Final Program

9-11. June 2003

UNIVERSIDAD POLITECNICA DE VALENCIA

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Co-Sponsored by

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Contents

General Information

1. Conference Location

The Conference is being held at the UPV Universita Politecnica de Valencia, Camino de Vera s/n, Valencia, Spain.
The registration desk will be placed on the second floor at the UPV from Monday morning onwards, where registration will start. On Monday and Tuesday registration will be from 8.15 a.m. - 5.00 p.m. with Wednesday registration only from 8.30 a.m.- 9.00. a.m.

ALL MAPS ARE AT THE BACK OF THIS PROGRAMME

TRAVEL INFO

IBERIA, International Airlines of Spain
OFICINA IBERIA
C/ La Paz 14
46003 Valencia
Tel. 34 – 963 527 552 , 34 – 963 523 677
Fax: 34 – 963 520 677
www.iberia.es
Airport Manises – Valencia
Information Service, Phone.: 34 – 961 598 500
Information and Reservations. Serviberia Tel.- 902 400 500
Ticket Office in Valencia Centre.- Tel.- 34 963 52 75 52
Ticket Office at the Airport.- Tel.- 34 961 59 88 09
Distance from the airport to the city centre: 8,5 km

Estacion del norte (RENFE Euromed-Alaris)
C/ Jativa, 24 – 46007 Valencia
tel: 34 – 963 520 202
www.renfe.es

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

conference dinner:	**50 EURO**	

General Information

4.Registration

The ISC'2003 Registration Desk will be open for information and registration:

Monday, June 9..... 8.15 a.m. to 5.00 p. m. on the 2nd Floor of UPV
Tuesday, June 10 ..... 8.15 a.m. to 5.00 p. m. on the 2nd Floor of UPV
Wednesday, June 11 ..... 8.30 a.m. to 9.00 on the 2nd Floor of UPV

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 ISC'2003)

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

ISC'2003 Proceedings	**50 EURO**

6. Meeting Rooms

The meeting rooms are on the 2nd floor of the UPV with the exception of the auditorium used for the Keynote, which will be at ETSI Telecommunication.
Internet Room: Room Nr. 2.14 (ROOM-E)
Room 2.9 (ROOM-A)
Room 2.10 (except Tuesday Morning) (ROOM-B)
Room 2.11 (ROOM-C)
Room 2.13 (ROOM-D)
Corridor Exhibition

7. Need Help?

Please see the conference desk for your questions

8. Social Events and Lunches

All registrants are invited to
The **get-together party** on Monday June 9th at 6.00 p.m. at UPV
All **lunches** are served at the restaurant of the Galileo Galilei next to UPV
The Conference Dinner
All participants are invited to the conference dinner on Tuesday the 10th of June. As we need to give an exact number of participants we would appreciate **your confirmation at the desk before Monday evening**. The conference dinner will be held at the Escuela de Hosteleria. Participants will meet on the main square in Valencia at 8.00 p.m. (an exact plan will be posted at the registration desk)

General Information

9. Company Visit

A company visit is envisaged to GRES DE NULES-KERABEN which, is a Company dedicated to the manufacture and sale of floor and wall ceramic tiles. A solid company established in 1975 and located in the Valencia Region, one of the most highly developed industrial areas in Spain and Europe, with a staff of 700 workers

The turnover is currently 13,000 million pesetas (78.131 euros) and our accumulated growth over the last five years has been 85%. Since its creation this Group has held a leading position within this industry, basically thanks to the strict application of certain principles, which constitute the base of all our activity

The bus for Keraben will leave UPV at 3.00 p.m. on Tuesday afternoon. The visit will start at 4.00 p.m.

a. 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 ISC'2003 conference.

b. Paper Legend:

O= Overhead
SL= Slide Projector
LCD= Projector
VCR= Video
PC= PC

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.rug.ac.be/~eurosis **and http://www.eurosis.org**

SUNDAY, 8th JUNE 2003

MONDAY, 9th JUNE 2003

08.15-17.00	REGISTRATION				
09.00-10.00	OPENING SESSION AND KEYNOTE SPEECH IN THE MAIN HALL				
10.00-10.30	COFFEE BREAK				
10.30-13.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	SIMULATION LANGUAGES AND TOOLS I	SIMULATION IN ENGINEERING	LOGISTICS SIMULATION	TEXTILE PROCESSES	INTERNET ROOM
13.00-14.00	LUNCH BREAK				
14.00-15.30	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	ANALYSIS IN MANAGEMENT	SIMULATION IN ELECTRONICS	LOGISTICS ON THE FACTORY FLOOR	MATERIALS	INTERNET ROOM
15.30-16.00	COFFEE BREAK				
16.00-18.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	SIMULATION METHODOLOGY	AUTOMOTIVE SIMULATION	MULTIBODY APPLICATIONS	VIRTUAL TEXTILES I	INTERNET ROOM

