FINAL PROGRAM

23-25 October 2006

Organized by

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EUROSIS
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General Information

1. Conference Location

The Conference is being held at

LAAS-CNRS (in the main building)
7, avenue du Colonel Roche
31077 Toulouse Cedex 4, France
Telephone: +33.5 61 33 62 00
Fax: +33.5 61 55 35 77
Email: laas-contact@laas.fr

The registration desk will be placed in the hallway of the main building of LAAS from Monday morning October the 23 onwards, where registration will start at 08.15 and will end at 17.00. On Tuesday October 24th registration will be from 8.30 a.m. - 3.00 p.m. with Wednesday registration only from 8.30 a.m.- 9.00. a.m.

ALL MAJOR MAPS ARE AT THE BACK OF THIS PROGRAMME

The airport is located about ten minutes by car from the city centre.

A shuttle service is organised between the airport and the centre of Toulouse. Departure is from door C on the ground floor. The shuttle frequency is every 20 minutes from 6h30 to 23h00. The one way ticket fare is 4 EURO.

Airport Shuttle: http://www.navettevia-toulouse.com/

Route of the Airport Shuttle Bus
The usual cost for a taxi from the Toulouse Blagnac Airport to the city center and the hotels is about 25 EURO during weekdays, but the price is higher at night and on the weekends.

2. 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.

3. Tickets

Extra tickets for the social event and lunches are available from the registration desk. Price: (or equivalent in another currency) for extra tickets

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<th>Extra conference dinner</th>
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4. Registration

The ESM'2006 Registration Desk will be open for information and registration:

- Monday, October 23 .......... 8.15 a.m. to 5.00 p.m.
- Tuesday, October 24 ........ 8.30 a.m. to 3.00 p.m.
- Wednesday, October 25 ...... 8.30 a.m. to 9.00 a.m.

The location of the registration desk will be signposted

5. Conference Proceedings

Each fully paid registrant will be provided with a copy of the Conference Proceedings (printed format) **This is NOT applicable to students who are not authors.**

(Extra copies are available on a cash and carry basis at special rates during ESM’2006)

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

| ESM’2006 Proceedings CASH AND CARRY | € 50 |

6. Meeting Rooms

The meeting rooms are designated A-B-C and D. The way to the rooms will be signposted. An Internet room will be available.
General Information

7. Need Help?
Please see the conference desk for your questions

8. Social Events and Lunches
All registrants are invited to
All lunches and Coffee Breaks are served at LAAS

The Conference Dinner
All participants are invited to the conference dinner on TUESDAY the 24th of October. As we need to give an exact number of participants we would appreciate your confirmation at the desk before Tuesday lunchtime.

The conference dinner will be held in the centre of Toulouse on the 24th of October at

Les Caves de la Marechale,
3, rue Jules Chalande
Tel: +33.5 61 23 89 88 from 8.00 p.m. onwards.

We will meet at 7.45 in front of the Town Hall at the main gate on the Place de la Capitole (the main square in Toulouse) and will walk as a group to the restaurant.
General Information

9. Visit

A guided visit is envisaged on Tuesday the 24th of October to TAXIWAY, where participants will be able to visit the AIRBUS A380 on the CIRCUIT JEAN LUC LAGARDERE SITE A380. The participants who pre-registered will be the only ones which will be able to make the visit.

10. Room Legend
The following rooms will be used for the conference:
Every conference day: "salle de Conférence" and in addition,
Monday: rooms "Vignemalle", "Tourmalet" and "Bardeen"
Tuesday: rooms "Vignemalle", "Tourmalet" and "Europe"
Wednesday: rooms "Vignemalle", "Tourmalet" and "Europe"

11. Best Paper Award
During the conference the papers, which were accepted as extended papers will be judged by the committee in order to choose the best paper of the ESM'2006 conference.

