

Final Program



7-9 June 2010

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General Information

1.1 Conference Location

The Conference itself is held at



Ramada Plaza Budapest Hotel,
Árpád fejedelem útja 94.
H-1036 Budapest
☎ Tel: (36-1) 436-4100
Reservations Tel: (36)-1-436-4119
☎ Fax: (36-1) 436-4162
✉ E-mail:
aszasz@ramadaplazabudapest.hu
Web: www.ramadaplazabudapest.hu

The registration desk will be placed in the hallway in front of the meeting rooms. Registration will start on Monday at 8.15 a.m. till 5.00 p.m. On Tuesday it will be from 8.30 a.m. - 3.30 p.m. with Wednesday registration only from 8.45 a.m.- 09.30. a.m.

ALL MAPS ARE AT THE BACK OF THIS PROGRAMME

1.2 How to get there

By Plane

[Budapest Ferihegy International Airport](#), which has 3 passenger terminals: Ferihegy 1, which tends to serve the many discount airlines now flying to and from Budapest, Ferihegy 2/A and Ferihegy 2/B. Terminal 3 is planned to be built. The airport is located to the east of the centre in the XVIII. district in Pestszentlőrinc. There is an airport minibuss service (www.airportshuttle.hu) to any address in Budapest. The hotel provides transport to or from the airport for a fee. For further information, please contact the hotel at: info@ramadaplazabudapest.hu

By Train

When arriving in Budapest by train it will either be at Keleti (eastern), Nyugati (westbound), and Déli (southbound) station. For information on train services go to the [Hungarian Railways Website](#). Around the city of Budapest you can also take the local railway or [HEV](#).

By Bus

With public transportation: take the bus nr93 or nr200E to Kőbánya-Kispest (metro line 3). Take the metro till Árpád Bridge station than take the tram nr1 direction to Buda till the other side of the bridge (Szt. Lélek tér)

General Information

By Taxi

Taxis to the hotel are available at the airport.

By Car

Budapest Ferihegy Airport (BUD): 22 kilometers (14 miles) from the destination which takes approximate 30 minutes by car. Driving directions: From the airport head for Ulloi Street, go to Hungária Boulevard and then Károly Boulevard, then across the Árpád Bridge and the hotel is on the left hand side.

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.

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.**

conference dinner:	€ 50
lunch	€ 30

1.5 Registration

The **ISC'2010** Registration Desk will be open for information and registration:

Monday, June 78.15 a.m. to 5.00 p. m. in the hallway

Tuesday, June 88.30 a.m. to 3.30 p. m. in the hallway

Wednesday, June 98.45 a.m. to 9.30 a.m. in the hallway

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-2010)

General Information

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

ISC'2010 Proceedings	€ 50
Other Proceedings –see price list at desk	

Other Proceedings can be ordered using the forms available at the conference.

1.7 Meeting Rooms

The meeting rooms will be designated and signposted as **ROOM A-B** at the conference.

Plenary Session and Closing Session: ROOM A

ROOM A for the Keynote Speech, Invited Speech and sessions

ROOM B for the sessions and Round-Table Discussion

1.8 Internet Connection

For internet connections contact the hotel.

1.9 Need Help?

Please see the conference desk for your questions

1.10 Social Events and Lunches

All registrants are invited to

Lunches on Monday and Tuesday and Coffee Breaks for the 2 ½ days which will be served in the hotel.


The Conference Dinner





The conference dinner will be held on the 8th of June in the evening at the [Fortuna House](#). A historic restaurant located in the Royal Quarter of Budapest.

Hess András Tér 4.

H-1014 BUDAPEST

 Tel./Fax: (+36-1) 3756-857,

 Tel.: (+36-1) 3557-177

 E-mail: fortuna@hu.inter.net

We will meet at 6.30 p.m. in front of the hotel where a bus will take us to the conference dinner site. This bus will also take us back to the hotel after dinner.

General Information

1.12 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'2010 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.