18.00 Get-together-Party

TUESDAY, 10th JUNE 2003

08.30-17.00	REGISTRATION				
09.00-10.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	MANUFACTURING INTEGRATION I	CHEMICAL ENGINEERING MANAGEMENT	LOGISTICS AND TRAFFIC SIMULATION	EUROSIS- MOSAIC AND EU-GAMESRESEARCH	INTERNET ROOM
10.00-10.30	COFFEE BREAK				
10.30-13.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	MANUFACTURING INTEGRATION II	SIMULATION IN ROBOTICS	AEROSPACE APPLICATIONS AND TRAIN SIMULATION	COMPLEX SYSTEMS SIMULATION	INTERNET ROOM
13.00-14.00	LUNCH BREAK				
14.00-15.30	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	TUTORIAL	COMPANY VISIT from 15.00	ROAD TRAFFIC AND PORT SIMULATION	VIRTUAL TEXTILES II	INTERNET ROOM
15.30-16.00	COFFEE BREAK				
16.00-18.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	MANUFACTURING PERFORMANCE SIMULATION	COMPANY VISIT	ROUND TABLE DISCUSSION	EXHIBIT	INTERNET ROOM
20.00	CONFERENCE DINNER at the Escuela de Hosteleria				

WEDNESDAY 11th JUNE 2003					
08.30-10.00	REGISTRATION				
09.00 10.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	VERIFICATION	BACK-UP SESSION	PROJECTS SESSION		INTERNET ROOMI
10.00-10.30	COFFEE BREAK				
10.30 12.00	PARALLEL SESSIONS				
	ROOM A	ROOM B	ROOM C	ROOM D	ROOM E
	METHODOLOGY LANGUAGES AND TOOLS II	ANALYSIS IN ENGINEERING	WORKSHOP		INTERNET ROOM
12.00-12.15	CLOSING SESSION AND BEST PAPER AWARD ROOM A				

NOTES

Monday, 9th June 2003

HALLWAY

Registration

08.15 - 17.00

MAIN HALL

09.00 - 09.15

Opening ISC2003 and Welcome

Welcome Address

Drs. Juan Carlos Guerri and Carlos Palau
UPV
ISC'2003, General Conference and Program Chairs

Philippe Geril
EUROSIS, Ghent University
EUROSIS Coordinator

Welcome

Plenary Lecture

Monday, 9th June 2003

MAIN AUDITORIUM

09.15 - 10.00

KEYNOTE SPEECH

Chair: Juan Carlos Guerri, UPV, Valencia, Spain

Knowledge Discovery in Databases and Modelling, How do they fit together?

Danny F. Van Welden **5**

10.00 - 10.30

COFFEE BREAK

Monday, 9th June 2003

10.30 – 13.00

ROOM A- 10.30-13.00 METH
SIMULATION LANGUAGES AND TOOLS I
Chair: Danny Van Welden, Ghent University, Ghent, Belgium

TOOLS-3-O
First Year Science and Engineering Students can Model
John Miller **21**

TOOLS-1
Tape Performance Measures Implemented in an Incident Management Model
R. Van Loock, F. Van Utterbeeck and H. Pastijn **24**

TOOLS-2
Adding instrumentation Tools to the SMPL Discrete-Event Simulation Language
X. Molero, V. Santonja, J.A. Alegre and I. Torregrosa **28**

METH-13
XML- based Modelling Language for Technical Networks
Alexei Lisounkin, Gerhard Schreck, Pedro Pablo Alacórn Cavero,
Juan Garbajosa Sopeña and Agustín Yagüe Panadero **539**

METH-6
Hardware in the Loop Simulation using Real-Time CD++
Lidan Li, Gabriel A. Wainer and Trevor Pearce **38**

ROOM B- 10.30-13.00 ENGIN
SIMULATION IN ENGINEERING
Chair: Carlos Palau, UPV, Valencia, Spain

ENGIN-1-ROBOT-LCD
Virtual Prototyping of a Domestic Robot for Design and Navigation Optimization
Marcos Fernández, Sergio Casas , Ana Martínez, Laura Nuñez, Dorleta Guzmán,
David Villaverde and Joseba Landaluze **167**

ENGIN-2
Teaching Construction Steps using VR
Gerardo Silvia Ghandia **175**

Monday, 9th June 2003

ENGIN-3-MULTI-O
Comparison of Open-Loop Stiffness Control Methods to suppress Self-Excitation Vibrations
Kanjuro Makihara and Horst Ecker **180**

ENGIN-5
Modeling of the Worm Gearing with Concave Shape Turn
Rasheed Abdulatif Abdullah **188**

ENGIN-8
Computer Simulation of Complex Ship System Gas Turbine –Synchronous Generator
Ante Munitic, Mario Orsulic and Josko Dvornik **192**

ROOM C- 10.30-12.30 LOGIS

LOGISTICS SIMULATION

Chair: Quasim Mehdi, University of Wolverhampton, United Kingdom

LOGIS-1-DISTR
A Parallel Procedure for a Distributed Logistics Scheduling
Wilhelm Dangelmaier, Hubertus Franke and Peter Scheideler **233**

LOGIS-2-LCD
Simulation of a Container Transport System Between Port and Inland Terminal Depots
Leire Maruri, Laura Nuñez, Ana Vidarte, José Manuel Ezquerra and Ana Martinez **238**

LOGIS-3
Scheduling and Program Agents Algorithms For E-Logistics
Anatoly Levchenkovs and Nadezhda Kunicina **243**

AGENT-1-LOGIS
Algorithm for Program Agents in E-Learning for solving Logistics Supply Chain Problems
Anatoly Levchenkovs and Ilia Smyshlaev **247**

