

THE 7TH INTERNATIONAL MEDITERRANEAN AND
LATIN AMERICAN MODELING MULTICONFERENCE



OCTOBER 13-15 2010
FES, MOROCCO

GENERAL CO-CHAIRS

AGOSTINO BRUZZONE, *MISS DIPTM, UNIVERSITY OF GENOA, ITALY*
CLAUDIA FRYDMAN, *LSIS, UNIVERSITY OF AIX-MARSEILLE, FRANCE*



EMSS 2010 FINAL PROGRAM

SOFT COMPUTING AND MODELLING & SIMULATION (SESSION 1) EMSS1

Wednesday, 13:30 – 15:30, Room 3

Chair: Stefan Wagner

FEATURE SELECTION IN THE ANALYSIS OF TUMOR MARKER DATA USING EVOLUTIONARY ALGORITHMS, *Stephan Winkler, Michael Affenzeller, Gabriel Kronberger, Michael Kommenda, Stefan Wagner, Witold Jacak, Herbert Stekel*

PREDICTION OF BLOOD DEMANDS IN A HOSPITAL, *Christian Fischer, Lukas Bloder, Christoph Neumüller, Sebastian Pimminger, Michael Affenzeller, Stephan Winkler, Herbert Stekel, Rupert Frechinger*

SYMBOLIC REGRESSION WITH SAMPLING, *Michael Kommenda, Gabriel Kronberger, Michael Affenzeller, Stephan Winkler, Christoph Feilmayr, Stefan Wagner*

GENERAL PURPOSE DATA MONITORING SOFTWARE FOR PLATFORM INDEPENDENT REMOTE VISUALIZATION, *Andreas Gschwandtner, Michael Bogner, Franz Wiesinger, Martin Schwarzbauer*

SOFT COMPUTING AND MODELLING & SIMULATION (SESSION 2) EMSS2

Wednesday, 16:00 – 18:00, Room 3

Chair: Monika Kofler

OPTIMIZATION OF KEYWORD GROUPING IN BIOMEDICAL INFORMATION RETRIEVAL USING EVOLUTIONARY ALGORITHMS, *Viktoria Dorfer, Stephan M. Winkler, Thomas Kern, Gerald Petz, Patrizia Faschang*

ON-LINE PARAMETER OPTIMIZATION STRATEGIES FOR METAHEURISTICS, *Michael Affenzeller, Lukas Pöllabauer, Gabriel Kronberger, Erik Pitzer, Stefan Wagner, Stephan M. Winkler, Andreas Beham, Monika Kofler*

EFFECTS OF MUTATION BEFORE AND AFTER OFFSPRING SELECTION IN GENETIC PROGRAMMING FOR SYMBOLIC REGRESSION, *Gabriel K. Kronberger, Stephan M. Winkler, Michael Affenzeller, Michael Kommenda, Stefan Wagner*

MUTATION EFFECTS IN GENETIC ALGORITHMS WITH OFFSPRING SELECTION APPLIED TO COMBINATORIAL OPTIMIZATION PROBLEMS, *Stefan Wagner, Michael Affenzeller, Andreas Beham, Gabriel Kronberger, Stephan Winkler*

BAUOPTIMIZER: MODELLING AND SIMULATION TOOL FOR ENERGY AND COST OPTIMIZATION IN BUILDING CONSTRUCTION PLAN DESIGN, *Gerald Zwettler, Florian Waschaurek, Paul Track, Elmar Hagmann, Richard Woschitz, Stefan Hinterholzer*

SOFT COMPUTING AND MODELLING & SIMULATION (SESSION 3) EMSS4

Thursday, 16:00 – 18:00, Room 3

Chair: Michael Kommenda

ON THE BENEFITS OF A DOMAIN-SPECIFIC LANGUAGE FOR MODELING METAHEURISTIC OPTIMIZATION ALGORITHMS, *Stefan Vonolfen, Stefan Wagner, Andreas Beham, Michael Affenzeller*

ENHANCED PRIORITY RULE SYNTHESIS WITH WAITING CONDITIONS, *Andreas Beham, Monika Kofler, Stefan Wagner, Michael Affenzeller, Helga Heiss, Markus Vorderwinkler*

USING ERP-DRIVEN FLOW ANALYSIS TO OPTIMIZE A CONSTRAINED FACILITY LAYOUT PROBLEM, *Andreas Beham, Monika Kofler, Stefan Wagner, Michael Affenzeller, Walter Puchner*

