



The Society For
Modeling & Simulation
International



ROOM 1

Session 1			
Wednesday 4th			
9.30–11.00			
Track Chair: José Luis Marzo and Boleslaw Szymanski			
Network Simulation	NS-1	Modern Generators of Multiple Streams of Pseudo-random Numbers (EMSS06-1591544351)	Krzysztof Pawlikowski, Marcus Schoo and Donald C. McNickle
	NS-2	Parallel queuing network simulation with lookbackbased Protocols (EMSS06-0471289667)	Gilbert G. Chen, Boleslaw K. Szymanski
	NS-3	Distributed Simulation of ATM and frame relay Networks (EMSS06-2599647502)	Andrzej Sikora, Ewa Niewiadomska-Szynkiewicz
Session 2			
Wednesday 4th			
11.30–13.00			
Track Chair: José Luis Marzo and Boleslaw Szymanski			
Network Simulation	NS-4	Modeling Traffic Sources with the Fourier Transform (EMSS06-4268811292)	Marek Małowidzki, Krzysztof Malinowski
	NS-5	Execution Speed Up Using Speculation Techniques in Computer Clusters (EMSS06-1601881042)	Joan Puiggali, Teo Jové, Salvador Salanova, Josep Lluís Marzo
	NS-6	On Evaluation Needs of real-life Sensor Network Deployments (EMSS06-5349877090)	Alfred Park, Kalyan Perumalla, Vladimir Protopopescu, Mallikarjun Shankar, Frank DeNap, Bryan Gorman
Session 3			
Wednesday 4th			
14.00–16.00			
Track Chair: Antonio Espuña and Jean-Marc Le Lann			
Continuous Process Modeling, Simulation and Optimization	CPMS-1	Matematical modeling of cross flow conveyor belt dryer (EMSS06-9342682198)	Elham M.Kashani and Noorollah.Kasiri
	CPMS-2	LIBPF: a library for process flowsheeting in C++ (EMSS06-6085311613)	Paolo Greppi
	CPMS-3	Simulation of a low cost and low power consumption absorption cycle to produce ozonized fluid ice for fishing ships (EMSS06-9273135113)	Xavier Paz, Laureano Jiménez, Nicolau F. Goula
	CPMS-4	Enhancing policy analysis in system dynamics using multiple objective optimisation (EMSS06-2389503974)	Jim Duggan
Session 4			
Wednesday 4th			
16.30–18.30			
Track Chair: Antonio Espuña and Jean-Marc Le Lann			
Continuous Process Modeling, Simulation and Optimization	CPMS-5	General framework and open prototype for solving distributed wastewater treatment systems (EMSS06-0595994423)	Cristina Martín, Gerard Escudero, Moisès Graells
	CPMS-6	Study and consequences of a high speed shock on coupled mechanical systems (EMSS06-9651285782)	Cédric Lopez François Malburet, André Barraco