ROOM D- 10.30-12.30 TEX

TEXTILE PROCESSES I

Chair: Pascal Bruniaux, ENSAIT, France

TEX-3
Simulation and Control of Package Dyeing Process Based on a Mathematical Description of Dye Transfer through the Package
Renzo Shamey, Xiaoming Zhao and Marcus Vosoughi **451**

TEX-5-LCD
Modeling Dye Liquor Flow in Fabric Beam Dyeing and Yarn Package Dyeing
David Karst, Yiqi Yang and W. Alex Rapp **457**

TEX-6-LCD
Dyeing Process Modeling for Polyester Micro Fibers
Keun Ho Park and Vladan Koncar **462**

TEX-17
Use of Discrete Simulation to design and manage an Industrial Dyeing Laboratory
Giorgio Romanin-Jacur **467**

ROOM E- 10.30-13.00 **INTERNET**
INTERNET ROOM

13.00 - 14.00
LUNCH BREAK

14.00 – 15.30

ROOM A- 14.00-15.00 **VERIFICATION**
ANALYSIS IN MANAGEMENT
Chair: Danny Van Welden, Ghent University, Ghent, Belgium

AN-3
Setting and Analysis of Multiproduct Supplier Links managed by Kanban Using a Learning + Evolutionary Optimization
Anne-Lise Huyet and Jean-Luc Paris **113**

AN-4
Simultaneous Perturbation Stochastic Approximation to optimize Drug Management in Hospital
M. Albanese, A. Matta and T. Tolio **118**

Monday, 9th June 2003

ROOM B- 14.00-15.30 ELECTRONICS

SIMULATION IN ELECTRONICS

Chair: Juan Carlos Guerri, UPV, Valencia, Spain

ELEC-1
Crosstalk Analysis on Printed Circuit Board by means of Wavelets
A.Kacha, F.Grenez, P.Dedoncker and K. Bennahammed **149**

ELEC-2-LCD
Three Dimensional Modeling of Thermal Oxidation of Silicon by Means of the Finite Element Methods
Christian Hollauer, Hajdin Ceric and Siegfried Selberherr **154**

ELEC-3-LCD
Statistical Analysis for the Three-Dimensional Monte Carlo Simulation of Ion Implantation
Robert Wittmann, Andreas Hössinger and Siegfried Selberherr **159**

ROOM C- 14.00-15.30 LOGIS

LOGISTICS ON THE FACTORY FLOOR

Chair: Anatoly Levchenkov, University of Riga, Riga, Latvia

LOGIS-4
Optimizing the Spare Parts Provisioning Plan for Radar Systems: An Approach through Process Simulation
Marco Bassanini, Francesco Constantino, Giulia di Gravio and Ludovice Honorati **253**

LOGIS-8-O
Modeling Logic of Simulation Generators for Lean Manufacturing
Yang-Hua Lian and Hendrik Van Landeghem **258**

LOGIS-7
On the Way to Simulate the Computerized Technical Systems
Eugene Kindler, Ivan Křivý and Alain Tanguy **263**

Monday, 9th June 2003

ROOM D- 14.00-15.30 **TEX**
MATERIALS
Chair: Vladan Koncar, ENSAIT, France

TEX-1
Geometrical Modelling of Woven and Knitted Fabrics for Technical Applications
Xiaogang Chen and Xuegong Ai **473**

TEX-4
Fracture Toughness of Flock Fiber Reinforced Layered Composites
Yong K. Kim and Sunil Hoskote **477**

TEX-12
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Xincai Tan and Xiaogang Chen **483**

ROOM E- 14.00-15.30 **INTERNET**
INTERNET ROOM

15.30 - 16.00
COFFEE BREAK

16.00 - 18.30

ROOM A- 16.00-18.00 **METH**
SIMULATION METHODOLOGY
Chair: John Miller, Champlain Regional College, Sainte-Foy, Canada

METH-7-LCD
Direct Optimisation for Simulation Based System Design
Petter Krus and Johan Andersson..... **59**

Monday, 9th June 2003

METH-10
Applying Formal Methods to Software Reuse
Zina Houhamdi **62**

METH-11-LCD
On the Use of Control Variates in the Simulation of Queues with Heavy Tailed Service
Pablo Jesus Argibay-Losada, Andres Suarez-Gonzalez, Candido Lopez-Garcia, Raul Fernando Rodriguez-Rubio, Jose Carlos Lopez-Ardao and Diego Teijeiro-Ruiz **68**

METH-12
Compensation for Synthetic Aperture Sonar Motion Errors Using Autofocusing Technique – Simulation Results
Tahseen Rafik **73**

ROOM B- 16.00-18.30 AUTO

AUTOMOTIVE SIMULATION

Chair: Ed Williams, Production Modeling Corp., Dearborn, USA

AUTO-1-O-LCD
Continuous Simulation of Acceleration Performance of a Car equipped with an automatic Gearbox
Olivier Verlinden, Georges Kouroussis, Calogero Conti, Joel Crappe and David Vercouter **201**

AUTO-3-SL
Simulation Verification of Fault Tolerant Brake-by-Wire System
Petr Grillinger **206**

AUTO-5-POS
Computer Simulation of Seat Vibration Test and Design Optimization of a Vehicle Suspension Seat Using an Equivalent 1-D.O.F. Mass-Spring Damper Model
Hoon Seok Byun, Sung –Nam Heo, Young-Hyu Choi, Joong-Ho Shin and Soo-Tae Kim **211**