REASSIGNING STORAGE LOCATIONS IN A WAREHOUSE TO OPTIMIZE THE ORDER PICKING PROCESS, *Monika Kofler, Andreas Beham, Stefan Wagner, Michael Affenzeller, Clemens Reitingner*

PROCESSOR-ORIENTED PERFORMANCE MEASUREMENT TOOL, *Martin Schwarzbauer, Michael Bogner, Franz Wiesinger, Andreas Gschwandtner*

RENEWABLE ENERGIES AND DESALINATION (SESSION 1) EMSS 6

Friday, 8:30 – 10:00, Room 3

Chairs: Dionysis Assimacopoulos, George Arampatzis

A DECISION SUPPORT SYSTEM FOR DESIGN AND ASSESSMENT OF HYBRID SYSTEMS FOR COGENERATION OF ELECTRICITY AND WATER, *Dionysis Assimacopoulos, George Arampatzis, Avraam Kartalidis*

MODELLING AND CONTROL OF A WIND TURBINE EQUIPPED WITH A PERMANENT MAGNET SYNCHRONOUS GENERATOR (PMSG), *Johanna Salazar, Fernando Tadeo, Cesar de Prada, Luis Palacin*

SIMULATION OF AN HYBRID POWER SYSTEM TO PRODUCE WATER AND ELECTRICITY FOR REMOTE COMMUNITIES IN TUNISIA, *Kamilia Ben Youssef, Kalthoum Makhoul, Lotfi Khemissi, Ridha Landolsi, Hamza Elfil, Amenallah Guizani*

ESTIMATION OF THE ENERGY PRODUCTION OF A 15KW WIND TURBINE IN THE SITE OF BORJ-CEDRIA, *Dahmouni Anouar Wajdi, Oueslati Mouhamed Mehdi, Ben Salah Mouhiedine Askri Faouzi, Kekini Chekib, Guizani Amenallah, Ben Nasrallah Sassi*

RENEWABLE ENERGIES AND DESALINATION (SESSION 2) EMSS 7

Friday, 10:30 – 12:00, Room 3

Chairs: Essameddin Badreddin, Adrian Gambier, Hamza Elfil

DIAGNOSIS OF THE OPEN-GAIN REVERSE OSMOSIS DESALINATION UNIT, *Kalthoum Makhoul, Kamilia Ben Youssef, Amenallah Guizani, Hamza ELFIL*

OPTIMAL SCHEDULING OF HYBRID ENERGY SYSTEMS USING LOAD AND RENEWABLE RESOURCES Forecast, *Sami Karaki, Ayman Bou Ghannam, Fuad Mrad, Riad Chedid*

FAULT-TOLERANT SUPERVISORY CONTROL OF A REVERSE OSMOSIS DESALINATION PLANT POWERED BY RENEWABLE ENERGIES, *Adrian Gambier, Tobias Miksch, Essameddin Badreddin*

VALIDATION OF A REVERSE OSMOSIS DYNAMIC SIMULATOR, *Luis Palacin, Fernando Tadeo, Johanna Salazar, Cesar de Prada*

CONTINUOUS AND HYBRID SIMULATION (SESSION 1) EMSS9

Friday, 16:00 – 18:00, Room 3

Chair: Cesar de Prada

EMPIRICAL AND SIMPLIFIED MODELS FOR AN INDUSTRIAL BATCH PROCESS, *Alexander Rodriguez, Luis Felipe Acebes, Cesar de Prada*

OBJECT ORIENTED MODELING AND SIMULATION OF BATCH SUGAR CENTRIFUGES, *Rogelio Mazaeda, César de Prada*

DYNAMIC SIMULATION OF A COLLECTOR OF H₂ USING METHODS OF NUMERICAL INTEGRATION AND A GRAPHICAL LIBRARY IN ECOSIMPRO®, *Mar Valbuena, Daniel Sarabia, Cesar de Prada*

OPTIMAL DESIGN FOR WATER AND POWER CO-GENERATION IN REMOTE AREAS USING RENEWABLE ENERGY SOURCES AND INTELLIGENT AUTOMATION, *Amr Kandil, Adrian Gambier, Essameddin Badreddin*

