

Final Program



24-26, October 2005



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SIMULA



Contents

Contents

General Information	4
Conference Location	4
How to get there.....	4
Badges.....	4
Tickets.....	4
Registration.....	5
Conference Proceedings.....	5
Need Help?	5
Meeting Rooms	5
Social Event and Lunches.....	5
Company Visit	5
Best Paper Award.....	6
Paper Legend	6
 Quick Program Overview.....	 7
 Notes.....	 10
 Scientific Program.....	 11
 Monday, October 24.....	 11
Tuesday, October 25	20
Wednesday, October 26	29
 Conference Locations.....	 32
 EUROSIS Info.....	 37

General Information

1. Conference Location

The ESMc conference is held at the main building of UNESCO at 7, place de Fontenoy, 75352 Paris 07 SP France. **General phone number: +33 (0)1 45 68 10 00, Fax number: +33 (0)1 45 67 16 90** The registration desk will be placed near the main entrance on Monday morning onwards, where registration will start from 8.30 till 9.15. After 9.15 a.m., the desk will be moved to the hallway leading up to the meeting rooms. On Monday and Tuesday registration will be from 8.30 a.m. - 5.00 p.m. with Wednesday registration only from 8.30 a.m.- 08.45. a.m.

ALL MAPS ARE AT THE BACK OF THIS PROGRAMME

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

lunch	€ 40
conference dinner:	€ 50

4.Registration

The ESM'2004 Registration Desk will be open for information and registration:

Monday, October 25..... 8.15 a.m. to 5.00 p. m. at the entrance and in the hallway.

Tuesday, October 26..... 8.15 a.m. to 5.00 p. m. in the hallway

Wednesday, October 27 8.30 a.m.

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'2004)

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

ESM'2004 Proceedings	50 EURO
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General Information

6. Meeting Rooms

The four meeting rooms will be indicated by EUROSIS signs at the event. The rooms used for the meeting are Rooms VI (A) and VII (B). Hereafter designated in the final programme as ROOM A and B.

7. Need Help?

Please see the conference desk for your questions

8. Social Events and Lunches

All registrants are invited to

All **buffet lunches** are served at UNESCO

The **Get-Together Party** will be held on Monday evening at UNESCO

The Conference Dinner

All participants are invited to the conference dinner on Tuesday the 26th of October. The conference dinner will be held at la Coupole, 102, bd du Montparnasse, F-75014 Paris. Métro : Vavin. Tel: 33 (0)1 43 20 14 20, Fax: 33 (0)1 43 35 46 14.

As we need to give an exact number of participants for this event, we would appreciate **your confirmation at the desk before Monday evening.**

General Information

10. Other

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'2004 conference.

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://biomath.ugent.be/~eurosis> and <http://www.eurosis.org>

MONDAY, 24 th OCTOBER 2005				
07.30-17.00	REGISTRATION			
08.30-09.30	OPENING SESSION AND INVITED SPEECH BY MICHAEL PIDD			
09.30-10.00	COFFEE BREAK			
10.00-12.00	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	SIMULATION METHODOLOGY	ELECTRONICS SIMULATION	PARALLEL SIMULATION	WELCOME BY MARWAN AL-AKAIDI
				LOGISTICS SIMULATION
12.00-13.30	LUNCH BREAK			
13.30-15.15	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	INVITED SPEECH EUGENE KINDLER	FLUID FLOW SIMULATION	ANALYTICAL AND NUMERICAL SIMULATION I	NEURAL NETWORKS IN INDUSTRIAL APPLICATIONS
	SIMULATION TOOLS I			
15.00-15.30	COFFEE BREAK			
15.30-17.30	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	SIMULATION TOOLS II	ENERGY SIMULATION	ANALYTICAL AND NUMERICAL SIMULATION II	COMPLEX SYSTEMS SIMULATION
17.30 – 18.30 GET-TOGETHER-PARTY				

TUESDAY, 25th OCTOBER 2005				
08.00-17.00	REGISTRATION			
08.30-09.30	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	AI BASED DECISION SUPPORT	INVITED SPEECH PIET KOMMERS	PETRI NETS SIMULATION I	IMAGE AND DATA MODELLING I
09.30-10.00	COFFEE BREAK			
10.00-12.00	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	AI BASED MANUFACTURING WITH AGENTS	SIMULATION AND TRAINING	PETRI NETS SIMULATION II	IMAGE AND DATA MODELLING II
12.00-13.30	LUNCH BREAK			
13.30-15.00	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	AI BASED TRANSPORT CONTROL	INVITED SPEECH RENATE SITTE SIMULATION USING UML	PETRI NETS SIMULATION III	PHONE NETWORK SIMULATION
15.00-15.30	COFFEE BREAK			
15.30-17.30	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	NEURAL NETWORKS SIMULATION	WEB BASED SIMULATION	MOBILE COMPUTING SIMULATION TRAFFIC ANALYSIS SIMULATION	SIMULATION OF PID CONTROLLERS
20.00	CONFERENCE DINNER			

