route to Information
William Conley

CONFERENCE DINNER – 20.00-22.30

The conference dinner will be held on the Wednesday the 31st of May at 8.00 p.m. at Restaurant "Dawne Smaki" ("Ancient Tastes"), Nowy Swiat 49 (200 metres southwards from Palais Staszic).
Thursday, 1st June 2017

HALLWAY FIRST FLOOR
Registration
08.30 - 15.30

09.00 – 10.00

MEETING ROOM - 09.00-10.00
KEYNOTE SPEECH
Chair: Krzysztof Szkatula, Polish Academy of Sciences, Warsaw, Poland

KEY_01
Universal Petri and Sleptsov Nets
Dmitry A. Zaitsev, International Humanitarian University, Odessa, Ukraine

10.00 - 10.30
COFFEE BREAK

10.30 – 12.30

MEETING ROOM - 10.30-12.30
VR AND ENGINEERING SIMULATION
Chair: Krzysztof Szkatula, Polish Academy of Sciences, Warsaw, Poland

VR_01
Expert System based opportunistic mobile Social Network for the historical Places virtual re-construction utilizing Populace’s acquainting Photos
Haifaa O. Elayyan and Philippe Geril
Thursday, 1st June 2017

TRAIN_01
ANYCRANE: Towards a better Port Crane Simulator for Training Operators
Rustam Abubakirovich Fayzrakhmanov, Ivan Sergeevich Polevshchikov,
Aydar Fadanisovich Khabibulin, Filipp Igorevich Shklaev and
Ruslan R. Fayzrakhmanov ................................................................. 85

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of Wastewater Quality Indices and operational Parameters of the Bioreactor:
Data Mining Approach
Bartosz Szeląg and Jan Studziński .................................................. 69

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Driving Simulator Development: Phase IV – Defining Hexapod Kinematics
by Driving Simulation
Valerian Croitorescu and Rafael Hariton ............................................. 97

COM_03
Design of a UWB Coplanar fed Antenna for biomedical Applications
Hamza Benchakroun, Zakaria Mahlaoui, Adnane Latif
and Salgado Henrique Manuel ............................................................. 77

12.30 - 13.30
LUNCH BREAK

13.30 – 14.30

MEETING ROOM - 13.30-14.30
KEYNOTE
KEYNOTE SPEECH
Chair: Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland

KEY_02
Collaboration needs Semantic Interoperability
Maria Ganzha, Systems Research Institute Polish Academy of Sciences, Warsaw, Poland
Thursday, 1st June 2017

14.30 - 15.00
COFFEE BREAK

15.00 - 16.00

MEETING ROOM – 15.00-16.00
TRANSPORT SIMULATION
Chair: Maria Ganzha, Polish Academy of Sciences, Warsaw, Poland

LAT_02
Deciding on the Pattern of Municipal Transport Network: The Case of Park+Ride Nodes in an Agglomeration
Jan W. Owsinski, Jaroslaw Stanczak, Krzysztof Sep and Aleksy Barski

16.00 - 16.15

MEETING ROOM - 16.00-16.15
BEST PAPER
CLOSING SESSION AND BEST PAPER AWARD
Chairs: Jan Owsinski, Polish Academy of Sciences, Warsaw, Poland and Philippe Geril, EUROSIS-ETI, Ostend, Belgium
SEE YOU ALL
At ISC’2018
June 6-8, 2018,
University of Azores, Ponta Delgada, Portugal

Track proposals and tutorial proposals can be sent in
by October 30th, 2017 to philippe.geril@eurosis.org

If you are interested in hosting an ISC conference, just contact EUROSIS.
Conference Site Map

METRO MAP OF WARSAW
NOTES
**ISC’2017 Registration Form**

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

<table>
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<th>LAST NAME</th>
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1. [ ] EUROSIS member € 565 Member Number:_____________________________ €__________
2. [ ] Members of Sponsor or Affiliate Society € 565 €__________
3. [ ] Non-Member Participant € 610 €__________
4. [ ] Students, who are not authors but who wish to attend the conference, or ONE DAY PARTICIPANTS pay: € 450 €__________

(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.

5. [ ] Conference Dinner Ticket for Companion € 50 [] Lunch Ticket for Companion € 15/day €__________
6. [ ] Extra Conference Proceedings € 35 Cash and Carry €__________

VAT Number if applicable: _______________________________

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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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EUROSIS-ETI
European Simulation Office
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Ghent University – Campus Ostend
Wetenschappspark 1
Plassendale 1.
B- 8400 Ostend, Belgium
☎ Tel: +32.59.255.330
✉ Fax: +32.59.255.339
✉ Email: Philippe.Geril@eurosis.org

Please send me info on EUROSIS:
Name:............................................................... Address:.................................................................
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Telephone.................................................................. Fax: .................................................................
Email: ......................................................................