	CPMS-7	Optimization of the operation conditions for denitrifying wastewater treatment plants (EMSS06-4810282571)	Noelia Alasino, Miguel C. Mussati, Nicolás Scenna
	CPMS-8	Studies of evaporative efficiency by dynamic simulation of an open integrated industrial system (EMSS06-6864603257)	Raquel D. Moita, Henrique A. Matos, Mário J. Pinho Cristina Fernandes, Clemente P. Nunes
PLENARY Session			
Thursday 5th 9.30 – 10.30			
Keynote Speaker: Dr. David Nicol Tradeoffs Between Model Abstraction, Execution Speed, and Behavioral Accuracy			
PLENARY Session			
Thursday 5th 11:00 – 12.00			
Keynote Speaker: Dr. Manuel Silva Discrete Event Systems and Life Cycle: The Petri Nets Based View			
PLENARY Session			
Thursday 5th 12:15 – 13.00			
Keynote Speaker: Dr. Wander Jager Simulating human behaviour: why and how to use theory and data.			
Session 5			
Thursday 5th 14.00 – 16.00			
Chair: José Luis Marzo and Boleslaw Szymanski			
Network Simulation	NS-7	A case study in modeling large-scale peer-to-peer file-sharing networks using discrete-event simulation (EMSS06-7625961964)	Christopher D. Carothers, Ryan LaFortune, William D. Smith, Mark Gilder
	NS-8	Multiplatform and Opensource GoS/MPLS Simulator. (EMSS06-0321592281)	Manuel Domínguez Dorado, Francisco J. Rodríguez, José L. González Sánchez, Alfonso Gazo-Cervero
	NS-9	A simulative framework to estimate p2p performance indexes and traffic matrices (EMSS06-6220242793)	Raffaele Bolla, Roberto Bruschi, Franco Davoli, Andrea Ranieri, Riccardo Rapuzzi, Michele Sciuto
	NS-10	Dynamic Scheduling of Computationally Intensive Applications on Unreliable Infrastructures (EMSS06-0463061464)	Maria Chtepen, Bart Dhoedt, Filip De Turck, Piet Demeester, Filip Claeys, Peter A. Vanrolleghem
Session 6			
Thursday 5th 16.30 – 18.00			
Chair: José Luis Marzo and Boleslaw Szymanski			
Network Simulation	NS-11	A multi output fast fourier transform implementation on graphics hardware for optical simulation (EMSS06-4956572653)	José G. Marichal-Hernández, Fernando Rosa, José M. Rodríguez-Ramos
	NS-12	An improvement of energy aware routing in wireless sensors network (EMSS06-5128507634)	Zenon Chaczko, Ryszard Klempous, Jan Nikodem, Michal Nikodem, Jerzy Rozenblit
	NS-13	Spare capacity modelling and its applications in survivable ip-over-optical networks (EMSS06-3904549687)	D. Harle, S. Albarrak, F. Ali
Session 7			
Friday 6th 9.00 – 10.30			

Chair: Jaume Figueras and Helena Szczerbicka			
Simulation Methodologies. Techniques and Applications.	STA-1	Heat exchangers network synthesis for pulp and paper process using different methodologies (EMSS06-9130732547)	Jalel Labidi, Zsolt Sztikai, Katalin Koczka, Rodrigo Llano-Ponte, Peter Mizsey
	STA-2	Simulation-based evaluation of agriculture strategies under uncertainty of weather forecast (EMSS06-6863930475)	Yuri Merkurjev, Vladimir Bardachenko, and Andrey Solomennikov
	STA-3	Movements and Attrition within Areas affected by Civil Disorders (HMS2006_7)	Matteo.Brandolini
Session 8			
Friday 6th 11.00 – 13.00			
Chair: Jaume Figueras and Helena Szczerbicka			
Simulation Methodologies. Techniques and Applications.	STA-4	Using Generic Event For a Simple Reflexible Intelligent Agent SDL Specification (EMSS06-3566432994)	Pau Fonseca, Josep Casanovas
	STA-5	An asymmetric multi-agent learning model and its simulation analysis (EMSS06-0037219105)	Haiyan Qiao, Jerzy Rozenblit, Ferenc Szidarovszky
	STA-6	Autonomous Intelligent Agent Control in Complex Environments	Agris Nikitenko
	STA-7	Supporting Multi-Agent-Based Simulation with Data Mining Techniques (EMSS06-4108657785)	Nicolas Knaak