AUTO-9-LCD
CAD-Based Ergonomics analyses in Motorcycle Design
Sandro Barone and Alessandro Curcio **217**

AUTO-2-LCD
Non-Structured Environment for Collision Detection and Obstacle Avoidance Algorithm Testing
Marta C.Mora and Josep Tornero **223**

Monday, 9th June 2003

ROOM C- 16.00-18.00 — ROBOTICS

MULTIBODY SIMULATION

Chair: Josep Tornero, UPV, Valencia, Spain

ROBOT-5
Identification of Dynamical Parameters of Robotic Manipulators using Singular Value Decomposition
Nader Nariman-Zadeh, Ahmad Bagheri and Mina Khoshnejad **387**

ROBOT-8-O
Hybrid Control for a Snakelike Robot
Viorel Stoian **392**

MULTI-1-O-LCD
Simulation Based Experiment Design to Diagnose Faults of Railroad Wheelsets
Zofia Kowalska **397**

MULTI-2-O
New Models for Fast Contact Force Computation
Ignacio García, Marta Pla-Castells and Rafael J. Martínez **401**

ROOM D- 16.00-17.30 — TEX

VIRTUAL TEXTILES I

Chair: Pascal Bruniaux, ENSAIT, France

TEX-7
Exploring the Nature of the Air Drawing of Polymer in the Melt Blowing Nonwoven Process via Numerical Simulations
Ting Chen and Xiubao Huang **491**

TEX-8-O-SL
A System for the Virtual Design and Simulation of Garments
Marzia Fontana, Caterina Rizzi and Umberto Cugini **496**

TEX-18
Real-time Visualization of Woven Textiles
Neeharika Adabala, Nadia Magnenat-Thalmann and Guangzheng Fei **502**

ROOM E- 16.00-18.00 — INTERNET

INTERNET ROOM

Tuesday, 10th June 2003

HALLWAY

Registration

08.15 - 17.00

09.00 – 10.00

ROOM A- 09.00-10.00 — MANUF

MANUFACTURING INTEGRATION I

Chair: Tim Baines, Cranfield University, Cranfield, United Kingdom

MANUF-10
Interface Data Model supporting Distributed Simulation
Y. Tina Lee, Yan Luo and Chuck McLean **307**

MANUF-5-O-LCD
A Class Library Conception for Manufacturing Systems
Carlos Alberto Bertotto, Flávio Rech Wagner and Carlos Eduardo Pereira **312**

ROOM B- 09.00-10.00 — CHEM

CHEMICAL ENGINEERING MANAGEMENT

Chair: to be announced later

PETROL-1-LCD
Simulation of Rubber Moulding Using Finite Element Modelling
Vahid Nassehi and Babar Ali **341**

PETROL-3
Optimization of Transfer and Storage Operations in Refineries
Antonio Eduardo Matsuno Ramos, Lúcia Valéria Ramos de Arruda
and Flávio Neves Jr., ... **346**

ROOM C- 09.00-10.00 — LOGIS

LOGISTICS AND TRAFFIC SIMULATION

Chair: Ana Pajares, UPV, Valencia, Spain

LOGIS-5
The Use of Aggregate Approach for simulation of Logistics Systems
Henrikas Pranevicius **271**

Tuesday, 10th June 2003

LOGIS-6-O
Simulation Method of the Public Logistics Center Localization in Poznan City
Eugenia Narbuntowicz and Waldemar Walerjańczyk **276**

ROOM D- 09.00-10.00 EUROSIS

EUROSIS, MOSAIC AND EU-GAMESRESEARCH

Chair: Philippe Geril, Ghent University, Ghent, Belgium

This session will give the participants an introduction to EUROSIS and an overview of the MOSAIC and EU-GAMESRESERACH projects

ROOM E- 09.00-10.00 INTERNET

INTERNET ROOM

10.00 - 10.30
COFFEE BREAK

10.30 - 13.00

ROOM A- 10.30-13.00 MANUF

MANUFACTURING INTEGRATION II

Chair: John Miller, Champlain Regional College, Sainte-Foy, Canada

MANUF-2
The Integration of Manufacturing Execution System and Product and Enterprise Resource Planning in the Logistic Chain
Mounir Benaissa, Abdelatif Benabdelhafid and Adel Alimi **317**

COMPLEX-3-LCD
Modeling and Simulation of a Pilot Scale Milk Pasteurization Unit
Ben Griffin and Tom O'Maloney **321**

MANUF-4
Human Performance Modelling within Assembly Line Simulations
Tim Baines, Linda Hadfield, Steve Mason, John M Kay and John Ladbrook..... **326**

Tuesday, 10th June 2003

MANUF-8
Visual Simulation in Manufacturing Management: Some Observations
Peter Lawrence **331**

ENGIN-4-MANUF
System Dynamics Continuous Computer Simulation Model of Shipbuilding Process
Ante Munitic, Josko Dvornik and Slavko Simundic **336**

ROOM B- 10.30-13.00 ROBOTICS

SIMULATION IN ROBOTICS

Chair: Josep Tornero, UPV, Valencia, Spain

ROBOT-2-LCD
Geometric Parallel Parking Planner for Car-Like Vehicles
Luis Gracia and Josep Tornero **357**

ROBOT-3-LCD
Multi-Rate Line Tracking for Mobile Robots based on Artificial Vision and Odometry
Leopoldo Armesto, Luis Gracia and Josep Tornero **362**