1.13 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

Every Room has an LCD projector and an overhead projector

ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL. If for some reason a chair is not available then the first speaker of the session assumes responsibility of the session unless otherwise solved by the committee.

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>

MONDAY, 7th JUNE 2010		
08.15-17.00	REGISTRATION	
09.00-09.30	OPENING SESSION IN ROOM A	
09.30-10.30	KEYNOTE ADDRESS BY ZOLTAN TANKO IN ROOM A	
10.30-11.00	COFFEE BREAK	
11.00-12.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
	TELECOM NETWORKS SIMULATION	SIMULATION IN ENERGY
12.30-14.00	LUNCH BREAK	
14.00-15.00	PARALLEL SESSIONS	
	ROOM A	ROOM B
	SIMULATION METHODOLOGY AND AI	FLUID CHEMICAL SIMULATION
15.00-15.30	COFFEE BREAK	
15.30-17.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
	SIMULATION TOOLS	BUSINESS PROCESS MODELLING
FREE EVENING		

TUESDAY, 8th JUNE 2010

08.30-15.30	REGISTRATION	
09.00-10.00	INVITED PRESENTATION ANDRE GAGALOWICZ IN ROOM A	
10.00-10.30	COFFEE BREAK	
10.30-12.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
	INVENTORY LOGISTICS AND SUPPLY CHAIN SIMULATION I	VIRTUAL MANUFACTURING
12.30-14.00	LUNCH BREAK	
14.00-15.00	PARALLEL SESSIONS	
	ROOM A	ROOM B
	TRAFFIC SIMULATION I	MANUFACTURING PROCESS SIMULATION
15.00-15.30	COFFEE BREAK	
15.30-17.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
	TRAFFIC SIMULATION II	MANUFACTURING OPTIMIZATION
19.00 – 22.00	CONFERENCE DINNER, departure by bus at the Hotel at 18.30.	

WEDNESDAY, 9th JUNE 2010		
08.45-09.30	REGISTRATION	
09.00 10.00	PARALLEL SESSIONS	
	ROOM A	ROOM B
	MANAGEMENT SIMULATION	BACK-UP SESSION
10.00-10.30	COFFEE BREAK	
10.30 12.30	PARALLEL SESSIONS	
	ROOM A	ROOM B
	COMPLEX ENGINEERING SYSTEMS SIMULATION	ROUND TABLE DISCUSSION
12.30-12.45	CLOSING SESSION AND BEST PAPER AWARD IN ROOM A	

Monday, 7th June 2010

HALLWAY

Registration

08.15 - 17.00

**ROOM A
09.00 – 09.30**

KEYNOTE

Opening ISC2010 and Welcome

Welcome Address

**Lencse Gabór, Szechenyi Istvan University, Gyor, Hungary
ISC'2010, General Conference Chair**

**László Muka, Elassys Consulting Ltd, Budapest, Hungary
ISC'2010, General Program Chair**

09.30 – 10.30

KEYNOTE SPEECH

Chair: Lencse Gabór, Szechenyi Istvan University, Gyor, Hungary



Simulation of Systems and Large-scale Development Projects
Zoltán Tankó

Welcome

Monday, 7th June 2010

**10.30 - 11.00
COFFEE BREAK**

11.00 – 12.30

**ROOM A- 11.00-12.30 TELECOM
TELECOM NETWORKS SIMULATION**

Chair: László Muka, Elassy Consulting Ltd, Budapest, Hungary

TEL_01
Achievable Cell throughput in 3G Systems
Peter Fazekas **203**

TEL_03
Models and Algorithms for Self Similar IP Network Traffic Simulation and Performance Analysis
Dimitar Radev and Izabella Lokshina **208**

TEL_05
Performance Prediction of Conservative Parallel Discrete Event Simulation
Gábor Lencse and András Varga **214**