SIMULATION OF BOILERS FOR HEATING AND HOT WATER SERVICES, *Renzo Tosato*

INDUSTRIAL ENGINEERING (SESSION 1) EMSS 5

Thursday 10:30 – 12:00 Room 3

Chairs: Giovanni Mirabelli, Francesco Longo

A COMPUTERIZED METHODOLOGY AND AN ADVANCED APPROACH FOR THE EFFECTIVE DESIGN AND PRODUCTIVITY ENHANCEMENT OF AN INDUSTRIAL WORKSTATION, *Antonio Cimino, Francesco Longo, Giovanni Mirabelli, Rafael Diaz*

A SIMULATION ANALYSIS FOR EVALUATING PALLET MANAGEMENT EFFECTVINESS, *Maria grazia Gnoni, Gianni Lettera, Alessandra Rollo*

A SIMULATION-BASED ERGONOMIC EVALUATION FOR THE OPERATIONAL IMPROVEMENT OF THE SLATE SPLITTERS WORK, *Nadia Rego Monteil, David del Rio Vilas, Diego Crespo Pereira, Rosa Rios Prado*

ENHANCING QUALITY OF SUPPLY CHAIN NODES SIMULATION STUDIES BY FAILURE AVOIDANCE, *Francesco Longo, Tuncer Ören*

A STOCHASTIC APPROACH FOR THE DESIGN OF END-OF-LINE STORAGE AREA, *Sara Dallari, Elisa Gebennini, Andrea Grassi, Magnus Johansson*

MODELING & SIMULATION WITH PETRI NETS AND DES FORMALISMS (SESSION 1) EMSS 3

Thursday 13:30 – 15:30 Room 3

Chairs: Emilio Jiménez, Mercedes Pérez

A NEW APPROACH TO DESCRIBE DEVS MODELS USING BOTH UML STATE MACHINE DIAGRAMS AND FUZZY LOGIC, *Stéphane Garredu, P A, Bisgambiglia, Evelyne Vittori, Jean-François Santucci*

PERFORMANCE COMPARISON BETWEEN COLORED AND STOCHASTIC PETRI NET MODELS: APPLICATION TO A FLEXIBLE MANUFACTURING SYSTEM, *Diego Rubén Rodríguez, Emilio Jiménez, Eduardo Martínez-Camara, Julio Blanco*

ON THE DEVELOPMENT OF A RISK BASED VERIFICATION PROTOCOL FOR PROCESS MODELLING AND SIMULATION, *Tore Myhrvold, Arjun Singh*

OPTIMIZATION OF FLEXIBLE MANUFACTURING SYSTEMS: COMPARISON BETWEEN STOCHASTIC AND DETERMINISTIC TIMING ASSOCIATED TO TASKS, *Diego Rubén Rodríguez, Daniela Ándor, Mercedes Pérez, Julio Blanco*

MODELING & SIMULATION WITH PETRI NETS AND DES FORMALISMS (SESION 2) EMSS 10

Friday 16:00 – 18:00 Room 1

Chairs: Emilio Jiménez, Juan Ignacio Latorre

TESTING DISCRETE EVENT SYSTEMS: SYNCHRONIZING SEQUENCES USING PETRI NETS, *Marco Pocci, Isabel Demongodin, Norbert Giambiasi, Alessandro Giua*

COLOURED PETRI NETS AS A FORMALISM TO REPRESENT ALTERNATIVE MODELS FOR A DISCRETE EVENT SYSTEM, *Juan Ignacio Latorre, Emilio Jiménez, Mercedes Pérez*

MODELING AND SIMULATION OF PERIODIC SYSTEMS BY ISS CONTINUOUS PETRI NETS, *Emilio Jimenez*

ON THE SOLUTION OF OPTIMIZATION PROBLEMS WITH DISJUNCTIVE CONSTRAINTS BASED ON PETRI NETS, *Juan Ignacio Latorre, Emilio Jiménez, Mercedes Pérez*

A CASE STUDY IN WORKFLOW MODELLING USING CONTROL-FLOW PATTERNS, *Yeray Callero, Iván Castilla, Rosa María Aguilar*

OPTIMIZATION METHODS AND SIMULATION TOOLS FOR DYNAMIC SYSTEMS, EMSS8

Friday 13:30 – 15:30 Room 3

Chair: Idalia Flores

SIMULATION AND OPTIMIZATION OF THE PRE-HOSPITAL CARE SYSTEM OF THE NATIONAL UNIVERSITY OF MEXICO USING TRAVELLING SALESMAN PROBLEM ALGORITHMS., *Esther Segura, Luis Altamirano, Idalia Flores*