ROOM 2

Session 1			
Wednesday 4th			
9.30–11.00			
Track Chair: Adelinde Uhrmacher and Michael Moehring			
Social Sciences Simulation	SSS-1	Using an agent-based simulation approach to study informational aspects of answering behaviors in mailing-lists (EMSS06-486262336)	Emilie Marquois-Ogez, Frédéric Amblard, Cécile Bothorel
	SSS-2	Design and implementation of a framework for the integrated simulation of traffic participants of all types (EMSS06-3187836256)	Ulf Lotzmann
	SSS-3	The Development of Cooperative Capabilities in Young Enterprises - A Cognition-Based Simulation Model (EMSS06-7604119785)	Michael Beier
Session 2			
Wednesday 4th			
11.30–13.00			
Track Chair: Adelinde Uhrmacher and Michael Moehring			
Social Sciences Simulation	SSS-4	SODSI: dynamical microsimulation as an established social policy planning tool (EMSS06-3465727992)	Christof Schatz
	SSS-5	On Accounting for the Interplay of Kinetic and Non-Kinetic Aspects in Population Mobility Models (EMSS06-3411171558)	Kalyan S. Perumalla and Budhendra L. Bhaduri
	SSS-6	Simulating spatial vaccination strategies with an agent based model (EMSS06-4737426037)	Joana M. Simoes
Session 3			
Wednesday 4th			
14.00–16.00			
Track Chair: Jaume Figueras and Helena Szczerbicka			
Simulation Methodologies. Techniques and Applications.	STA-8	Body of Knowledge of Modeling and Simulation (M&SBOK): Pragmatic Aspects (EMSS06-7236636954)	Tuncer I. Ören
	STA-9	A generalized framework for abstraction and dynamic loading of numerical solvers (EMSS06-7855528474)	Filip H.A. Claeys, Peter A. Vanrolleghem, Peter Fritzon
	STA-10	An efficient and effective partitioning algorithm for air traffic management (EMSS06-9919232093)	Björn Paul, Wolfgang Theeck, Jan Himmelspach, Adelinde Uhrmacher
	STA-11	Generalized nets as a tool for modelling and simulation of open and hybrid systems (EMSS06-2296497865)	Nikolinka Christova, Violeta Tasseva, Desislava Peneva, Krassimir Atanassov
Session 4			
Wednesday 4th			
16.30–18.30			
Track Chair: Dr. Ramón Vilanova and Xavier Lafuente			
Biological Process Simulation	BPS-1	Boosting the efficiency of compound virtual experiments through a priori exploration of the solver setting space (EMSS06-8745814916)	Filip H.A. Claeys, Peter A. Vanrolleghem, Peter Fritzon

	BPS-2	Modeling bone adaptation and remodeling initiated by mechanical stimuli (EMSS06-9104083545)	Solvey Maldonado, Steffen Borchers, Rolf Findeisen, Frank Allgöwer
	BPS-3	Modeling the bone remodeling cycle due to mechanical force. (EMSS06-7022763213)	Steffen Borchers, Solvey Maldonado, Rolf Findeisen and Frank Allgöwer
	BPS-4	On spatial discretisation in the calculus of subcutaneous insulin absorption profiles (EMSS06-2049904606)	Cristina Tarín Sauer, Jorge Bondia, Edgar Teufel, Josep Vehí
Session 5			
Thursday 5th			
14.00 – 16.00			
Track Chair: Gaby Neumann and Yury Merkurjev			
Logistics Modeling, Simulation and Optimization	LMSO-1	Warehouse simulation environments for analysing order picking processes (EMSS06-0344733885)	Galina Merkurjeva, Bernardo Cisneiros Machado, Aurelija Burinskiene
	LMSO-2	Modeling and simulation of vehicle movements in ship critical zones (EMSS06-8144635512)	Jesús Lozano R., Amable López P., Raul Atenza M.
	LMSO-3	Factory railway system modeling and simulation (EMSS06-3748055823)	Antoni Guasch, Jaume Figueras, Miquel A. Piera
	LMSO-4	Case study to compare modeling and simulation approaches of different domain experts (EMSS06-8592725631)	Gaby Neumann, Bernd Page
Session 6			
Thursday 5th			
16.30 – 18.30			
Track Chair: Manuel Silva and Emilio Jiménez			
Industrial Applications of Petri Nets	IAPN-5	An open petri net modelling and analysis environment in matlab (EMSS06-0672698638)	Gasper Music, Thomas Loscher, Dejan Gradisar
	IAPN-6	PN to CSP methodology: Incomplete Search (EMSS06-7003555148)	Daniel Riera Terrén, Miquel Àngel Piera, Antoni Guasch Petit
	IAPN-7	Modeling and automation implementation of an industrial production process with PN (EMSS06-8372154584)	César Murillo, Ramiro Aliendre, Emilio Jiménez, Mercedes Pérez
Session 7			
Friday 6th			
9.00 – 10.30			
Track Chair: David Nicol			
Special Session	SpSe-1	Efficient state management to speed up simultaneous simulation of alternate system configurations	Shravan Gaonkar, Tod Courtney, William H. Sanders
	SpSe-2	A class of load balancing network routing protocols	Anders A. Hansson, Christian M. Reidys
	SpSe-3	Top speed of flash worms revisited	David M. Nicol
Session 8			
Friday 6th			
11.00 – 13.00			
Track Chair: Jaume Figueras and Helena Szczerbicka			
Simulation Methodologies. Techniques and Applications.	STA-12	A diagraph method for qualitative/quantitative modelling of the dynamics of combined operator/process systems (EMSS06-4000367555)	Y.M. Sebzali, X.Z. Wang, Abdullah Akbar
	STA -13	Activity based modelling with automatic prototype generation of process based arena models (EMSS06-4433736410)	Luís M. Silva Dias, Guilherme A. B. Pereira, A.J. M. Guimarães Rodrigues
	STA-14	Sequential processing of PDEVS models (EMSS06-1363418859)	Jan Himmelspach Adelinde M. Uhrmacher