WEDNESDAY 26th OCTOBER 2005				
08.30-09.00	REGISTRATION			
09.00 10.00	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	HOSPITAL LOGISTICS SIMULATION	SIMULATION VALIDATION AND ANALYSIS I	MACHINE SIMULATION	ENVIRONMENTAL MODELLING
10.00-10.30	COFFEE BREAK			
10.30 12.00	PARALLEL SESSIONS			
	ROOM A	ROOM B	ROOM C	ROOM D
	GENETIC ALGORITHM SIMULATION	SIMULATION VALIDATION AND ANALYSIS II	OBJECT ORIENTED SIMULATION AND VIRTUAL ENVIRONMENTS	BIOLOGICAL MODELLING
12.00-12.15	CLOSING SESSION AND BEST PAPER AWARD ROOM A			

NOTES

Monday, 24th October 2005

HALLWAY

Registration

07.30 - 17.00

MAIN HALL

09.15 - 09.30

Opening ESM[®]2005 and Welcome

Welcome Address

Dr. J. Manuel Feliz Teixeira and Prof. A.E Carvalho Brito

University of Porto

ESM'2005, General Conference Chairs

Welcome by

Philippe Geril

EUROSIS, Ghent University

EUROSIS Coordinator

Welcome

Monday, 24th October 2005

ROOM A

08.45 - 09.30

KEYNOTE SPEECH

Chair: J.Manuel Feliz Teixeira, University of Porto, Porto, Portugal

Modelling & simulation to support public policy: performance measurement & improvement

Michael Pidd

09.30 - 10.00

COFFEE BREAK

Monday, 24th October 2005

09.45 – 12.15

ROOM A- 09.45-12.15
SIMULATION METHODOLOGY
Chair:



METH-10-ANALYSIS
Automatic Modelling Image Represented Objects using a Statistic based Approach
Maria João M. Vasconcelos and João Manuel R. S. Tavares7

METH-13
Traceability from Farm-to-Fork
Giordana Bonini and Massimo Garuti 13

METH-20
Selection of Control Variates for Variance Reduction in a multiresponse Simulation with a small Number of Replications
An Caris and Gerrit K. Janssens..... 19

METH-27
A Combination of Randomized Quasi-Monte Carlo with Splitting for Rare Event Simulation
Valerie Demers, Pierre L'Ecuyer and Bruno Tuffin 25

AI-03 Pseudorandom Number Generators in Empirical Tests <u>Alexander Ostanin</u> 587
--

ROOM B- 10.00-12.00
ELECTRONICS SIMULATION
Chair:



METH-03
Simulation Framework for Multi-Processor Memory Communications
Jacob Engel, Daniel Lacks and Taskin Kocak..... 413

METH-05
On Chip Interconnect Simulation of Parasitic Capacitances in Periodic Structures
A. Nentchev, R. Sabelka, W. Wessner and S. Selberherr 420

Monday, 24th October 2005

METH-08

Adaptive Mesh Generation for TCAD with Guaranteed Error Bounds

Rene Heinzl, Philipp Schwaha, Michael Spevak and Tibor Grasser 425

METH-23

Three-Dimensional State-of-The-Art Topography Simulation

Elaf Al-Ani, Rene Heinzl, Philipp Schwaha, Tibor Grasser
and Siegfried Selberherr..... 430

ROOM C- 10.00-12.00

PARALLEL SIMULATION

Chair:

PARA-02

Interference caused by the insertion of an h-BEB station in standard shared-Ethernet networks: Simulation Analysis

Ricardo Moraes and Francisco Vasques..... 503

METH-21-PARA

An Execution Time Performance Evaluation of CMB Protocol

Célia Leiko Ogawa Kawabata, Regina Helena Carlucci Santana,
Marcos José Santana and Sarita Mazzini Bruschi..... 509

PARA-04

The effect of cumulative lookahead on conservative parallel simulation performance

Viliam Solcany and Jiri Safarik..... 512

PARA-05-DEVS01

Management of perturbations within a spatialized differential equations system in the DEVS framework

David Versmisse and Eric Ramat 520

ROOM D- 10.00-12.00

WELCOME AND LOGISTICS SIMULATION

Chair: Marwan Al-Akaidi, De Montfort University, Leicester, UK

LOGIS-02

Reverse Logistics of end of Life Vehicles Modelling and Simulation of Collection and Disassembly

Gabriella Maria Acaccia, Rinaldo Carlo Michelini and Nicola Qualich..... 35



Monday, 24th October 2005

LOGIS-03

Mixed Automation of a sorting Postal Facility Design and Performance Assembly

Gabriella Maria Acaccia, Rinaldo Carlo Michelini and Nicola Qualich..... 41

LOGIS-04-NEUR-02

Stable and robust feedback linearization adaptive fuzzy control of SISO nonlinear systems using Takagi Sugeno fuzzy models