OPTIMAL POLICIES FOR A CONGESTED URBAN NETWORK, *Ciro D'Apice, Rosanna Manzo, Luigi Rarità*

SIMULATION MODEL FOR EVALUATING SCENARIOS IN PAINTING TASKS SCHEDULING IN THE AUTOMOTIVE INDUSTRY, *Luis Altamirano, Idalia Flores*

METHODOLOGY FOR THE DETECTION AND PREVENTION OF FAILURES IN INDUSTRIAL PRODUCTION EQUIPMENT, *Ann Wellens, Joel Esquivel*

MODELING AND SIMULATION METHODOLOGIES, TECHNOLOGIES AND APPLICATIONS EMSS 11

Thursday 16:00 – 18:00 Room 2

Chairs: Toni Guasch

HIERARCHICAL CONSCIENT EVOLUTION, *Tudor Niculiu, Maria Niculiu*

THE IMPACT OF THE SIMULATION USER ON SIMULATION RESULTS: TO WHAT EXTENT HUMAN THINKING CAN BE REPLACED BY ALGORITHMS?, *Gaby Neumann, Juri Tolujew*

MODELLING COUNTRY RECONSTRUCTION BASED ON CIVIL MILITARY COOPERATION AGOSTINO G. BRUZZONE, FRANCESCA MADEO, FEDERICO TARONE

A METHODOLOGY FOR THE DESIGN OF SIMULATION CAMPAIGNS BASED ON POPULATION VARIANCE CHARACTERIZATION, *Andrea Grassi, Elisa Gebennini, Giuseppe Perrica, Cesare Fantuzzi, Bianca Rimini*

DATA DRIVEN TUMOR MARKER PREDICTION SYSTEM, *Witold Jacak, Karin Proell, Herbert Stekel*

MODELING AND SIMULATION METHODOLOGIES, TECHNOLOGIES AND APPLICATIONS EMS12

Friday 16:00 – 18:00, Room 2

Chair: Miquel Angel Piera

SIMULATING AND VALIDATING COMPLEX SYSTEMS: THE CHALLENGE OF FORECASTING DISCONTINUOUS OUTPUT BEHAVIOR, *Marko Hofmann, Thomas Krieger*

BEHAVIORAL VERIFICATION OF BOM BASED COMPOSED MODELS, *Imran Mahmood, Rassul Ayani, Vladimir Vlassov, Farshad Moradi*

A SIMULATION MODEL TO QUANTIFY PERTURBATION EFFECTS OF AIRPORT INFRASTRUCTURES IN AIR CARGO HANDLING OPERATIONS, *Miquel Angel Piera, Mercedes Narciso, Juan Jose Ramos, Lanyae Filali*

SYSTEM DYNAMICS USE FOR TECHNOLOGIES ASSESSMENT, *Zane Barkane, Hugues Vincent, Egils Ginters*
A SIMULATION-BASED APPROACH TO THE VEHICLE ROUTING PROBLEM, *Stefan Vonolfen, Stefan Wagner, Andreas Beham, Monika Kofler, Michael Affenzeller, Efreng Lengauer, Marika Scheucher*

MODELING AND SIMULATION METHODOLOGIES, TECHNOLOGIES AND APPLICATIONS EMSS13
Friday 13:30 – 15:30, Room 2

Chairs: Francesco Longo, Miquel Angel Piera

IMPROVEMENT ON DYNAMIC TILED TERRAIN RENDERING ALGORITHM IN LIBMINI, *Liao Mingxue, Xu Fanjiang, He Xiaoxin*

AN ADD-ON FOR REACTIVE NAVIGATION USING DEVS, *Youcef Dahmani, Maamar Hamri*

H_∞ ; OPTIMAL CONTROL OF DISCRETE-TIME SINGULARLY PERTURBED SYSTEMS, *Mostapha bidani, Mohamed wahbi*

MODULAR DRIVEN WHEELCHAIR BOND GRAPH MODELLING, *Abdennasser Fakri, Japie Petrus Vilakazi*