12. Shuttle Buses
2 Buses will be available to the participants to take them to and from LAAS. They will leave in the morning from 2 locations: The Novotel Toulouse Centre and the Ibis Centre Hotel. (see on the hotel information page)

ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL

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

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
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**Room A**
- Decision Based Simulation
- Collective Intelligence Simulation
- Approximation and Evaluation Simulation
- Modeling Operability
- Fp 7 Meeting

**Room B**
- Analytical Simulation in Communications
- Approximation and Evaluation Simulation
- Modeling Operability

**Room C**
- Biological Simulation

**Room D**
- Eurosism Member Meeting
Monday, 23rd October 2006

HALLWAY
Registration
08.15 - 17.00

MAIN HALL
09.00 – 10.00
Opening ESM’2006 and Welcome

Welcome Address

Professor Malik Ghallab
Head of LAAS CNRS

Alexandre Nketsa
LAAS-CNRS
ESM2006 General Conference Chair

Philippe Geril
EUROSIS, Ghent University
EUROSIS Coordinator

09.15 – 10.00
KEYNOTE SPEECH
Chair: Alexandre Nketsa, LAAS-CNRS, Toulouse, France

The Wireless and Mobile Revolution: Signal Processing as the Way Forward
Marwan Al-Akaidi
Monday, 23rd October 2006

10.00 - 10.30
COFFEE BREAK

10.30 – 12.30

ROOM A - 10.30-12.30
COMPLEX
INTRODUCTION TO COMPLEX SYSTEMS MODELLING
Chair: Cyrille Bertelle, University of Le Havre, Le Havre, France

INVITED SPEECH
Complexity, Control and Self-Organization
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Holistic Metrics, a Trial on Interpreting Complex Systems
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BACK-UP SESSION

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12.30 - 14.00
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Monday, 23rd October 2006

14.00 – 15.00

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Laszlo Gulyas

THE ESM2006 SHUTTLE BUSSSES WILL PICK UP THE PARTICIPANTS AT LAAS
TO TAKE THEM BACK TO THE CITY CENTRE AT 18.15

FREE EVENING
Tuesday, 25th October 2006

HALLWAY
Registration
08.30 - 15.00

09.00 – 10.00

ROOM A- 09.00-10.00

EMOTION MODELLING
Chair: Gerard H. E. Duchamp, Univ. Paris Nord, Villetaneuse, France

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Chair: Khader Sahraoui, LAAS-CNRS, Toulouse, France

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Modelling Methodology and Simulation of a Hospital Laundry
Michel Gourgand, Fateh Mebrek and Alain Tanguy

BIO-05
A Queueing Network Model of Patient Flow in an Accident and Emergency Department
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BIO-04
A Capacity Planning Simulation Model and its Application to a Nuclear medicine Service
Rob Cameron, Robert E Dugdale and Michael J. Page

ENV-02
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Alexandre Weber, Daniel Dupont, Anne Follet, Philippe Kubiak and Ahmed Rahmani

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AGENT BASED NEGOTIATION AND ACTORS
Chair: Alexandre Nketsa, LAAS-CNRS, Toulouse, France

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Maria Joao Viamonte, Isabel Praça, Carlos Ramos and Zita Vale
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Benoit Lacroix, Philippe Mathieu and Sebastien Picault ........................................ 315
Tuesday, 24th October 2006

ROOM D - 14.00-15.00
PETRI NETS SIMULATION
Chair: Philippe Esteban, LAAS-CNRS, Toulouse, France

PETRI-08
ESA_PetriNet tool: Extraction Scenarios & Analyzer by Petri Net model
Application to the extraction of feared scenarios in a landing gears system
Malika Medjoudj, Hamid Demmou and Robert Valette ............................................. 375

PETRI-10
Reducing Complexity in the Systematic Construction of Petri Nets Models through Graph Transformations
Carmen Veronica Bobeanu and Hendrik Van Landeghem................................. 521

15.00 - 15.30
COFFEE BREAK

15.15 – DEPARTURE TO AIRBUS FOR A GROUP OF 47 PEOPLE
(this was decided on the first-in basis of the registrations received)
The list of participants will be posted at the registration desk. The other participants will be taken back to Toulouse centre after the last sessions finish at LAAS at 17.15 in the 2nd bus.

15.30 – 17.00

ROOM B - 15.30-17.00
FLUID FLOW SIMULATION
Chair: Jean-Claude Pascal, LAAS-CNRS, Toulouse, France

FLUID-04
Thermohydraulic Modeling and Analysis of CANDU Shutdown Cooling System
Ilie Prisecaru, Daniel Dupleac and Nijă Iulian......................................................... 164

FLUID-02
Solubility of Toxic Compounds from Petroleum Spills into Seawater
M. R. Riazl and Y. M. Al-Roomi.............................................................. 169

FLUID-03
Investigation of Flow Dynamics in Porous Media using Computer Simulation
Arezou Jafari, S. Mohammad Mousavi, Piroz Zamankhan, Kari Pietarinen and Pertti Sarkomaa................................................................. 157
Tuesday, 24th October 2006