D. Ben Halima and M. Chtourou 49

12.00 - 13.30

LUNCH BREAK

13.30 – 15.15

ROOM A- 13.30-15.15

INVITED SPEECH AND SIMULATION TOOLS I

Chair:

INV-01

Reflective Simulation: Simulation of Systems that Simulate Eugene Kindler

SIMULA-01

Simulation of Queueing Systems in Quesim

Jaroslav Sklenar 35

METH-09-PARA

Distributed Simulation with J-Sim

Jan Klír and Jiří Šafařík 38

ROOM B- 13.30-15.00

FLUID FLOW SIMULATION

Chair:

FLUID-01

Computer modelling and simulation of the influence of physical parameters on thermal comfort

Mariusz Nowak and Andrzej Urbaniak..... 445



Monday, 24th October 2005

FLUID-04

Visualising Fluid Circulation in Coupled Free and Heterogeneous Porous Domain

Diganta Bhusan Das and Mark Lewis 448

FLUID-05

Iterative Cluster splitting for fast VR Visualization s of Turbulences in Microfluids

Renate Sitte and Renato Kovacs 455



ROOM C- 13.30-15.00

ANALYTICAL AND NUMERICAL SIMULATION I

Chair:

ANA-03

Geometric-form solution for a two-class FIFO queue with instantaneous service for one class

Louis-Marie Le Ny 465

ANA-04

Fully Three Dimensional Analysis of Leakage Current in Non-Planar Oxides

P. Schwaha, R. Heinzl, W. Brezna, J. Smoliner, H. Enichlmair, R. Minixhofer and T. Grasser 469

ANA-05

Discretization Schemes for Macroscopic Transport Equations on Non-Cartesian Coordinate Systems

M. Spevak and T. Grasser 474



ROOM D- 13.30-15.00

NEURAL NETWORKS IN INDUSTRIAL APPLICATIONS

Chair:

IND-01

Modeling of Abrasive Fluid Micro Machining by Polynomial Neural Networks and Genetic Algorithms

M. Alitavoli Nariman-zadeh, A. Khalkhali and M. Mehran 59

NEUR-04

Characterization of petroleum wells using fuzzy systems

Rafika Hamza, Khaled Mechichi, Abdellaziz Aboud and Nabil Derbel 64

Monday, 24th October 2005

IND-04-NEUR

Optimal Control of a Container Crane by A Fuzzy Logic Controller, Robustness and Stability

Najla Krichen Masmoudi, Mohamed Djemel and Chokri Rekik 70

15.00 - 15.30

COFFEE BREAK

15.30 – 17.30

ROOM A- 15.30-17.30

SIMULATION TOOLS II

Chair:

METH-37-NEW

DELSIM: A simulation Tool for evaluation of Delivery Systems in Supply Chains

Herminia I. Calvete, Carmen Galé, María-José Oliveros
and Belén Sánchez-Valverde 43

METH-15

RTJSim: A Simulator for Real-Time Java

Jan Rosenkranz and Werner Pohlmann..... 48

METH-28

UNCSIM: A Computer Programme for Statistical Inference and Sensitivity, Identifiability and Uncertainty Analysis

Peter Reichert 51

METH-30

Simulation of the Complexity of Cities with CAST

L. Jankovic, W. Hopwood and Z. Alwan 56

ROOM B- 15.30-17.30

ENERGY SIMULATION

Chair:

ENV-08

The simulation of power system structure effects on technical and economic effectiveness of energy generation

Eugeniusz M. Sroczan..... 391



Monday, 24th October 2005

METH-01

Dynamic Simulation of District Heating Systems

Christian Johansson and Fredrik Wernstedt..... 396

VAL-02-FLUID

CANDU Saturated Steam Turbine Modeling using COMPGEN for MMS Package

Ilie Prisecaru and Daniel Dupleac..... 401

METH-39-FLUID

A Two Dimensional and Transient Model for a Polymer Electrolyte Fuel Cell Cathode and Membrane

Rajaram Maringanti, Shanmukh Katragadda, Roland Haas and Amrita Mahale 406



ROOM C- 15.30-17.30

ANALYTICAL AND NUMERICAL SIMULATION II

Chair:

ANA-06

A Simulation-Based Optimization Model to Schedule Periodic Maintenance of a Fleet of Aircraft

Ville Mattila and Kai Virtanen..... 479

ANA-09

Enhancing the Performance of a Two-Echelon Inventory System with Emergency Supply Flexibility using Pipeline Knowledge

Filip Van Utterbeeck and Dirk Van Oudheusden..... 484

ANA-07

A Mathematical Model for Performability evaluation of Heterogeneous Multiprocessor Systems with Reconfiguration and Rebooting Delays

