

# PROGRAMME SCHEDULE

## SUNDAY

Sunday, 9 Sept., Room: LRV, 13:00	
<b>TUTORIAL-I</b>	
Session Organizer: <b>Mušič G.</b>	
13:00-15:45	INTRODUCTION TO OBJECT-ORIENTED MODELING AND SIMULATION WITH MODELICA USING THE OPENMODELICA ENVIRONMENT <i>Fritzson P., Pop A., Aronsson P., Lundvall H. *, Broman D., Hedberg D., Brugard J. ** (*Linköping University, Sweden, **MathCore Engineering AB, Linköping, Sweden)</i>
Sunday, 9 Sept., Room: LRV, 13:00	
<b>TUTORIAL-II</b>	
Session Organizer: <b>Mušič G.</b>	
13:00-15:45	SUPER-OBJECT-ORIENTED PROGRAMMING AND MODEL NESTING <i>Kindler E. * (*University of Ostrava, Czech Republic)</i>
Sunday, 9 Sept., Room: LRV, 16:00	
<b>TUTORIAL-I</b>	
Session Organizer: <b>Mušič G.</b>	
16:00-18:45	INTRODUCTION TO OBJECT-ORIENTED MODELING AND SIMULATION WITH MODELICA USING THE OPENMODELICA ENVIRONMENT <i>Fritzson P., Pop A., Aronsson P., Lundvall H. *, Broman D., Hedberg D., Brugard J. ** (*Linköping University, Sweden, **MathCore Engineering AB, Linköping, Sweden)</i>
Sunday, 9 Sept., Room: P1, 16:00	
<b>TUTORIAL-III</b>	
Session Organizer: <b>Mušič G.</b>	
16:00-18:45	INVERSE SIMULATION METHODS AND APPLICATIONS <i>Murray-Smith D. J. *, Lu L. (*University of Glasgow, United Kingdom)</i>

## MONDAY

Monday, 9 Sept., Room: P1, 9:00	
<b>OPENING</b>	
Session Chair: <b>Zupančič B.</b> , Session Co-chair: <b>Karba R.</b>	
9:00	Welcome address, About EUROSIM, A brief history of EUROSIM, About EUROSIM 2007, Message from the golden sponsor Elektro Slovenia- Importance of effective simulation tools for reliable electric transmission system control.
Monday, 9 Sept., Room: P1, 10:00	
<b>PLENARY-I</b>	
Session Chair: <b>Zupančič B.</b>	
10:00-10.45	ELECTRONIC CIRCUIT MODELING AND SIMULATION IN MODELICA <i>Cellier F. E. *, Clauß C., Urquía A. (*ETH Zurich, Switzerland)</i>
Monday, 10 Sept., Room: P3, 11:05	
<b>MO-1-P3: MECHANICAL ENGINEERING I</b>	
Session Chair: <b>Hannani K. S.</b> , Session Co-chair: <b>Šitum Ž.</b>	
11:05	GREY-BOX MODELING OF AN OCEAN VESSEL FOR OPERATIONAL OPTIMIZATION <i>Savarsdóttir H., Sigurdsson S., Leifsson L. *, Vésteinsson A. (*Reykjavik University, Iceland)</i>
11:25	SIMULATION OF THE COALESCENCE OF DROPLETS EMPLOYING LATTICE BOLTZMANN AND LEVEL SET METHODS <i>Mehravaran M., Hannani S. K. * (*Sharif University of Technology, Iran)</i>
11:45	MODELING AND SIMULATION OF HYDRAULIC SYSTEM FOR TRANSLATIONAL AND ROTATIONAL MOTION <i>Šitum Ž. *, Essert M., Žilić T. (*University of Zagreb, Croatia)</i>
12:05	DYNAMICAL CHARACTERIZATION OF A VIBRATING MEMBER GYROSCOPE USING FINITE ELEMENT METHOD <i>Satz A. *, Hammerschmidt D. (*KAI Kompetenzzentrum Automobil- und Industrie-Elektronik GmbH, Villach, Austria)</i>
12:25	MODELING OF NON-CONTACT HANDLING DEVICE BY USING AIR SWIRLING FLOW <i>Li X. *, Kagawa T., Kawashima K. (*Tokyo Institute of Technology, Japan)</i>
Monday, 10 Sept., Room: P4, 11:05	
<b>MO-1-P4: ARTIFICIAL INTELLIGENCE METHODS I</b>	
Session Chair: <b>Liu Z.</b> , Session Co-chair: <b>Belič A.</b>	
11:05	MATHEMATIC MODEL AND CONTROL METHOD BASED ON HYBRID INTELLIGENCE <i>Liu Z. *, Wang X., Cui L. (*Beijing Technology and Business University, China)</i>
11:25	RBF NEURAL NETWORK WITH LINEARLY APPROXIMATED FUNCTIONS ON FPGA <i>Marek R. *, Skrbek M. (*Czech Technical University in Prague, Czech Republic)</i>