	STA-15	Object-oriented approach to implementation of supply chain optimization and simulation models (EMSS06-4721693229)	Charu Chandra, Jānis Grabis
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ROOM 3

Session 1			
Wednesday 4th			
9.30–11.00			
Track Chair: Maria Rosa Aguilar and Tayfur Altioik			
Simulation in Manufacturing	MANUF-1	Automated Simulation Model Generation for Scheduler-Benchmarking In Manufacturing (EMSS06-3067323894)	Gabriel Kronberger, Berthold Kerschbaumer, Andreas Weidenhiller, Herbert Jodlbauer
	MANUF-2	An interface to integrate workflow diagrams into discrete event simulation (EMSS06-4301348529)	R. M. Aguilar, R. Muñoz, I. Castilla, C. A. Martin, V. Muñoz
	MANUF-3	Using system dynamics simulation for analysis of uncertainties in engineering projects (EMSS06-8951796214)	Kazem Yaghootkar
Session 2			
Wednesday 4th			
11.30–13.00			
Track Chair: Juan José Ramos and Jean Claude Hennet			
Supply Chain Integration and Extended Enterprises	SCI-4	Supply chain management models for industrial districts: an agent-based simulation study (EMSS06-1556179661)	Vito Albino, Nunzia Carbonara and Ilaria Giannoccaro
	SCI-5	Product portfolio optimization for dairy industry (EMSS06-2609965591)	Natasha G. Vaklieva-Bancheva, Elisaveta G. Shopova, Antonio Espuña, Luis Puigjaner
	SCI-6	A Technological Platform for Designing Real-Time Decision Tools in Transportation Logistics (EMSS06-6269058724)	J.J. Ramos, D. Guimarans, M.A. Piera, A. Guasch
Session 3			
Wednesday 4th			
14.00–16.00			
Track Chair: Manuel Silva and Emilio Jiménez			
Industrial Applications of Petri Nets	IAPN-1	An optimization method for continuous petri net models: application to manufacturing systems (EMSS06-0869691825)	Diego Rodríguez
	IAPN-2	Building an Efficient Coloured Petri Net Simulator (EMSS06-5683592491)	Miguel Mujica Mota, Miquel A. Piera
	IAPN-3	Development of genetic algorithm for solvingscheduling tasks in fms with coloured petri nets (EMSS06-1411208618)	Liana Napalkova, Galina Merkuryeva, Miquel A. Piera
	IAPN-4	Industrial Applications of Petri Nets: System Modelling and Simulation (EMSS06-6778731275)	Emilio Jiménez, Mercedes Pérez, Ignacio Latorre
Session 4			
Wednesday 4th			
16.30–19.00			
Track Chair: Gaby Neumann and Yury Merkuryev			
Logistics Modeling, Simulation and Optimization	LMSO-5	Efficient heuristic optimization in single machine scheduling (EMSS06-3172379648)	Roland Braune, Michael Affenzeller, Stefan Wagner
	LMSO-6	Distribution of the Search Space for a Colored Petri Net Simulator (EMSS06-2533600679)	Laia Vilalta Estrada, Miquel A. Piera, Mercedes Narciso, Toni Guash