Enver Ever, Orhan Gemikonakli, Ram Chakka and Tien Van Do 487

VAL-03-FINITE

Effects of non-symmetric geometry on bulk cavitation fields – Finite Element Simulation and practical results

J.P. Lewis, S. Gardner and I. Corp..... 495

Monday, 24th October 2005



ROOM D- 15.30-17.30

COMPLEX SYSTEMS SIMULATION

Chair:

COMPLEX-01

Drivers, Benefits and Approaches of Software System Simulation

Christian D. Bodemann and Michael Irvine 5

COMPLEX-02-LOGIS

A simulation based process for the construction of correct models

Riadh Ben Halima, Khalil Drira and Mohamed Jmaiel 12

COMPLEX-03

Path following for under actuated marine craft using Line of Sight algorithm

J. Ghommen, F. Mnif and N. Derbel..... 20

IND-05

Statistical Approach for Analysis of Energy System Losses in Jordan

Nabeel Tawalbeh and Ayman Agha 27

17.30 – 18.30

UNIVERSITY OF PORTO- 17.30-18.30

GET-TOGETHER-PARTY

SOCIAL

Tuesday, 25th October 2005

HALLWAY

Registration

08.00 - 17.00

08.30 – 09.30

ROOM A- 08.30-09.30

AI BASED DECISION SUPPORT WITH AGENTS

Chair:



METH-38-AI

JOntoRisk: An Ontology Based Platform for Knowledge Based Simulation Modeling in Financial Risk Management

Christian Cuske, Tilo Dickopp and Stefan Seedorf 79

AI-08

Simulating Pilot's Decision making by an Influence Diagram Game

Kai Virtanen, Tuomas Raivio and Raimo P. Hämäläinen 87

ROOM B- 08.45-09.30

INVITED SPEAKER

Chair: to be announced later



INV-02

VR Models for Professional Training

Piet Kommers

ROOM C- 08.30-09.30

PETRI NETS SIMULATION I

Chair: to be announced later



PETRI-01

Yet another Smart Process Editor

Kees van Hee, Reinier Post and Lou Somers 527

Tuesday, 25th October 2005

PETRI-02

Towards a Meta-Model Based Approach for Hierarchical Petri Net Transformations to VHDL

V. Albert, A. Nketsa and J.C. Pascal..... 531



ROOM D- 08.30-09.30

IMAGE AND DATA MODELLING I

Chair: to be announced later

ELEC-03

Image segmentation based on games theory approach Application to melanoma pattern extraction

Amin Kallel and Imene Khanfir 119

IND-02

Implementation of 9/7 and 5/3 filters by the *Lifting Scheme*

Dhaha Dia, Mohamed Atri and Rached Tourki 126

09.30 - 10.00

COFFEE BREAK

10.00 - 12.00

ROOM A- 10.00-12.00

AI-BASED MANUFACTURING WITH AGENTS

Chair:

AGENT-01

Agent-based Framework for simulation in manufacturing Control

Eric Gouardères, Mahmoud Tchikou and Nicolas Lamarque 95

AGENT-04

A new Input-Output Control Order Release Mechanism: How Workload Control Improves Manufacturing Operations in a Job Shop

M. Rosário Moreira and Rui Alves 101



Parallel Sessions - Tuesday

Tuesday, 25th October 2005

AI-02

Dynamic Data Driven Re-engineering of Digital Models Evaluated With a Agent-Based Architecture

Paulo Jorge Ferreira Lebres, Gil Manuel Gonçalves and Jan Wörner 108

AGENT-07

Intelligent Agents for Multiple Representation based Approach in Distributed and Heterogeneous Systems

Abdelouahed Zakari, Janah Saadi and Marouane Chriss 114

ROOM B- 10.00-12.00

SIMULATION AND TRAINING

Chair:

EDU-04

A training Simulator for the evaporation section of a Beet Sugar Production Process

Alejandro Merino, Raúl Alves and Luis Felipe Acebes..... 341

EDU-05

Individualisation of the learning Process using Simulation and Artificial Intelligence Methods

Andrzej Urbaniak 346

EDU-02

3D Virtual Environments for PLC Programming Education and Training

António Pessoa de Magalhães, Bruno T. Vigário and Francisco T. Freitas 349

PARA-06-VIR

Measuring Human Performance in Multinational Distributed Events: Lessons Learned from the First Warfighter Alliance in a Virtual Environment (Exercise FirstWAVE)

Antoinette M. Portrey, Loren Keck, Brian Schreiber and Winston Bennett Jr. 354

ROOM C- 10.00-12.00

PETRI NETS SIMULATION II

Chair:

PETRI-03

Modeling Multistage Interconnection Networks of Arbitrary Crossbar Size with Compositional High Level Petri Nets