ROOM B - 15.30-16.30
AGENT BASED SIMULATION IN BIOLOGY
Chair: Hamid Demmou, LAAS-CNRS, Toulouse, France

AGENT-01
Analysis of the relative importance of the humoral versus the cellular response during the acute stage of HIV infection: Results from multi-agent computer simulations
Ashley Callaghan, Heather J. Ruskin and Ray Walshe

AGENT-08-BIO-PETRI
Simulation of Attentional Networks in the Brain – an Agent Based Approach
Terje Kristensen and Jørgen Johansen

THE ESM2006 SHUTTLE BUSSES WILL PICK UP THE PARTICIPANTS TO TAKE THEM BACK TO THE CITY AT 17.15

CONFERENCE DINNER – 20.00 -23.00

Les Caves de la Marechale,
3, rue Jules Chalande
Tel: +33.5 61 23 89 88 from 8.00 p.m. onwards.

We will meet at 7.45 in front of the Town Hall at the main gate on the Place de la Capitole (the main square in Toulouse) and will walk as a group to the restaurant.
Wednesday, 25th October 2006

HALLWAY
Registration
08.30 - 09.00

09.00 – 10.00

ROOM A - 09.00-10.00
DECISION BASED SIMULATION
Chair: Hamid Demmou, LAAS-CNRS, Toulouse, France

METH-15
The Application PLA for Creation Simulation Models for Decision Making
H. Pranevicius, V. Pilkauskas and D. Makackas

METH-16
The Simulation of the economic Effect of Power System Structure including
Renewable Sources of Energy
Eugeniusz M. Sroczan

ROOM B - 09.00-10.00
ANALYTICAL AND NUMERICAL SIMULATION IN COMMUNICATIONS
Chair: Khader Sahraoui, LAAS-CNRS, Toulouse, France

ANMT-01
Differential Modeling and its Application to TCP/IP
H. Hassan, J-M. Garcia and C. Bockstal

ANMT-06
Transient Analysis of Semi-Markovian Switching Systems in
Telecommunication Networks
Gerhard Hasslinger and Sebastian Kempken

ROOM C - 09.00-10.00
BIOLOGICAL SIMULATION
Chair: Jean-Claude Pascal, LAAS-CNRS, Toulouse, France
Wednesday, 25th October 2006

BIO-01
Geometric Hierarchical Data Organisation in the Modelling of the Cerebellum
Omar Bennani, P. Chauvet, F. Jouen and G.A. Chauvet ........................................ 223

BIO-02
Development of a Cardiovascular Model with Baroreceptor Reflex
Jinhuai Lin, Derek G Tilley and Roger F Ngwompo................................................ 229

ROOM D - 09.00-10.00
EUROSIS MEMBER MEETING
At this meeting an update will be given about EUROSIS plus an in depth overview of the new EUROSIS website and its applications for the members.

10.00 - 10.30
COFFEE BREAK

10.30 - 12.30

ROOM A - 10.30-12.30
COMPLEX
COLLECTIVE INTELLIGENCE AND NEURAL LEARNING
Chair: Pierrick Tranouez, University of Le Havre, Le Havre, France

COMPLEX-08
Multiobjective Optimization using Ant Colonies
Feïza Ghezail, Henri Pierreval and Sonia Hajri Gabouj........................................ 437

COMPLEX-10
Self-organization in an artificial immune Network System
Julien Franzolini and Damien Olivier ................................................................. 440

COMPLEX-11
Pyocyanic Bacillus Propagation Simulation
Antoine Dutot, Pierre Magal, Damien Olivier and Guilhelm Savin ......................... 445

COMPLEX-24
On Adapting Neural Networks to Cellular Manufacturing
Dania A. El-Kebbe and Christoph Danne ............................................................ 450
Wednesday, 25th October 2006

ROOM B- 10.30-12.00  ANALYT
APPROXIMATION AND EVALUATION SIMULATION
Chair: Mario Paludetto, LAAS-CNRS, Toulouse, France

ANMT-03
Reliability Based Pareto Optimum Design of Robust Compensators for a Dynamic System with Parametric Uncertainty
Nader Nariman-zadeh, Amir Hajiloo, Ali Jamali, Ahmad Bagheri and Aria Alasti .............................................................................................................................................. 83

ANMT-04
Generating Simulation Input with Approximate Copulas
Feras Nassaj and Johann Christoph Strelen ........................................................................................... 88