	LMSO-7	Colored Petri Net Specification of Multi-Agent System Behaviour to Tackle the Vehicle Routing Problem (EMSS06-1577486452)	Sonia Busquets, Miquel A. Piera. Juan José Ramos, Toni Guash
	LMSO-8	A simulation-optimization platform to improve distribution networks (EMSS06-1905246007)	Valérie Bélanger, Angel Ruiz, Daoud Ait Kadi
	LMSO-9	Modelling of logistics service costs by means of nonparametric methods (EMSS06-8840665742)	Vitalijs Jurenoks and Vladimirs Jansons
Session 5			
Thursday 5th 14.00 – 16.00			
Track Chair: Manuel Silva and Emilio Jiménez			
Industrial Applications of Petri Nets	IAPN-8	Performance Analysis of an Assembly System: A case study (EMSS06-9297301955)	Jean-Luc Cojan, Loïc Plassart, Frank Singhoff, Philippe Le Parc
	IAPN-9	Derivative subnets of the valid msc subnet $\Sigma_c(q)$ of controlled dan/petri nets (EMSS06-7461324604)	Eleazar Jiménez Serrano, Keijiro Araki, Shigeru Kusakabe
	IAPN-10	Comparison of optimization techniques applied to a flexible manufacturing system (EMSS06-4266640201)	Juan Ignacio Latorre Biel, Emilio Jiménez Macías, Mercedes Pérez de la Parte
	IAPN-11	Model Based Decision Approach: Reactive Modeling to Improve Logistic Systems (EMSS06-5683592490)	Miquel Angel Piera, Toni Guasch
Session 6			
Thursday 5th 16.30 – 18:00			
Track Chair: Juan José Ramos and Jean Claude Hennet			
Supply Chain Integration and Extended Enterprises	SCI-1	Production coordination in a multistage manufacturing network (EMSS06-8779254940)	Jean-Claude Hennet
	SCI-2	Optimal Release Dates in Multi Period and Multilevel Supply Chain with Random LeaTimes (EMSS06-1212609095)	Faïcel Hnaïen, Alexandre Dolgui , Lynda Boukir, Mohamed -Aly Ould Louly
	SCI-3	Design and implementation of the branch & bound algorithmic design technique as an high level parallel composition (EMSS06-1645276048)	Mario Rossainz López, Manuel I. Capel Tuñón
Session 7			
Friday 6th 9.00 – 10.30			
Track Chair: Jaume Figueras and Helena Szczerbicka			
Simulation Methodologies. Techniques and Applications	STA-19	Designing reliable systems and networks using discrete event simulation: a case study (EMSS06-8320383669)	Angel A. Juan, Carles Serrat, Javier Faulin, Joan M. Marqués
	STA-20	A devs M&S framework based on java and actors (EMSS06-7795786332)	Franco Cicirelli, Angelo Furfaro, Liberio Nigro
	STA-21	A Strategy For Specific Identification Of A Multivariable Plant From Closed-Loop Identification (EMSS06-3420313667)	Miguel Rodríguez, Santiago Sandoval, Cesar de Prada Moraga, William Colmenares
Session 8			
Friday 6th 11.00 – 12.30			
Track Chair: Maria Rosa Aguilar and Tayfur Altioek			
Simulation in Manufacturing	MANUF-4	A computer-aided simulation analysis tool for siman models automatically generated from petri nets(EMSS06-5232825322)	Albert Peñarroya, Francesc Casado, Jan Rosell

	MANUF-5	Verification and validation in discrete event simulation: a case study in hospital management (EMSS06-8260257003)	R. M. Aguilar, I. Castilla, R. Muñoz, C. A. Martín, J. D. Piñeiro
	HMS-8	Simulation of Pool Logistics for Power Plant Service (HMS2006_8)	Agostino Bruzzone, Enrico Briano