Elisabeth Pelz and Dietmar Tutsch..... 537



Tuesday, 25th October 2005

METH-02-PETRI

Just-in-time Lots Delivery using a Petri net and (Max,+) Algebra Approach

Ilham Elmahi, Olivier Grunder and Abdellah Elmoudni 544

PETRI-06

Constraint-Based State Space Reduction in Colored PN

Lorenzo Capra 550

PETRI-07

Simulation and Verification of Atomicity Properties for an Electronic Cash System

Panagiotis Katsaros, Vasilis Odontidis and Maria Gousidou-Koutita..... 558



ROOM D- 10.00-12.00

IMAGE AND DATA MODELLING II

Chair:

NEUR-01

Face Recognition using Linear Analysis Techniques and Neural Networks Based Approaches

Ichraq Ben Aouicha, Tarek Tray and Dorra Sellami Masmoudi..... 134

ELEC-06

The Capability of reducing the PAPR by Turbo Coding

Omar Daoud, Marwan Al-Akaidi and Jon Ivins 143

NEUR-05

Data Mining for Generating Predictive Models of Automatic Speech Recognition

Ayad T. Al-Zobaydi, Marwan M. Al-Akaidi and Robert I. John 147

ELEC-07

Simulation and FPGA Implementation of a Simple Computer

Kasim M. Al-Aubidy, Ra'ed F. Al-Bader, Ala'a A. Smadi..... 151

12.00 - 13.30

LUNCH BREAK

Tuesday, 25th October 2005

13.30 - 15.15

ROOM A- 13.30-15.00

AI BASED TRANSPORT CONTROL

Chair:

AGENT-10-TRANS-TOOLS

Distributed Agent Based Simulation Architecture with Hierarchical Time Synchronisation

Norbert Adamko and Valent Klima 123

AGENT-09-TRANS

Making Way for Emergency Vehicles

Eugénio Oliveira and Nuno Duarte 128

AI-13

PLUMBER, an AI Planner for Oil Pipeline Transportation

Ruy L. Milidui, Frederico dos S. Liporace and Roberto P. Cavalcante 136

ROOM B- 13.30-15.15

INVITED SPEAKER AND SIMULATION USING UML

Chair:

INV-03

Models and Similarity

Renate Sitte

METH-36

ActiveChartsIDE-An Integrated Software Development Environment comprising a Component for Simulating UML 2 Activity Charts

Stefan Sarstedt, Dominik Gessenharter, Jens Kohlmeyer, Alexander Raschke and Matthias Schneiderhan 66

METH-04

Overcoming The Limitations of Signal Handling when Simulating UML 2 Activity Charts

Stefan Sarstedt 61



Tuesday, 25th October 2005



ROOM C- 13.30-15.00

PETRI NETS SIMULATION III

Chair:

PARA-03

A Case Study using Modular Time Petri Nets and Distributed Simulation

Franco Cicirelli, Angelo Furfaro and Libero Nigro 564

METH-07

Object oriented approach for deriving Feared Scenarios in Hybrid Systems

N. Sadou, H.Demmou, J.C.Pascal and R.Valette 572

PARA-10

A Custom Tool supporting structural modelling in the Petri Nets Domain

Carmen Veronica Bobeanu and Hendrik Van Landeghem 579



ROOM D- 13.30-15.00

PHONE NETWORK SIMULATION

Chair:

ELEC-02

Service-Aware Routing Protocols (SARP): Exploiting mobility with loose delay constraints in ad hoc networks

M. Alchaita, M. Al-Akaidi and J. Ivins 101

ELEC-09

Effects of Handoffs on the Performance of Cellular Systems Using Simulation

Nada Al-Khatib and Jamal S. Rahhal..... 105

ELEC-04

Computational Aspects to Calculate the Interference between the High Voltage Transmitters and Communication Cables

Ghada M. Amer..... 111

15.00 - 15.30

COFFEE BREAK

Parallel Sessions - Tuesday

Tuesday, 25th October 2005

15.30 - 17.30

ROOM A- 15.30-17.30
NEURAL NETWORKS SIMULATION
Chair:



METH-11
A Tool for Fast Development of Modular and Hierarchic Neural Network-based Systems
Francisco Reinaldo, Mauro Roisenberg, Jorge Muniz Barreto, Rui Camacho
and Luis Paulo Reis **161**

AI-01
Achieving efficiency through Simulation in a declining Manufacturing Market
Nima Amanifard, Nader Nariman-zadeh, Mehrdad H. Farahani
and Abolfazl Khalkhali **164**

AI-07
Identification of Aircraft Dynamics, Using Neural Network Simultaneous Optimization Algorithm
Fariborz Saghaei and Behzad Momahed Heravi **172**

AI-11
Lamb Meat Tenderness Prediction Using neural Networks and Sensitivity Analysis
Paulo Cortez, Manuel Portelinha, Sandra Rodrigues, Vasco Cadavez
and Alfredo Teixeira **177**