LATE PAPER

SIMULATION-BASED DEMAND MANAGEMENT WITH NON-INSTANTANEOUS INVENTORY REPLENISHMENT, *Raid Al Aomar, Rasha Adnan*

HMS 2010 FINAL PROGRAM

M&S LOGISTICS TRAFFIC AND TRANSPORTATION I – HMS 1

Wednesday 16.00 – 18.00

Chair: Agostino Bruzzone

STATISTICAL MODELLING OF FINANCIAL STABILITY OF LOGISTICS SYSTEM, *Vladimirs Jansons, Vitalijs Jurenoks, Konstantins Didenko*

SECURITY & SAFETY TRAINING AND ASSESSMENT IN PORTS BASED ON INTEROPERABLE SIMULATION, *Agostino Bruzzone, Alberto Tremori, Enrico Bocca*

MODELING THE EMPTY CONTAINER FLOW: AN APPLICATION OF SYSTEM DYNAMICS, *Mandar Tulpule, Rafael Diaz, Francesco Longo, Antonio Cimino*

TRAINPORTS - TRAINING IN MARINE PORT BY USING SIMULATION, *Agostino Bruzzone, Antonio Cimino, Francesco Longo, Giovanni Mirabelli*

A 256 VARIABLE NON-LINEAR TRANSPORTATION PROBLEM, *William Conley*

M&S LOGISTICS TRAFFIC AND TRANSPORTATION II – HMS 2

Thursday 13.30 – 15.30

Chair: Marina Massei

DISPATCHING OF MULTIPLE SERVICE VEHICLES IN THE DYNAMIC DIAL-A-RIDE PROBLEM, *Thomas Pickles, Baris Balcioglu, Beno Benhabib*

DATA ANALYSIS AND PROCESSING TOOL FOR AUTOMATIC IDENTIFICATION SYSTEM (AIS) VESSEL DATA TO SUPPORT SIMULATION MODELING, *Keith Hofseth, Cory Rogers, Richard Males*

SIMULATION MODEL FOR BERTH ALLOCATION PLANNING IN SEVILLE INLAND PORT, *Carlos Arango, Pablo Cortes, Jesus Muñuzuri, Luis Onieva*

MULTILEVEL APPROACH MODELLING FOR PORT CONTAINER TERMINAL SIMULATION, *Marcos Sanz, Daniel Juste, Carlos Lozano, Marina Valles, Jose Luis Navarro*

SIMUL9: APPLYING UML TO A METRO SIMULATOR, *Jordi Montero, Antoni Guasch, David Huguet, Jaume Figueras*

ADVANCED MODELS AND APPLICATIONS OF LOGISTICS & MANUFACTURING I – HMS 3

Thursday 16.00 – 18.00

Chair: Teresa Murino

MODELLING AND ANALYSIS OF MECHANICAL STEEL HANDLING PROCESSES IN SEAPORTS, *Bernd Scholz-Reiter, Michael Görge, Jan Topi Tervo, Ralf Matthies*

TOWARDS THE INTEGRATION OF BERTH ALLOCATION AND CONTAINER STACKING PROBLEMS IN MARITIM CONTAINER TERMINALS, *Miguel A. Salido, Mario Rodriguez, Federico Barber*

CLASSIFICATION OF DYNAMICAL PATTERNS IN AUTONOMOUSLY CONTROLLED LOGISTIC SIMULATIONS USING ECHO STATE NETWORKS, *Bernd Scholz-Reiter, Tobias Lensing, Michael Görge, Lutz Dickmann*

DESIGNING A SOFTWARE TOOL TO PLAN FIGHT ACTIONS AGAINST MARINE POLLUTIONS, *Jean-Marc Mercantini, Claudia Guerrero, Diégo Dantas de Freitas*

SIMULATION AS AN INTEGRATED PLATFORM FOR CONTAINER TERMINAL DEVELOPMENT LIFE-CYCLE, *A.Kuznetsov, V.Pogodin, Y.Spasky, V.Gleim*

ADVANCED MODELS AND APPLICATIONS OF LOGISTICS & MANUFACTURING II – HMS 4

Friday 10.30 – 12.00

Chair: Teresa Murino

ANALYSIS AND OPTIMIZATION OF AN HIGHLY SEASONABLE WAREHOUSE: CASE STUDY UNIFRIGO GADUS S.P.A., *Andrea Eminente, Teresa Murino, Giuseppe Naviglio*

APPLICATION OF ARTIFICIAL NEURAL NETWORK FOR DEMAND FORECASTING IN SUPPLY CHAIN OF THAI FROZEN CHICKEN PRODUCTS EXPORT INDUSTRY, *Pongsak Holimchayachotikul, Teresa Murino, Pachinee Payongyam, Apichat Sopadang, Matteo Savino, Romano Elpidio*