ROBOT-4-LCD
Real-Time Application for Car Like Vehicles Based on Can Bus
Leopoldo Armesto, Santiago Fuster, Francisco Jiménez and Josep Tornero **367**

ROBOT-6-STUDENT-LCD
Real-Time Simulation of an Inspection Robot with a Commercial Physics Engine
Jan Andries Neuhöfer **375**

ROBOT-7-O-LCD
Ruling Robots by the Activity Patterns of Hierachical SOMs
Matthias Reuter **380**

ROOM C- 10.30-12.30 AEROSPACE & TRAF

AEROSPACE APPLICATIONS AND TRAIN SIMULATION

Chair: Philippe Geril, Ghent University, Ghent, Belgium

AIR-1-SL-LCD
Bridges in HLA Distributed Simulations
Benoît Bréholée and Pierre Siron **413**

Tuesday, 10th June 2003

AIR-2
Genetic Algorithm for Scheduling Aircraft Landing
Mohamed Baccouche, Jaouad Boukachour and Abdellatif Benabdelhafid **418**

TRAF-2
Simplifying Sensitivity Analysis in Subway Control
Felisa J. Vazquez–Abad and Lourdes Zubieta **423**

TRAF-4
More Punctuality in Regional Traffic: Introduction of Computer Aided Rescheduling with REGIDISP on a South German Regional Railway
Wilfried Koch **429**

ROOM D- 10.30-12.30 COMPLEX

COMPLEX SYSTEMS SIMULATION

Chair: Quasim Mehdi, University of Wolverhampton, United Kingdom

COMPLEX-1-O
Complex Selecting Criteria Modeling with Colored Petri Nets
Enrique Arjona and Graciela Bueno **125**

COMPLEX-4
Simulation of Hybrid Systems Using Open Petri Nets
Stanislovas Bartkevicius, Vidmantas Macerauskas and Kastytis Sarkauskas **131**

METH-4
Methods of Conceptual Synthesis of Dynamic Models for Complex Systems
Vladimir Putilov, Andrey Oleynik and Andrey Gorokhov **136**

COMPLEX-5-O
Visual Representation of Enhanced Sand Pile Models
Marta Pla-Castells, Ignacio García and Rafael J. Martínez **141**

ROOM E- 10.30-13.00 INTERNET

INTERNET ROOM

13.00 - 14.00
LUNCH BREAK

Tuesday, 10th June 2003

14.00 - 15.30

ROOM A- 14.00-15.30 TUTORIAL

TUTORIAL

Modeling and Simulation of Complex Cell Spaces

Gabriel A. Wainer, Department of Systems and Computer Engineering, Carleton University, Ottawa, ON.

ROOM B- 14.00-16.00 VISIT

COMPANY VISIT

A company visit is envisaged to Gres-de-Nules Keraben. This visit is limited to 50 participants

ROOM C- 14.00-15.00 TRAFFIC

ROAD TRAFFIC AND PORT SIMULATION

Chair: Carlos Palau, UPV, Valencia, Spain

AUTO-4-O
Numerical Simulation of the Aerodynamic Interference in Traffic Flow
Marek Maciejewski and Wojciech Osmólski **437**

TRAF-5
An Approach to Mathematical Modelling the Port of Seville
María-José Aracil, José-Ignacio Castillo and Lourdes López-Valpuesta **442**

ROOM D- 14.00-15.30 TEX

VIRTUAL TEXTILES II

Chair: Vladan Koncar, ENSAIT, France

TEX-9-LCD
Modeling New Product Development in the Textile and Apparel Industry
Balamurugan S Ramanan, Padmini S Hands and Samuel C. Winchester **511**

TEX-11
CAD/CAM for Cellular Woven Fabrics with Trapezoid Cross-sectional Shapes
Xiaogang Chen, Hongxia Wang and Hongxia Zhang **519**

TEX-14-LCD
Traction model - A Methodological Approach
Pascal Bruniaux and Jean-Marc. Castelain **523**

Tuesday, 10th June 2003

ROOM E- 14.00-15.30 **INTERNET**
INTERNET ROOM

15.30 - 16.00
COFFEE BREAK

16.00 - 18.00

ROOM A- 16.00-18.00 **MANUF**
MANUFACTURING PERFORMANCE SIMULATION
Chair: Alexei Lisounkin, Fraunhofer Institute, Berlin, Germany

AUTO-6-O
Improvement of Throughput and Resource Utilization in an Automotive Stamping Plant
Edward J. Williams and Marcelo Zottolo **285**

MANUF-3-O
Modular Design and Simulation Based Verification of the Logic Control Code for an Agile Shoe Manufacturing System
Emanuele Carpanzano and Andrea Cataldo..... **290**

MANUF-1-O
Production Based Profitability Simulations in Paper Mills
John Fogelholm..... **295**

MANUF-16
Performance Enhancement using an Expert Mechanism in a Manufacturing Simulator
Hablom Mebrahtu, Rob Walker and Tony Mileham **299**

ROOM C- 16.00-17.00 **ROUNDTABLE**
THE FUTURE OF INDUSTRIAL COMPUTER SIMULATION
Chair: Quasim Mehdi, University of Wolverhampton, United Kingdom

ROOM D- 16.00-17.00 **EXHIBIT**
Participants are invited to visit the ad-hoc exhibits

Tuesday, 10th June 2003

ROOM E- 14.00-15.30 **INTERNET**
INTERNET ROOM

CONFERENCE DINNER at 8.00 p.m.
All participants will meet at a designated point, which will be indicated at the conference desk.