ROOM 4

Session 1			
Wednesday 4th			
9.30–11.00			
Track Chair: Witold Jacak and Michael Affenzeller			
Simulation in Medicine	SM-1	Model-based navigation using GPS: one step closer to intelligent, incremental maps (EMSS06-3288370591)	Herwig MAYR
	SM-2	Processing of Myoelectric Signals for Control Assistance of Multifunctional Hand Prosthesis (EMSS06-5763943679)	Klaus Buchenrieder
	SM-3	A dynamical model of the cardiac vector loop for simulation of electrocardiogram signals (EMSS06-3129520627)	Andreas Schrempf, Andreas Lindbaum
Session 2			
Wednesday 4th			
11.30–13.00			
Track Chair: Jaume Figueras and Helena Szczerbicka			
Simulation Methodologies. Techniques and Applications.	STA-16	Estimating the maintenance cost in electric networks using an hybrid soft computing methodology (EMSS06-8277611576)	Jesús Acosta, Ángela Nebot, Pedro Villar Josep M. Fuertes
	STA-17	A fault diagnosis approach using ODPN simulation for hydraulic systems (EMSS06-7219608442)	A. Mokhtari , M.Y LeLann, G. Hetreux, I.M LeLann
	STA-18	The Mathematical Modeling And Simulation of Low Voltage Network for Harmonic Analysis (EMSS06-4965680106)	Abdullah Al-Odienat
Session 3			
Wednesday 4th			
14.00–16.00			
Track Chair: Witold Jacak and Michael Affenzeller			
Simulation in Medicine	SM-4	Development of an application for a mini-endoscope to reconstruct the inner surface of a blood vessel using a motion-simulation-model of the endoscope (EMSS06-8028241038)	R.Hainisch, S.Froschauer, H. Schöffl, M. Zauner
	SM-5	Robust segmentation of coronary arteries in cine angiography for 3D modeling (EMSS06-8741977264)	Gerald A. Zwettler ,Clemens Steinwender Roland Swoboda, Franz Leisch, Werner Backfrieder
	SM-6	Data driven therapy modeling (EMSS06-9655799638)	Witold Jacak Karin Pröll
	SM-7	Surgical training and performance assessment using a motion tracking system (EMSS06-4833796613)	Chuan Feng, Hanees Haniffa, Jerzy Rozenblit, PhD, Jianfeng Peng, Allan Hamilton, MD, FACS Mohamad Salkini, MD
Session 4			
Wednesday 4th			
16.30 – 18.30			
Track Chair:			
HMS	HMS-1	Capacity Assessment Via Simulation for a Spanish Dry Port (HMS2006_1)	Álvaro García Sánchez, Isabel García Gutiérrez

	HMS-2	Simulation-based analysis of dependency between sales volume and service level (HMS2006_2)	Julija Petuhova and Yuri Merkuryev
	HMS-3	Design procedure methods for logistic facilities. The case study of a logistic platform for the goods exchange to be located in the Centre of Italy (HMS2006_3)	Stefano Saetta, Lorenzo Tiacci
	HMS-4	Vessel Management Simulation (HMS2006_4)	Agostino Bruzzone, Enrico Bocca
Session 5			
Thursday 5th 14.00 – 16.00			
Track Chair: Witold Jacak and Michael Affenzeller			
Simulation in Medicine	SM-8	A note on solution sizes in the haplotype tagging snps problem (EMSS06-5897930833)	Staal Vinterbo, Stephan Dreiseitl
	SM-9	Robust Iterative Reconstruction in Bi-Planar X-Ray Angiography (EMSS06-7291461533)	Werner Backfrieder, Martin Carpella, Roland Swoboda, Clemens Steinwender, Christian Gabriel, Franz Leisch
	SM-10	HeuristicModeler: A Multi-Purpose Evolutionary Machine Learning Algorithm and its Applications in Medical Data Analysis (EMSS06-2071897413)	Stephan Winkler, Michael Affenzeller, Stefan Wagner
	SM-11	Putting the head on the neck: a realistic biomechanic model of human head-neck mechanics (EMSS06-1936107421)	Thomas Haslwanger, Michael Aichinger, Michael Stoettinger, Rudi Jaeger, Valentin Keppler Stefano Ramat
Session 6			
Thursday 5th 16.30 – 19.00			
Track Chair:			
HMS	HMS-6	Optimizing Retail Logistics from Store Point of View (HMS2006_6)	Chiara Briano, Agostino Bruzzone, Marina Massei
	HMS-7	Modelling for estimating impact on road transportation of regional emergencies & disasters (HMS2006_5)	Agostino G. Bruzzone, Marina Massei
	HMS-8	Logistics and process solutions for supply chain in fresh food in retail (HMS2006_9)	Agostino G. Bruzzone, Enrico Bocca
	HMS-9	Simulation of the Supply Chain Risks (HMS2006_10)	Agostino Bruzzone, Marina Massei, Simonluca Poggi
	HMS-10	Ant Colony System for Supply Chain Route Optimization (HMS-11)	G. De Sensi, F. Longo, G. Mirabelli, E. Papoff
MISS Session: McLeod Institute of Simulation Sciences			
Friday 6 th 9.00–10.30			
Chair: Agostino Bruzzone			