11:45	USE OF RADIAL BASIS FUNCTIONS AND LEVEL SET METHOD FOR SOLVING ONE-DIMENSIONAL PHASE CHANGE PROBLEMS <i>Vrankar L. *, Kansa E. J., Runovc F., Turk G. (*Slovenian Nuclear Safety Administration, Ljubljana, Slovenia)</i>
12:05	MISSING DATA IMPUTATION AND THE INDUCTIVE MODELING <i>Čeppek M. *, Kordík P., Šnorek M. (*Czech Technical University in Prague, Czech Republic)</i>
12:25	DATA MODELS IN VIEW OF COOPERATIVE DIALOGUE SYSTEMS <i>Hajdinjak M. (*University of Ljubljana, Slovenia)</i>

Monday, 10 Sept., Room: P6, 11:05

**MO-1-P6: ALGEBRAIC METHODS AND ALGORITHMS IN MODELLING DISCRETE DYNAMICAL SYSTEMS (S12)**

Session Organizer(s): **Li A.**

Session Chair: **Li A.**, Session Co-chair: **Peng C.**

11:05	COMPUTING DEDEKNID SUMS USING THE EUCLIDEAN ALGORITHM <i>Buckley A. (*University of Ljubljana, Slovenia)</i>
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11:25	CONSTRUCTION OF SELF-ADJOINT DETERMINANTAL REPRESENTATIONS OF SMOOTH CUBIC SURFACES <i>Buckley A., Košir T. (*University of Ljubljana, Slovenia)</i>
11:45	ALGEBRAIC METHODS IN MULTIVARIATE POLYNOMIAL INTERPOLATION <i>Li A. *, Min X. (*Montclair State University, Montclair, New Jersey, United States of America)</i>
12:05	DISTANCE BASED METHODS IN PHYLOGENETIC TREE CONSTRUCTION <i>Peng C. (*Morehouse College, Atlanta, Georgia, United States of America)</i>
12:25	WAVELET COMPRESSION OF SEMI-REGULAR TETRAHEDRAL VOLUME MESHES <i>Castro S., Castro L. (*Universidad Nacional del Sur, Bahía Blanca, Argentina)</i>

Monday, 10 Sept., Room: P7, 11:05

**MO-1-P7: MODELLING AND SIMULATION IN THE VEHICLE THERMAL MANAGEMENT SYSTEM (S23)**

Session Organizer(s): **Puntigam W.**

Session Chair: **Puntigam W.**, Session Co-chair: **Tegethoff W.**

11:05	SOME CONSIDERATIONS ON GLOBAL AND LOCAL THERMAL COMFORT BASED ON FIALA'S THERMAL MANIKIN IN THESEUS-FE <i>Paulke S. *, Wagner S., Schneider T. (*P+Z Engineering GmbH, München, Germany)</i>
11:25	MODELING AND SIMULATION OF COMPRESSORS IN MOBILE AIR-CONDITIONING SYSTEMS <i>Tegethoff W. *, Horst T., Richter C., Kossel R., Bodmann M., Lemke N. (*TLK-Thermo GmbH, Braunschweig, Germany)</i>
11:45	INTELLIGENT COMBINATION OF SIMULATION TOOLS AND EXPERIMENTAL INVESTIGATIONS BY MEANS OF THE V APPROACH <i>Puntigam W. *, Martin K. (*The Virtual Vehicle - Competence Center (VIF), Graz, Austria)</i>
12:05	THERMAL MANAGEMENT SIMULATION APPROACH FOR PARALLEL HYBRID VEHICLES <i>Kitanoski F. *, Lang G., Puntigam W., Kussmann C. (*The Virtual Vehicle - Competence Center (VIF), Graz, Austria)</i>
12:25	SIMULATING THERMAL MANAGEMENT OF BATTERY MODULES FOR THE PROPULSION OF HYBRID VEHICLES <i>Kussmann C. *, Drage P., Jagsch S. (*Magna Steyr Fahrzeugtechnik AG &amp; CO KG, Graz, Austria)</i>