The conference dinner itself is held at the Escuela de Hosteleria

Wednesday, 11th June 2003

HALLWAY

Registration

08.30 - 09.00

09.00 – 10.00

ROOM A- 09.00-10.00 **VERIF**

VERIFICATION AND ANALYSIS

Chair: Jean-Luc Paris, INSEAD, Fontainebleau, France

VERIF-1-O-LCD
Towards Multi-Criteria Decision support for Modelling and Simulation
Eshan Rajabally, John Dalton, Pratyush Sen and Steve Whittle..... **83**

VERIF-2
Logic and Hybrid Formal Verification Techniques for Process Plant Control: A Case Study
Luca Ferrarini, Claudio Maffezzoni and Francesco Schiavo..... **88**

ROOM B- 09.00-10.00 **BACK-UP**

BACK-UP SESSION

Chair: to be announced later

This session is set up for those authors who could not present their papers in the allocated time-slots.

ROOM C- 09.00-10.00 **PROJECTS**

PROJECTS

Chair: Philippe Geril, Ghent University, Ghent, Belgium

This session is set up for those authors who have projects for which they are looking for partners or which they would like to see proposed as EU prjects

ROOM E- 09.00-10.00 **INTERNET**

INTERNET ROOM

Wednesday, 11th June 2003

10.00 - 10.30
COFFEE BREAK

10.30 - 12.00

ROOM A- 10.30-12.00 **METH**
METHODOLOGY LANGUAGES AND TOOLS II
Chair: Gabriel Wainer, Carleton University, Ottawa, Canada

METH-5-LCD
Distributed process Simulations Using OPC: A Case Study
Raúl Alves, Julio E. Normey-Rico, Alejandro Merino, Luis Felipe Acebes and Cesar de Prada **43**

METH-15-O
Inducing Parameters of a Decision Tree for Expert System Shell McESE by Genetic Algorithm
I. Bruha and F. Franek..... **48**

METH-2-LCD
The Thermoptim Software Package
Nicolas Bus and Renaud Gicquel..... **53**

ROOM B- 10.30-12.00 **ANALYSIS**
ANALYSIS IN ENGINEERING
Chair: Jean-Luc Paris, INSEAD, Fontainebleau, France

AN-7
A Case Study on Comparative Eco-balances for Coating Materials with Epoxidised Derivatives
Jorge Marx Gómez, Jana Görmer and Chaouki Khatib **99**

AN-6
Simultaneous Perturbation Stochastic Approximation for Real-time Optimization of Model Predictive Control
Irina Baltcheva, Felisa J.Vazquez-Abad, Smaranda Cristea and Cesar De Prada **533**

AN-2-O-LCD
Analysis of new Proposals for Parallel Application based Discrete-Event Simulation
Angel Perles, Xavier Molero, Antonio Marti and Juan Jose Serrano **103**

Wednesday, 11th June 2003

ROOM C- 10.30-12.00 **WORKSHOP**

WORKSHOP ON HUMAN PERFORMANCE MODELLING

Chair: Tim Baines, Cranfield University, Cranfield, United Kingdom

Manufacturing companies need an understanding of worker behaviour to design systems. System modelling can be an invaluable aid to improving organisational design. Current modelling tools however, do not properly represent people and variations in their performance. This is especially the case with manufacturing system design, where computer-based simulation tools are frequently used as aids within organisational improvement programmes. This 'gap' in modelling capability is a serious limitation, and one which the *HPM-net* [http://www.hpm-net.org] has been set up to research. Many opportunities exist for exploitation both inside and outside manufacturing, but many challenges remain. The workshop is designed to understand current thinking and stimulate strategic research directions surrounding the Human Performance Modelling. Our work on HPM and the network would be presented.