PARAMETRIC ESTIMATION OF SPARE PARTS IN CUSTOMER SUPPORT ACTIVITY, *Daniela Chiocca, Teresa Murino, Giuseppe Naviglio*

SIMULATION MODELLING OF A MARINE TURBOGENERATOR, *Josko Dvornik, Enco Tireli, Josip Orovic*

A SIMPLE REPRESENTATION SCHEME TO MODEL CRITICAL INFRASTRUCTURE
INTERDEPENDENCIES, *Chloe Griot, Jean-Pierre Nordvik*

SUPPLY CHAINS – HMS 5

Friday 13.30 – 15.30

Chair: Yuri Merkurjev

COMPOSED INFORMATION AND COMMUNICATION TECHNOLOGIES FOR LOCATION AND STATUS
TRANSPRANCY ON RO-RO TERMINALS, *Bernd Scholz-Reiter, Mehmet-Emin Özsahin, Anne Schweizer, Marc-
André Isenberg*

SUPPLY CHAIN SIMULATION METHODS ANALYSIS: AN APPLICATION TO THE BEER GAME, *Daniel
Guimaranes, Julija Petuhova, Yuri Merkurjev, Juan José Ramos*

TRANSPORT-STORAGE SYSTEM OPTIMIZATION IN TERMS OF EXERGY, *Pawel Zajac*

STOCHASTIC ODE AND PDE MODELS OF CURRENT STOCK OF DIVISIBLE PRODUCTIONS, *Eugene
Kopytov, Sharif Guseynov, Edvin Puzinkevich*

IMAACA'2010 FINAL PROGRAM

SESSION I – BOND GRAPH SESSION

Wednesday 13 October, 14.00-15.30

Session Chair: Geneviève Dauphin-Tanguy, France.

Session Co-chair: Katsuya Suzuki, Japan.

TRAJECTORY CONTROL OF A THREE DOF DUAL ARM SPACE ROBOT WITH SMALL ATTITUDE DISTURBANCE, *Hareesh Patolia, P. M. Pathak, S. C. Jain*

SIMULATION AND EXPERIMENTAL STUDIES ON WALKING ROBOT WITH FLEXIBLE LEGS, *Krishnan L V, P M Pathak, Lokesh Sardana, S C Jain*

FUEL CONSUMPTION IMPROVEMENT OF VEHICLE WITH CVT BY BOND GRAPHS, *Katsuya Suzuki, Kazuhiro Tanaka, Sho Yamakawa, Fumio Shimizu, Masaki, Fuchiwaki*

AUTOMATIC HANDLING OF COMMUTATIONS IN BOND GRAPH BASED SIMULATION OF SWITCHED SYSTEMS, *Matías Nacusse, Sergio Junco*

SESSION II - SPECIAL SESSION: MODELING AND CONTROL OF MECHANICAL SYSTEMS,

Wednesday 13 October, 14.00-15.30

organized by Jean-Yves Dieulot, LAGIS, Lille, France.

Session Chair: Jean-Yves Dieulot, France.

Session Co-chair: Nadhira Khezami, Tunisia.

SWITCHING MULTIMODEL LQ CONTROLLERS FOR VARIABLE SPEED AND VARIABLE PITCH WIND TURBINES, *Nadhira Khezami, Naceur Benhaj Braiek, Xavier Guillaud*

DYNAMIC MODELING OF A PARALLEL ROBOT WITH SIX DEGREES OF FREEDOM, *Abdelhakim Chibani, Chawki Mahfoudi, Abdelouahab Zaatri, Achour Amouri*

OPTIMAL GRASPING FORCE DISTRIBUTION FOR THREE ROBOTS HOLDING A RIGID OBJECT, *Ammar Khadraoui, Chawki Mahfoudi, Abdelouahab Zaatri, Karim Djouani*

DYNAMIC MODEL OF A FLEXIBLE BLADE WIND TURBINE IN AN ELECTRICAL GRID CONTROL STRUCTURE, *Lamine Chalal, Jean-Yves Dieulot, Geneviève Dauphin-Tanguy, Frederic Colas*

SESSION III – HYBRID ENERGY SYSTEMS

Thursday 14 October, 10.30-12.00

organized by Marta Basualdo, CIFASIS, Argentina and Rachid Outbib, LSIS, France.