**ROOM B- 11.00-12.30 ENERGY
SIMULATION IN ENERGY**

Chair: Damien Chapon, Airbus Operation S.A.S., Toulouse, France

ENERG_01
Spatial Power Distribution Simulation for Nuclear Reactor
Janos Sebestyen Janosy, Andras Kereszturi, Gabor Hazi,
Jozsef Pales and Endre Vegh **239**

ENERG_03
Model Based Real Time Automated Temperature Control System for Risk Minimization in Honey Bee Wintering Building
Aleksejs Zacepins, Jurijs Meitalovs and Egils Stalidzans **245**

Monday, 7th June 2010

ENERG_02

Adjustment of Hydrostatic Transmissions through Virtual Instrumentation Technique

Teodor Costinel Popescu, Dragos Daniel Ion Guta and Alexandru Marin 248

12.30 - 14.00

LUNCH BREAK

14.00 – 15.00

ROOM A- 14.00-15.00

METH

SIMULATION METHODOLOGY AND AI

Chair: Lencse Gabór, Szechenyi Istvan University, Győr, Hungary

DES_01

Contact Status Simulation and Fretting Fatigue Threshold Determination of Spline SHC under Alternating Loadings

Longjiang Shen, Armin Lohrengel and Günter Schäfer 5

AMB_01

Design of Novel Self-Organization Mechanisms through Simulation

Marton Legeny and Borbala Katalin Benko 10

ROOM B- 14.00-15.00

FLUID

FLUID CHEMICAL SIMULATION

Chair: Janos Sebestyén Janosy, MTA KFKI-AEKI, Budapest, Hungary.

METH_03_TOOLS_ELEC

Fault Detection in Fluid Systems: An Interactive Realtime Approach

C. Angeli and A. Chatzinikolaou 223

CHEM_01

Topological Features and Parameters of Biochemical Network Structures

Tatjana Rubina and Egils Stalidzans 228

15.00 - 15.30

COFFEE BREAK

Monday, 7th June 2010

15.30 - 17.30

**ROOM A- 15.30-17.30
SIMULATION TOOLS**

TOOLS

Chair: László Muka, Elassy Consulting Ltd, Budapest, Hungary

METH_01_TOOLS

Waveform Relaxation for the Simulation of Complex Hybrid Systems in SCICOS

Damien Chapon, Ramine Nikoukhah and François Delebecque 17

METH_02_TOOLS

Graphical Object Oriented Simulation with SIMIO

Patrick Kirchhof and Nicolas G. Meseth 22

METH_04

FORTIS – An Integrated Simulator for Distributed Time Series Forecasting

Janetta Culita and Dan Stefanoiu 27

COMP_01_TOOLS

ViennaIPD - An Input Control Language for Scientific Computing

Josef Weinbub, Karl Rupp and Siegfried Selberherr 34

ROOM B- 15.30-17.00

BUSINESS

BUSINESS PROCESS MODELLING

Chair: Habtom Mebrahtu, Anglia Ruskin University, Chelmsford, UK

MANUF_09_ECEC

Storyboards in Business Process Modelling

Veronika Juchova, Svatopluk Stofa, David Ježek and Ivo Vondrak 57

MANUF_11

Barriers to the Application of Simulation for Tactical decision Making

PJ Byrne, Paul Young, John Geraghty, Cathal Heavey and Barry Kennedy 62

HOS_01

AIDATrace - Interoperation Platform for Active Monitoring in Healthcare Environments

José Machado, Miguel Miranda, Pedro Gonçalves, António Abelha, José Neves and Alberto Marques 67

FREE EVENING

Tuesday, 8th June 2010

HALLWAY

Registration

08.30 - 15.30

09.00 – 10.00

ROOM A- 09.00-10.00

INVITE

INVITED PRESENTATION

Chair: Lencse Gabór, Szechenyi Istvan University, Gyor, Hungary



Towards Virtual Try-on Technology

André Gagalowicz

10.00 - 10.30

COFFEE BREAK

10.30 - 12.30

ROOM A- 10.30-12.30

LOGIS

INVENTORY LOGISTICS AND SUPPLY CHAIN SIMULATION

Chair: Jose Machado, Universidade do Minho, Braga, Portugal.