Monday, 10 Sept., Room: P8, 11:05

**MO-1-P8: MODELLING AND SIMULATION IN STRUCTURAL MECHANICS (S15)**

Session Organizer(s): **Lebon F., Maceri F.**

Session Chair: **Lebon F.**, Session Co-chair: **Maceri F.**

11:05	RESOLUTION METHODS DEDICATED TO STRESS FORMULATED CONTACT PROBLEMS <i>Kuss F., Lebon F. (*LMA-CNRS, Marseille, France)</i>
11:25	WIRES AND CABLES IN SOME DISCRETE STRUCTURES OF CIVIL ENGINEERING <i>Alart P., Dureisseix D. *, Lainel R., Pagano S. (*University Montpellier 2, France)</i>

11:45	SIMULATION OF DECOHESION AND FRACTURE ALONG AN INTERFACE VIA GEOMETRICALLY NONLINEAR COHESIVE ELEMENTS. APPLICATION TO ADHESIVE JOINTS <i>Valoroso N. *, Champaney L. (*Consiglio Nazionale delle Ricerche, Rome, Italy)</i>
12:05	NUMERICAL SIMULATION OF DELAMINATION PHENOMENA IN FIBER REINFORCED COMPOSITE LAMINATES <i>Bruno D., Carpino R., Greco F., Lonetti P. (*University of Calabria, Italy)</i>
12:25	NUMERICAL SIMULATION OF THE MINTING PROCESS FOR INNOVATIVE COINS <i>Ielpo N., Maceri F., Tocchetti F. A. (*Universita di Roma "Tor Vergata", Italy)</i>

Monday, 10 Sept., Room: P9, 11:05

**MO-1-P9: SIMULATION IN ECONOMICS AND BUSINESS I (S02-1)**

Session Organizer(s): **Štemberger M., Orsoni A.**

Session Chair: **Orsoni A.**, Session Co-chair: **Indihar Štemberger M.**

11:05	BUSINESS PROCESS MANAGEMENT AND DISCRETE EVENT SIMULATION: A TOLL SURVEY <i>Bosilj-Vukšić V., Čerić V. (*University of Zagreb, Croatia)</i>
11:25	REFORMS OF THE SLOVENIAN PERSONAL INCOME TAX SYSTEM <i>Čok M. (*University of Ljubljana, Slovenia)</i>

11:45	AN EXTENDED PRICING AND INVENTORY CONTROL MODEL WITH REFERENCE EFFECTS <i>Gimpl-Heersink L. *, Gimpl J., Taudes A. (*Vienna University of Economics and Business Administration, Austria)</i>
12:05	SIMULATION SYSTEM FOR CRISIS MANAGEMENT <i>Glogovac B. *, Rožaj D., Krnec G. (*Logon d.o.o., Ljubljana, Slovenia)</i>
12:25	SIMULATION MODELLING OF SUPPLY CHAIN PROCESSES □ A CASE STUDY FROM WHOLESALE <i>Jaklič J. *, Huber T., Svetina M., Indihar Štemberger M. (*University of Ljubljana, Slovenia)</i>