ROOM E- 10.30-12.00 **INTERNET**

INTERNET ROOM

ROOM A 12.00 - 12.15 **BEST PAPER**

CLOSING SESSION AND BEST PAPER AWARD

Chair: Juan Carlos Guerri and Philippe Geril

SEE YOU ALL
NEXT JUNE AT ISC'2004
IN MALAGA, SPAIN

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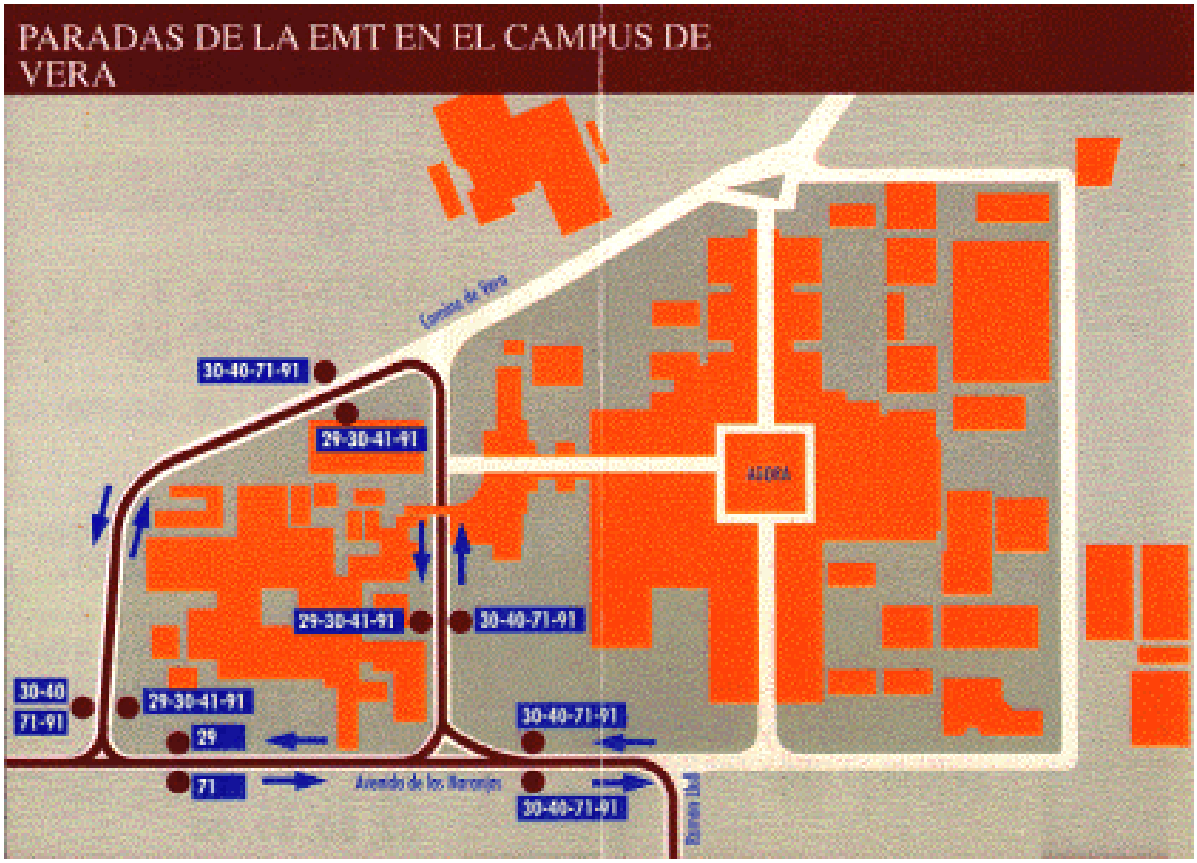
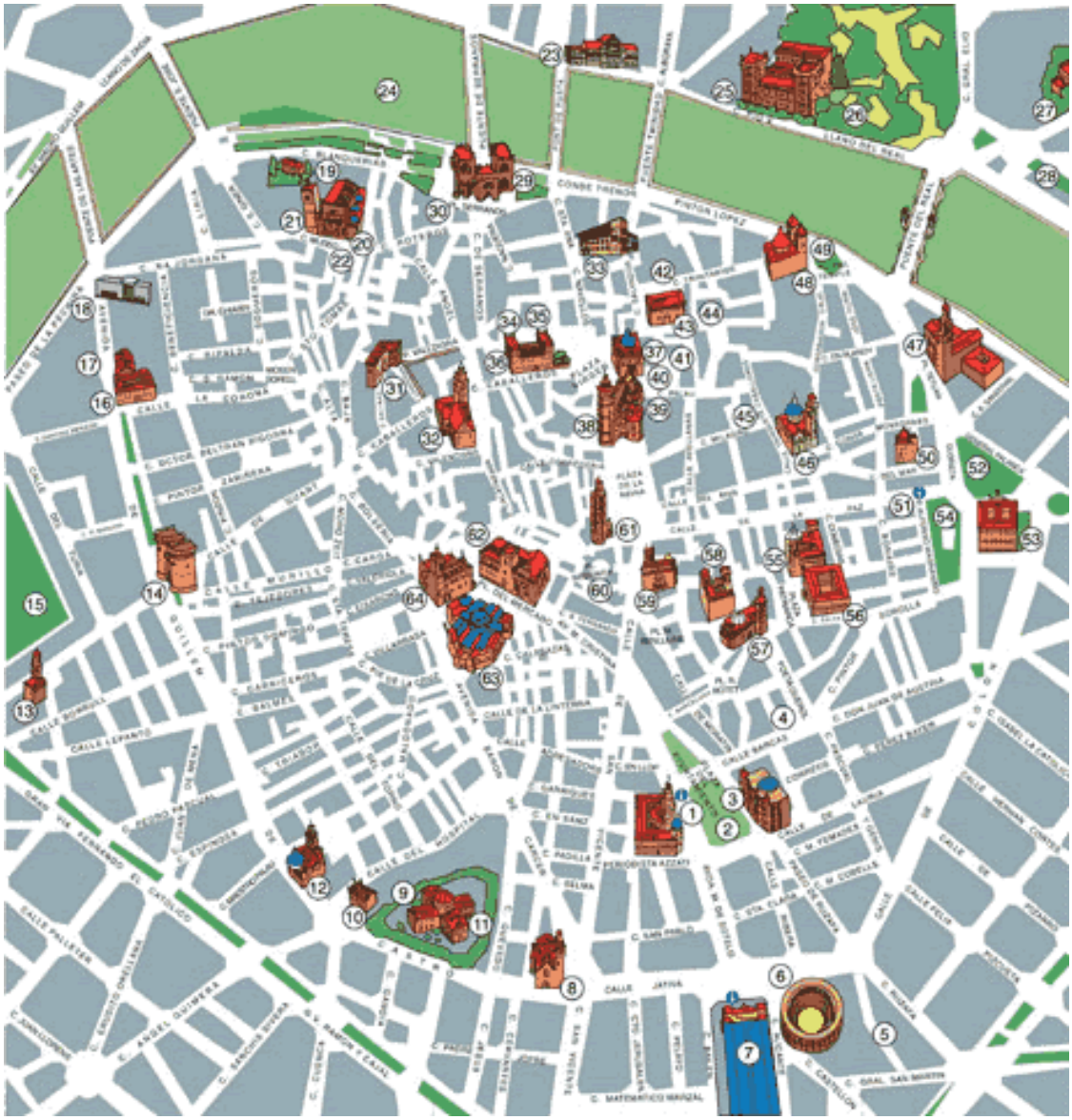