ANMT-05-COMPLEX
Expanded scope of traffic flow analysis: Entity Flow-Phase Analysis for Rapid performance evaluation of enterprise process systems
Gabor Lencse and Laszlo Muka ............................................................................................................. 94

ROOM C- 10.30-12.00  METH
MODEL INTEROPERABILITY
Chair: Philippe Esteban, LAAS-CNRS, Toulouse, France

METH-08
Process Interaction Diagrams for Structured Discrete Event Simulation Modeling
Acácio M. O. Porta Nova ......................................................................................................................... 19

METH-07
Contextual Testing of Interactive Product Simulations for New Generation Products
Alex Woolley and Steve Gill ...................................................................................................................... 23

METH-10
Simulation Model Interoperability in Support of Complex Organisation Design and Change
Richard Weston, Min Zhen, Aysin Rahimifard, Joseph Ajaefobi, Chenghua Ding, Alejandro Guerrero, Bilal Wahid and Tariq Masood ........................................................................................................ 28
Wednesday, 25th October 2006

ROOM D - 10.30-12.00  FP-7-MOSAIC
Preparatory meeting to send in a proposal for an NoE on Simulation for the FP-7

ROOM A 12.30 - 12.45  BEST PAPER
CLOSING SESSION AND BEST PAPER AWARD
Chair: Alexandre Nketsa and Philippe Geril

THE ESM2006 SHUTTLE BUSSES WILL PICK UP THE PARTICIPANTS at LAAS TO TAKE THEM BACK TO THE CITY AT 13.00

SEE YOU ALL
OCTOBER 2007
IN MALTA
FOR ESM’2007
at the WESTIN hotel

Track proposals and tutorial proposals can be sent in by January 30th, 2007
## CONFERENCE HOTELS

The following hotels are those from which the shuttle busses will depart to ESM’2006

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Website</th>
<th>Departure Times</th>
<th>Room Rates</th>
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</thead>
<tbody>
<tr>
<td>IBIS Centre **</td>
<td>2, rue Claire-Paulilhac</td>
<td>+33 (0)5 61 63 61 63</td>
<td>+33 (0)5 61 63 07 46</td>
<td><a href="http://www.ibishotel.com">www.ibishotel.com</a></td>
<td>Monday-Thursday</td>
<td>73 EUR</td>
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<td></td>
<td>Friday-Sunday</td>
<td>55 EUR</td>
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<tr>
<td>NOVOTEL TOULOUSE Centre</td>
<td>Compans Caffarelli</td>
<td>+33.(0)5.61.21.74.74</td>
<td>+33.(0)5.61.22.81.22</td>
<td><a href="http://www.novotel.com">www.novotel.com</a></td>
<td>Sunday-Tuesday</td>
<td>135 EUR</td>
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<tr>
<td></td>
<td>5, Place Alfonse Jourdain</td>
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<td></td>
<td><a href="mailto:H0906@accor-hotels.com">H0906@accor-hotels.com</a></td>
<td>Wednesday-Saturday</td>
<td>129 EUR</td>
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### Departure times of the shuttle busses

**Monday October 23**

- **Morning:** Novotel Toulouse Centre: 7.45  
  Hotel Ibis Centre: 8.00 (around corner, on the Place Jeanne d’Arc)  
  Arrival at LAAS: 8.30-8.45
- **Evening:** departure LAAS: 18.15 for the city centre

**Tuesday October 24**

- **Morning:** Novotel Toulouse Centre: 8.00  
  Hotel Ibis Centre: 8.15 (around corner, on the Place Jeanne d’Arc)  
  Arrival at LAAS: 8.30-8.45
- **Afternoon:** Departure to AIRBUS of bus 1: at 15.15. Arrival AIRBUS: 16.00.  
  Departure to Toulouse centre: 18.00  
  Departure from LAAS of bus 2: at 17.15 for the City Centre

**Wednesday October 25**

- **Morning:** Novotel Toulouse Centre: 8.00  
  Hotel Ibis Centre: 8.15 (around corner, on the Place Jeanne d’Arc)  
  Arrival at LAAS: 8.30-8.45
- **Lunch time:** Departure from LAAS to city centre at 13.00
Toulouse surroundings and road system around the city
Conference Site Maps

LOCATION OF LAAS IN RELATION TO TOULOUSE

LAAS - CNRS
Conference Site Maps

LAAS PLAN
Conference Site Maps

LOCATION OF ALL THE HOTELS

TOULOUSE
Centre - Ville
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 new Society will be 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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Fax: ...................................................................................................................
Email: .............................................................................................................