ROOM B- 15.30-17.00
WEB BASED SIMULATION
Chair:

WEB-01-MED
Web-based Simulation in Medicine
Victor Alves and José Machado **199**

WEB-02
Web Based Simulation: Review of Recent Developments
Khaled Mahbub and Muhammad Azizur Rahman **202**

Tuesday, 25th October 2005

WEB-03

An experience with a Hardware-on-the-loop Computer Vision Remote Laboratory

Miguel A. Mateo Pla, Irene Zaragoza Álvarez, Jose A. Albadalejo Meroño and Lenin G. Lemus Zúñiga..... 208

WEB-04

Solving Model-based WWTP Design and Operation Related Engineering Problems – Stand-alone and web based approaches

Ion Irizar, Alain Castro, Carlos Pérez and Eduardo Ayesa..... 211

ROOM C- 15.15-17.45

MOBILE COMPUTING AND TRAFFIC ANALYSIS SIMULATION

Chair:

AGENT-05

A New Behavioural Pattern for Mobile Code

Mâamoun Bernichi and Fabrice Mourlin 435

METH-40

Simulation of Manets with Processing Overheads

Karthik G, Manish V, Ravi M Y and Ganesh Murthy C N S..... 440

METH-16

Modifiable Areal Unit Problem 9MAUP0 Effects on Traffic Analysis Zones (TAZ) Delineation

Luis Miguel Martínez, José Manuel Viegas and Elisabete A. Silva..... 313

METH-32

Statistical Properties observed for Traffic on Internet Platforms

Gerhard Haßlinger..... 324

VAL-04

Speeding Up the Performance Analysis of Communication Systems

Gábor Lencse..... 329

VAL-05

Data Organization - Comparison for Model Validation in FRTS

Dimosthenis Anagnostopoulos and Mara Nikolaidou 334



Tuesday, 25th October 2005



ROOM A- 15.30-17.30

SIMULATION OF PID CONTROLLERS

Chair:

ELEC-05

**On the Particularities of Hysteresis Band Widths in Takahashi DTC Strategy:
the So-called Focal Speeds**

Fatma Ben Salem and Ahmed Masmoudi..... 79

ELEC-01

**PID Control Design of A Blower System using the Pole Compensation
Technique**

Houda Ben Jmaa Derbel 85

ELEC-04

**On the design of fuzzy supervised PI controller based on gain and phase
margin specifications**

L.Tounsi-Rekik and M. Chtourou 90

NEUR-03

PID Neural Tuning for Integrating Processes

R. Chibani and M. Chtourou 95

CONFERENCE DINNER at 8.00 p.m.

**All participants will meet at a designated point, which will be
indicated at the conference desk.**

Wednesday, 26th October 2005

ROOM A

Registration

08.30 - 09.00

09.00 – 10.00

ROOM A- 09.00-10.00

HOSPITAL LOGISTICS SIMULATION

Chair:

ENV-09-MED

Hospital Maxi-Emergency protocol testing by a Double Dynamics Simulation Model

Giorgio Romanin-Jacur 367

ENV-10-MED

Hospital Logistic Modelling and Simulation Case Study: Brancardage

Michel Gourgand, Fateh Mebrek and Alain Tanguy 372

ROOM B- 09.00-10.00

SIMULATION VALIDATION AND ANALYSIS I

Chair:

VAL-01

An Integrated Decision Support System for Improving ATP Performances in S&ME

Piero Giribone, Roberto Revetria and Lucia Cassettari 275

METH-34

Integrated Modeling and Simulation of Development Processes

Bernhard Kausch, Nicole Schneider, Torsten Licht, Peter Schmitz,

Ludger Schmidt and Christopher Schlick..... 283



Wednesday, 26th October 2005



ROOM C- 09.00-10.00 MACHINE SIMULATION Chair:

METH-18

A Simple Double Hysteretic Cycle Spin Model

Paulo Pinto and A. Almeida 381

METH-41

Static Models of Load Induction Motor

Luis Aromataris, Marcos Galetto, Jorge Martinez, Gustavo Rodriguez
and Diego Moitre 384



ROOM D- 09.00-10.00 ENVIRONMENTAL MODELLING Chair:

ENV-01

Finite Element Modelling of Pollutants Dispersion in the Tay Estuary

Rahim Ghorashi, Navraj S Hanspal, Naghmeh Keshavarzi-Roonizi
and Vahid Nassehi 237

ENV-02

Micro-Heterogeneity Effects on Two-Phase Flow in Porous Media: Interplay between Distribution and Intensity of Heterogeneity

Diganta Bhusan Das and Nicholas Widdows..... 242

10.00 - 10.30

COFFEE BREAK

10.30 - 12.30



ROOM A- 10.30-12.00 GENETIC ALGORITHM SIMULATION Chair:

AI-12

A Genetic Algorithm for solving the P-Medium Problem

Abdel Latif Abu Dalhoum, Al Zoubi Moh'd, Marina de la Cruz, Alfonso Ortega
and Manuel Alfonso 122

Wednesday, 26th October 2005

AI-10

Dependence Input Modeling with the Help of non-Gaussian AR Models and Genetic Algorithms

Feras Nassaj and Johann Christoph Strelen 146

AI-06

Multi-Objective Evolutionary Algorithm Optimization of Robotic Manipulators

E. J. Solteiro Pires, P. B. de Moura Oliveira and J. A. Tenreiro Machado 154

ROOM B- 10.30-12.30

SIMULATION VALIDATION AND ANALYSIS II

Chair:

METH-33

Parameter optimisation for a demand forecasting Model for Sales Campaign Products with the option of an additional Purchase

Katrien Ramaekers and Gerrit K. Janssens 291

AGENT-06

Negotiation Protocols for Electricity Spot Market Multi-Agent Simulation

Isabel Praça, Carlos Ramos, Zita Vale and Manuel Cordeiro 295

METH-26

Comparing a Standard and a Naïve Stock Refill Policies by Means of Simulation

J. Manuel Feliz-Teixeira and António E. S. Carvalho Brito 300

METH-25

Simulation System for Design of Optimal Industry Devices

Karol Kostúr and Martin Truchlý 306

ROOM C- 10.30-12.30

OBJECT ORIENTED SIMULATION AND VIRTUAL ENVIRONMENTS

Chair:

AI-05

Implementing Design Patterns as Aspects

Mihaela Dinsoreanu, Dragos Morar and Ioan Salomie 185

Wednesday, 26th October 2005

METH-22

Formal Properties of closed Flow Lines with limited Buffer capacities and random processing times

Matta A. and Chefson R 190

VIR-01-WEB

The Architectonical Design of Virtual Environments Fuels a new Form of the WWW

Stefano Cacciaguerra, Claudia Cagneschi and Roberto Fabbri..... 221

METH-31-VIR-02

Developing a Flexible 6DOF Modeling and Simulation Environment for a Sounding Rocket

M.A. Amiri Atashgah, N. Nassiri and M. Bahrami..... 227

ROOM D- 10.30-12.30

BIOLOGICAL MODELLING

Chair:



ENV-03

Model Concepts of metal uptake by plant roots from single root to field scale

Willibald Loiskandl, Andrea Schnepf, Tiina Roose, Margarita L. Himmelbauer and Sabine Klepsch 251

ENV-06

Modelling Functional Groups of Algae in Lake Zürich

Johanna Mieleitner and Peter Reichert..... 256

ENV-07-MED

Decision Trees Identifying Changes in Proteome Expression Induced by Sleep Deprivation

Terje Kristensen, Roar Nybø and Alvhild Alette Bjørkum 262

ENV-12-BIO

Multiscale Approach to Modelling Bone Tissue Growth in Hollow Fibre Membrane Bioreactor

Diganta Bhusan Das 593

Wednesday, 26th October 2005

ROOM A- 12.30-12.45



**CLOSING SESSION AND ESM2005-MESM2005 BEST PAPER
AWARD**

Chair: Philippe Geril, Ghent University, Ghent, Belgium

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AT LAAS, IN TOULOUSE, FRANCE**

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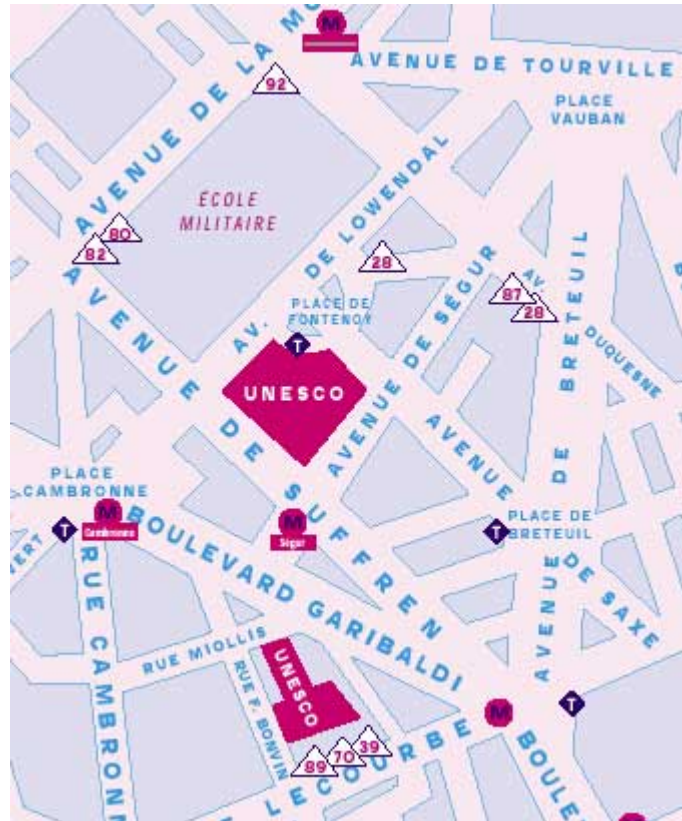
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FRANCE (MARCH 11-12)**

