Final Program

7-9 June 2010

Organized by

Sponsored by

Contents

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 minibus 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)

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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 7 ....8.15 a.m. to 5.00 p. m. in the hallway
Tuesday, June 8 ....8.30 a.m. to 3.30 p. m. in the hallway
Wednesday, June 9.............8.45 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.

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**	

HALLWAY

Registration

08.15 - 17.00

ROOM A   **KEYNOTE**
09.00 – 09.30

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

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, Gyor, 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 Sebestyen 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

13

Parallel Sessions - Monday

Monday, 7th June 2010

15.30 - 17.30

ROOM A- 15.30-17.30   **TOOLS**
SIMULATION TOOLS
Chair: László Muka, Elassys Consulting Ltd, Budapest, Hungary

ROOM B- 15.30-17.00   **BUSINESS**
BUSINESS PROCESS MODELLING
Chair: Habtom Mebrahtu, Anglia Ruskin University, Chelmsford, UK

FREE EVENING

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

15

Parallel Sessions - Tuesday

Tuesday, 8th June 2010

ROOM B- 10.30-12.00   **MANUF**
VIRTUAL MANUFACTURING
Chair: László Muka, Elassys Consulting Ltd, Budapest, Hungary

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

TRANS_10
Simulation of Traffic Operations for Sea-crossing Bridges

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

MANUF_08_FUBUTEC
BPM Method Extension for Automatic Process Simulation

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

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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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

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

Wednesday, 9th June 2010

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

**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, Högskolan Skövde, Skövde, Sweden CONFIRMED**

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

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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EUROSIS Info