TEL_02

Requirements for Electronic Tags from a Business Perspective

Izabella Lokshina and Evan Schiele 179

Parallel Sessions - Tuesday

Tuesday, 8th June 2010

TRANS_02

Robustness of the Performance of an Unreliable Product Inventory System against various Demand Patterns

Roongrat Pisuchpen and Gerrit K. Janssens..... 184

TRANS_03

Simulation of a Basic Integrated Inventory Problem with Quality Improvement and Lead Time Reduction

Sofie Van Volsem and Johannes Verdiesen..... 190

TRANS_09

Green Supply Chain Event Management

Matthias Klumpp, Sascha Bioly, Alexandra Saur and Stephan Zelewski..... 195

ROOM B- 10.30-12.00

MANUF

VIRTUAL MANUFACTURING

Chair: László Muka, Elassy Consulting Ltd, Budapest, Hungary

MANUF_06

A comprehensive 3D Simulation System for the Virtual Production

Jürgen Roßmann, Roland Wischnewski and Oliver Stern 109

MANUF_07_TOOLS

Specified CAD (Computer Aided Design) Tool for Rapid Manufacturing Technology

Estitxu Martínez de Alegría Uriarte, Iñaki García, Aurelio Díaz de Arcaya, Gonzalo Lázaro and Luis Usatorre 117

MANUF_02

Micro Pattern Shaping Simulation

Su-Jin Kim, Jong-Min Lee, Duy Le and Tae-Jin Je..... 122

12.30 - 14.00

LUNCH BREAK

Tuesday, 8th June 2010

14.00 - 15.00

ROOM A- 14.00-15.00 **TRAF**

TRAFFIC SIMULATION I

Chair: Lencse Gabór, Szechenyi Istvan University, Gyor, Hungary

TRANS_04

Hierarchical Architecture for Urban Traffic Management – Simulation

Monica Voinescu, Andreea Udrea, Simona Caramihai and Calin Munteanu..... 161

TRANS_10

Simulation of Traffic Operations for Sea-crossing Bridges

Guiyun Liu and Pengjun Zheng 167

ROOM B- 14.00-15.00

MANUF

MANUFACTURING PROCESS SIMULATION

Chair: Tim Govaert, Ghent University, Ghent, Belgium

MANUF_03

A Comparison of Modified Just-in-Time Production system with CONWIP

Ali Ardalan and Rafael Diaz..... 75

MANUF_08_FUBUTEC

BPM Method Extension for Automatic Process Simulation

Štěpán Kuchař and Jan Kožusznik..... 80

15.00 - 15.30

COFFEE BREAK

15.30 – 17.00

ROOM A- 15.30-17.00

TRAF

TRAFFIC SIMULATION II

Chair: Pengjun Zheng, University of Southampton, Southampton, UK.

TRANS_08

A Fuzzy Q-Learning Approach to Simulate Intelligent Traffic Control

Juan C.Pacheco, Rosaldo J.F.Rossetti and Cesar H.Rodriguez 257

Tuesday, 8th June 2010

TRANS_01

A deterministic Annealing Algorithm for Simultaneous Routing of Loaded and Empty Containers

Kris Braekers, Gerrit K. Janssens and An Caris 172

ROB_01

Simulation of Real-time Robot Control Systems using Player/Stage Software

Vitalijs Komasilovs and Egils Stalidzans..... 39

ROOM B- 15.30-17.00

MANUF

MANUFACTURING OPTIMIZATION

Chair: Sofie Van Volsem, Ghent University, Ghent, Belgium.