Monday, 10 Sept., Room: P12, 11:05

**MO-1-P12: CONTROL AND DECISION FOR COMPLEX SYSTEMS (S17)**

Session Organizer(s): **Popescu D., Tanguy G.D.**

Session Chair: **Popescu D.**, Session Co-chair: **Lupu C.**

11:05	STRUCTURAL PROPERTIES OF SWITCHING BOND GRAPH <i>Hihi H. *, Rahmani A. (*Ecole Centrale de Lille, France)</i>
11:25	IMAGE PROCESSING FOR BIOLOGIC MODELS USING FRACTAL TECHNIQUES <i>Crişan D., Popescu-Minea C., Udrea A. (*Polytechnic University of Bucharest, Romania)</i>
11:45	ADAPTIVE FUZZY CONTROL OF DC MOTORS USING STATE AND OUTPUT FEEDBACK <i>Rigatos G. G. (*Industrial Systems Institute, Rion Patras, Greece)</i>
12:05	MULTI-MODEL ADAPTIVE CONTROL <i>Lupu C., Pages O., Flutur C. (*Polytechnic University of Bucharest, Romania)</i>
12:25	IDENTIFICATION, CONTROL AND DECISIONS FOR HEATING PROCESSES <i>Popescu D. *, Dimon C. (*Polytechnic University of Bucharest, Romania)</i>

Monday, 10 Sept., Room: P3, 14:00

**MO-2-P3: AEROSPACE SYSTEMS**

Session Chair: **Casella F.**, Session Co-chair: **Patchett C.**

14:00	HIGH ACCURACY SIMULATION OF ORBIT DYNAMICS: AN OBJECT-ORIENTED APPROACH <i>Casella F. *, Lovera M. (*Politecnico di Milano, Italy)</i>
14:20	FLYING THROUGH DESIGN SPACES: EFFICIENT EVOLUTIONARY OPTIMISATION OF AIRCRAFT WINGS <i>Vankan W. J., Kessler E. *, Maas R. (*Natal Aerospace Laboratory, Amsterdam, Netherlands)</i>
14:40	DECISION ARCHITECTURES FOR UNINHABITED AUTONOMOUS AIR SYSTEMS <i>Patchett C. *, Sastry V. (*BAE Systems, Warton Aerodrome, Lancashire, United Kingdom)</i>
15:00	MATLAB-SIMULINK NONLINEAR MODELING AND SIMULATION OF AIRCRAFT LONGITUDINAL DYNAMICS <i>Abdulhamitbilal E. *, Jafarov E. M., Kavsaoglu M. Ş. (*Istanbul Technical University, Turkey)</i>
15:20	MODELLING OF LEADER-FOLLOWER SPACECRAFT FORMATIONS IN 6 DOF <i>Svensden L. M., Kristiansen R., Nicklasson P. J., Schlanbusch R. (*Narvik University College, Norway)</i>
15:40	ACCELERATING SOLAR WIND CALCULATIONS <i>Schüle J. (*Technical University of Braunschweig, Germany)</i>

Monday, 10 Sept., Room: P4, 14:00

**MO-2-P4: EDUCATION IN SIMULATION / SIMULATION IN EDUCATION I (S01-I)**

Session Organizer(s): **Wiechert W.**

Session Chair: **Wiechert W.**, Session Co-chair: **Kljajić M.**

14:00	WORKFLOW INTEGRATION OF COMPUTER AIDED ENGINEERING: AN EDUCATIONAL APPROACH <i>Anderl R., Yaman O. (*Technical University of Darmstadt, Germany)</i>
14:20	AN INTERACTIVE GRAPHICAL TRACE-DRIVEN SIMULATOR FOR TEACHING BRANCH PREDICTION IN COMPUTER ARCHITECTURE <i>Radu C., Calborean H., Crapciu A., Gellert A., Florea A. (*Lucian Blaga University of Sibiu, Romania)</i>
14:40	ROLE-BASED VIEW CONTROL IN WEB-BASED SIMULATION ENVIRONMENTS <i>Piater A. *, Lurk A. (*University of Stuttgart, Germany)</i>
15:00	TEACHING FINITE ELEMENTS: AN ALTERNATIVE APPROACH USING MODELICA <i>Wiechert W. *, Treude M. (*University of Siegen, Germany)</i>
15:20	MODELING AND SIMULATION EDUCATION CONCEPTS IN SYSTEM DYNAMICS OF MANAGEMENT STUDIES <i>Kljajić M. *, Kljajić Borštnar M., Škraba A. (*University of Maribor, Slovenia)</i>
15:40	THE GPSS++ MODELLING LANGUAGE: OBJECT-ORIENTED VERSION OF GPSS <i>Basch D. *, Capan I., Ivančić T., Prgeša H., Sukser T. (*University of Zagreb, Croatia)</i>