Session Chair: Adrian Ilinca, Canada.

Session Co-chair: Xavier Roboam, France.

A PUMPING SYSTEM FED BY HYBRID PV-WIND SOURCES WITHOUT BATTERY STORAGE, BG MODELLING CONTROL AND ENERGY MANAGEMENT, *Amine Ben Rhouma, Jamel Belhadj, Xavier Roboam*

PNEUMATIC HYBRIDISATION OF DIESEL ENGINE IN A HYBRID WIND-DIESEL INSTALLATION WITH COMPRESSED AIR ENERGY STORAGE, *Tammam Basbous, Rafic Younes, Adrian Ilinca, Jean Perron*

ANALYSIS OF RENEWABLE ENERGY POTENTIAL OF HYBRID SYSTEMS FOR DWELLINGS IN FRANCE, *Philippe Poulet, Rachid Outbib*

PSEUDO DYNAMIC MODEL OF A BIO-ETHANOL PROCESSOR FOR A HYBRID VEHICLE PROTOTYPE, *Lucas Nieto, David Zumoffen, Diego Feroldi, Rachid Outbib, Marta Basualdo*

SESSION IV - SYSTEM AUTOMATION AND MANAGEMENT

Thursday 14 October, 14.00-15.30

Session Chair: Xavier Roboam, France.

Session Co-chair: Fadi Motawej, France.

DEPENDABILITY EVALUATION OF SAFETY INSTRUMENTED SYSTEMS INCORPORATING INTELLIGENT INSTRUMENTS, *Abdelhak Mkhida, Jean Marc Thiriet, Badr Bououlid*

DEVELOPING INTEGRATED PERFORMANCE MEASUREMENT SYSTEM - USING MDA APPROACH, *Paris Jean Luc, Khalid Kouiss, Saadi Janah, Deshayes Laurant*

TRAFFIC CONTROL AND QUEUES MANAGEMENT FOR A SINGLE INTERSECTION, *Fadi Motawej, Rachid Bouyekhf, Abdellah EL Moudni*

SESSION V- CONTROL OF ELECTRICAL DRIVES and PROCESS MODELING

Friday 15 October, 8.30-10.00

Session Chair: Latifa Ezzine, Morocco.

Session Co-chair: Badr Bououlid, Morocco.

AN ALTERNATIVE WAY TO THE PWM CONTROL OF SWITCHED RELUCTANCE MOTOR DRIVES, *Hedi Yahia, Mohmed Faouzi Mimouni, Rachid Dhifaoui*

EXPERIMENTAL ASSESSMENT OF TRAPEZOIDAL COMMUTATION AND FOC PERFORMANCES OF 3-PHASE PERMANENT MAGNET BRUSHLESS MOTOR, *Rachid Askour, Badr Bououlid*

IMPLEMENTATION OF IDENTIFICATION ALGORITHM USING RECURRENT RBF NEURAL NETWORKS FOR THE INSIDE TEMPERATURE IN A GREENHOUSE, *Latifa Ezzine, Mohamed Guerbaoui, Youssef El Afou, Abdelali Eddahhak, Abdeslam Lachhab, Lotfi Belkoura, Benachir Bouchikhi*

NON-ISOTHERMAL MODEL OF THE YEASTS GROWTH IN ALCOHOLIC FERMENTATIONS FOR HIGH QUALITY WINES, *Pablo M. Aballay, Gustavo J.E. Scaglia, Martha D. Vallejo, Laura A., Rodríguez, Oscar A. Ortiz.*

MAS 2010 FINAL PROGRAM

PRODUCTION PLANT AND INVENTORY MANAGEMENT SIMULATION – MAS 1

Wednesday 13.30 – 15.30

Chair: Francesco Longo

INVENTORY CONTROL PERFORMANCE OF VARIOUS FORECASTING METHODS WHEN DEMAND IS LUMPY, *Adriano Solis, Somnath Mukhopadhyay, Rafael Gutierrez*

MONTE CARLO SIMULATION: REMANUFACTURING OR NOT –A NEWSVENDOR PERSPECTIVE, *Rafael Diaz, Mandar Tulpule, Francesco Longo, Antonio Cimino*

PRODUCTION SYSTEMS DESIGN AND MANAGEMENT: A CASE STUDY ON A HAZELNUTS INDUSTRIAL PLANT, *Duilio Curcio, Francesco Longo, Giovanni Mirabelli, Piero Giordano*