Plan of the UPV

Conference Site Maps

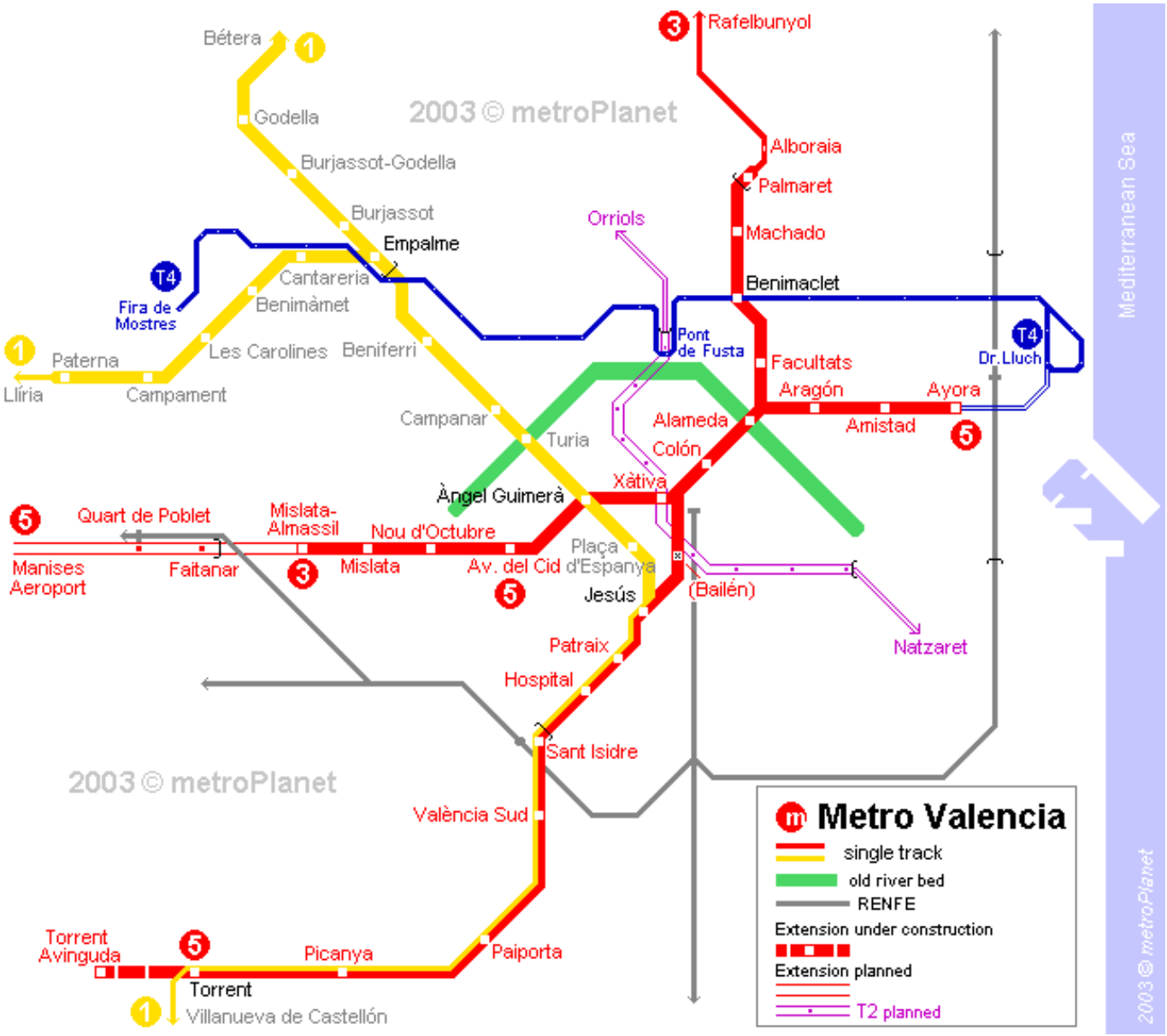


Valencia City Centre

Conference Site Maps

Conference Site Maps

Conference Site Maps



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, EU-GAMENET etc…

If you would like to receive more information about EUROSIS, please contact

Philippe Geril
EUROSIS-SIM CENTRE
Ghent University
Coupure Links 653
B-9000 Ghent, Belgium
Tel: +32.9.233.77.90
Fax: +.32.9.223.49.41
Email: Philippe.Geril@rug.ac.be

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

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