MANUF_05

A LEGO Factory for teaching Simulation Based Production Optimization

Anna Syberfeldt..... 89

MANUF_04

Automatic Analysis of Manufacturing Simulation Output

Habtom Mebrahtu and Rob Walker 95

TRANS_06

A Design Method for Parts Picking Zones in a Manufacturing Environment

Klaas Peerlinck, Tim Govaert and Hendrik Van Landeghem..... 102

CONFERENCE DINNER – 19.00 -22.00



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Hess András Tér 4.

H-1014 BUDAPEST

☎ Tel./Fax: (+36-1) 3756-857,

☎ Tel.: (+36-1) 3557-177

✉ E-mail: fortuna@hu.inter.net

We will meet at 6.30 p.m. in front of the hotel where a bus will take us to the conference dinner site. This bus will also take us back to the hotel after the dinner.

Wednesday, 9th June 2010

HALLWAY

Registration

08.45 - 09.30

09.00 – 10.00

ROOM A- 09.00-10.00

BUSINESS

MANAGEMENT SIMULATION

Chair: Philippe Geril, ETI-EUROSIS, Ostend, Belgium

COMPLEX_03_AERO

We can save our World if Worlds collide

William Conley..... 45

COMPLEX_02_AERO

The Large Asteroid Problem from an Industrial Management Perspective

William Conley..... 50

ROOM B- 09.00-10.00

BACK-UP

BACK-UP SESSION

Chair: TBA

This session is reserved for authors, who were unable through circumstances beyond their control, to present their paper in the aforementioned timeslot.

10.00 - 10.30

COFFEE BREAK

10.30 - 12.30

ROOM A- 10.30-12.30

COMPLEX

COMPLEX ENGINEERING SYSTEMS SIMULATION

Chair: Izabella Lokshina, SUNY Oneonta, Oneonta, NY, USA

COMPLEX_05_VIR

Building of a Motion feedback Roller Coaster Simulator: A case Study

Miguel A. Expósito-Sánchez, Ignacio García-Fernández,

Miguel A. Gamón-Giménez, Marta Pla-Castells and Rafael J. Martínez-Durá 131

Wednesday, 9th June 2010

COMPLEX_04 Modelling and Simulation of Several Interacting Cellular Automata Marta Pla-Castells, <u>Ignacio García-Fernández</u> and Rafael J. Martínez-Durá..... 139

TRAIN_01_AUTO Modular Technology: A Methodology for the Creation of Virtual Environments in Terrain Driving Simulators <u>Carlota Tovar</u> , Ginés Jesús Jimena and Jose María Cabanellas 147
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AUTO_01 Simulation of an HEV equipped with a variable displacement ICE <u>Valerian Croitorescu</u> , Andrei Maciac, Marius Bataus, Mircea Oprean and Cristian Andreescu 154

ROOM B- 10.30-12.30 **ROUND-TABLE**
ROUND-TABLE DISCUSSION
Chair: Lencse Gabór, Szechenyi Istvan University, Gyor, Hungary
The theme of this discussion is how to stimulate simulation research and use during harsh economic times or “How modelling and simulation can help overcome the turbulent situation generated by the economic crisis“.

ROOM A 12.30 - 12.45 **BEST PAPER**
CLOSING SESSION AND BEST PAPER AWARD
Chair: Lencse Gabór, Szechenyi Istvan University, Gyor, Hungary

ISC'2011

**SEE YOU ALL
JUNE 6-8, 2011
FOR ISC'2011 AT THE
CENTRO CULTURALE DON ORIONE
IN VENICE, ITALY**



**Track proposals and tutorial proposals can be sent in by
August 15th, 2010 to philippe.geril@eurosis.org**

Other ISC Conferences from 2012 onwards

ISC'2012, June 4-6, 2012, [Hotel International](#), Brno, Czech Republic (could be moved to the University)

ISC'2013, Sardegna, Italy TBC

ISC'2014, June 2014, Höskolan Skövde, Skövde, Sweden CONFIRMED

If you are interested in hosting an ISC just contact EUROISIS.

Conference Site Maps



Budapest Centre Map

NOTES

Conference Notes

eurosis

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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