COORDINATION OF ACTIVITIES: APPLICATION OF SOME CONCEPTS AND FORMALIZATIONS TO AGRICULTURAL SYSTEMS SIMULATION, *Roger Martin-Clouaire, Rémy Courdier, Guerrin François*

STOCHASTIC VENDOR SELECTION PROBLEM, *Baohua Wang, Shiwei He, Sohail Chaudhry*

ENTERPRISE AND SUPPLY CHAIN MODELING AND INTEROPERABILITY – MAS 2

Thursday 10.30 – 12.00

Chair: Gregory Zachawericz

A DECISION SUPPORT TOOL BASED ON ANP AND FMEA TO DETERMINE CAUSES FAILURES IN TRAIN CONTROL SYSTEM, *Antonella Petrillo, Fabio De Felice*

HARMONIZED AND REVERSIBLE DEVELOPMENT FRAMEWORK FOR HLA BASED INTEROPERABLE APPLICATION, *Zhiying Tu, Gregory Zacharewicz, David Chen*

ADVANTAGE OF MOBILE TRAINING FOR COMPLEX SYSTEMS, *Agostino Bruzzone, Marina Massei*

SIMULATION INTEGRATED WITH WEB 3.0 AS SMART SUPPORT FOR COMMAND AND CONTROL, *Agostino Bruzzone, Giovanni Cantice, Roberto Cianci, Francesco Longo, Simonluca Poggi*

DECISION SUPPORT SYSTEM APPLICATIONS I – MAS 3

Friday 8.30 – 10.00

Chair: Gregory Zachawericz

STEERING PROJECTS THROUGH SIMULATION: AN INNOVATIVE TOOL TO IMPROVE PROJECTS GUIDANCE EFFICIENCY, *Massimo de Falco, Luisa Falivene, Salvatore Miranda, Raffaele Iannone*

CONTROL STRATEGIES FOR A VARIABLE SPEED URBAN WIND TURBINE, *Aziz Naamane, Adil Mehadary, Mourad Trihi*

A PAIRWISE COMPARISON-BASED MODEL OF UNCERTAINTY IN MULTI-PERSON MULTI-CRITERIA DECISION PROBLEMS

PRECISION TRACKING MOTION CONTROL OF AN XY MICROPOSITIONING STAGE DRIVEN BY STEPPER MOTOR, *Hatem Tlijani, Mohamed Benrejeb*

A SIMULATION-BASED FRAMEWORK FOR CONSTRUCTION PROJECT INFORMATION MANAGEMENT, *Elmira Moghani, Simaan AbouRizk*

MODELING & APPLIED SIMULATION IN COMPLEX SYSTEM I – MAS 4

Friday 10.30 – 12.00

Chair: Simaan AbouRizk

POINTWISE COMPLETENESS AND POINTWISE DEGENERACY OF STANDARD AND POSITIVE HYBRID LINEAR SYSTEMS DESCRIBED BY THE GENERAL MODEL, *Kaczorek Tadeusz*

MODELING AND SIMULATION OF PROCESS INTERRUPTIONS WITH COPULAS, *Ivan Ourdev, Simaan AbouRizk*

A STUDY OF COMPUTATIONAL MODELING OF ABDOMINAL AORTIC ANEURYSM, *Sungmin Kim, Manpyo Lee, Hochul Kang, Juhwan Lee, Jehoon Jeong, Seunggyu Roh*

DESIGNING IRREGULAR GEARS VIA SPLINES, *Adam Marlewski, Piotr Krawiec*

ANN AND ANFIS BASED FOR ANALYZING NON LINEAR REAL SYSTEMS, *Samira Chabaa, Jilali Antari, Abdelouhab Zeroual*

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MISS - McLEOD INSTITUTE OF SIMULATION SCIENCE



M&SNET - MODELING & SIMULATION NETWORK



IMCS - INTERNATIONAL MEDITERRANEAN & LATIN AMERICAN COUNCIL OF SIMULATION



UNIVERSITY OF LA LAGUNA



MISS LATVIAN CENTER - RIGA TECHNICAL UNIVERSITY



MISS SPANISH CENTER - UAB



UNIVERSITY OF PERUGIA



MAST - MANAGEMENT AND ADVANCED SOLUTIONS AND TECHNOLOGIES



LAMCE, UFRJ



CIFASIS: CONICET - UNR - UPCAM