**EUROMEDIA-ECEC-2006 AT THE UNIVERSITY PAUL
SABATIER IN TOULOUSE, FRANCE (APRIL 11-13)**

**ISC'2006 AT THE FRAUNHOFER INSTITUTE, IN
BERLIN, GERMANY (JUNE 9-11)**

Parallel Sessions - Wednesday

Conference Site Maps

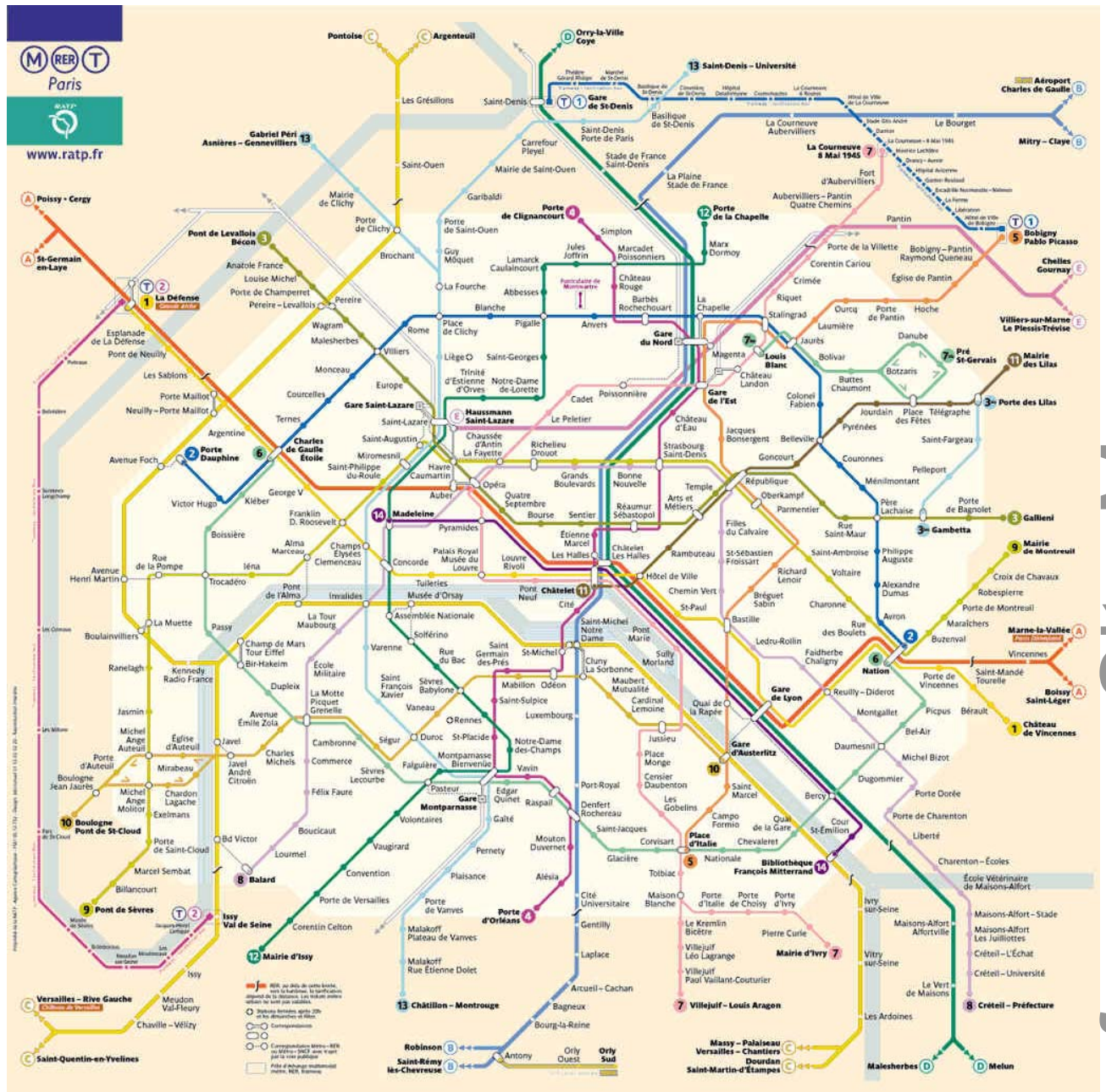


Plan of the Conference Area
The ESM2004 Entrance will be at the UNESCO
entrance at Place De Fontenoy

Conference Site Maps



Conference Site Maps



PARIS Metro Map



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, etc...

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