Monday, 10 Sept., Room: P6, 14:00

**MO-2-P6: HYBRID SYSTEMS**

Session Chair: **Zbořil F.**, Session Co-chair: **Schiffelers R.**

14:00	COMPUTATION OF POSITIVE REALIZATIONS OF MIMO HYBRID LINEAR SYSTEMS WITH DELAYS USING THE STATE VARIABLE DIAGRAM METHOD <i>Kaczorek T., Sajewski Ł. (*Białystok Technical University, Poland)</i>
14:20	CO-SIMULATION OF CHI AND SIMULINK MODELS <i>van Beek B., Hofkamp A., Reniers M., Rooda J., Schiffelers R. (*Eindhoven University of Technology, Netherlands)</i>
14:40	CONSTRUCTION OF A HYBRID TRAFFIC MODEL BASED ON JUTS CELLULAR MODEL <i>Hartman D. *, Herout P. (*University of West Bohemia, Czech Republic)</i>
15:00	PATTERN ORIENTED AGENT-BASED MULTI-MODELING OF EXPLOITED ECOSYSTEMS <i>Bonneaud S. *, Redou P., Chevaillier P. (*European Center for Virtual Reality, Plouzane, France)</i>

15:20	FRAMEWORK FOR MODEL-BASED DESIGN OF MULTI-AGENT SYSTEMS <i>Zbořil Jr. F. (*Brno University of Technology, Czech Republic)</i>
15:40	EXTENDING THE OPNET SIMULATION ENVIRONMENT FOR MOBILE AGENTS IN NETWORK CONGESTION CONTROL <i>Van N. H. *, Popov O. (*Stockholm University, Sweden)</i>

Monday, 10 Sept., Room: P7, 14:00

**MO-2-P7: MODELLING AND SIMULATION IN MEDICINE AND PHARMACY I (S14-I)**

Session Organizer(s): **Drinovec J., Mrhar A., Atanasijević-Kunc M.**

Session Chair: **Drinovec J.**, Session Co-chair: **Kofránek J.**

14:00	NEUROGENESIS: FROM EXPERIMENTAL DATA TO SYSTEM DYNAMICS MODEL <i>Rimac M., Božikov J. (*University of Zagreb, Croatia)</i>
14:20	NUMERICAL MODELS OF SKIN ELECTROPERMEABILIZATION <i>Pavšelj N. *, Miklavčič D. (*University of Ljubljana, Slovenia)</i>
14:40	LOCALIZATION OF ELECTRICAL ACTIVITY SOURCES IN HUMAN BRAIN DURING EPILEPTIC SEIZURES WITH EEG ANALYSIS <i>Peyrer-Heimstätt I. *, Belič A., Breitenecker F. (*Vienna University of Technology, Austria)</i>
15:00	DISEASES AND FACTORS OF RISK MODELLING REGARDING THE DEVELOPMENT OF STROKE <i>Atanasijević-Kunc M. *, Drinovec J., Ručigaj S., Mrhar A. (*University of Ljubljana, Slovenia)</i>
15:20	ATLAS OF PHYSIOLOGY AND PATOPHYSIOLOGY – INTERNET SIMULATION PLAYGROUND <i>Kofránek J., Matoušek S., Andrlik M., Stodulka P., Wünsch Z., Privitzer P., Hlaváček J., Vacek O. (*Charles University in Prague, Czech Republic)</i>
15:40	TIME BEHAVIOUR OF PROSTATE TUMOR MARKERS: FROM MODELLING TO A WEBTOOL FOR PHYSICIANS <i>Popper N. *, Zauner G., Bodmann V. (**"Die Drahtwarenhandlung" – Simulation Services, Vienna, Austria)</i>

Monday, 10 Sept., Room: P8, 14:00

**MO-2-P8: MODELLING AND SIMULATION IN MECHATRONICS (S04)**

Session Organizer(s): **Schmucker U.**

Session Chair: **Schmucker U.**, Session Co-chair: **Kasper R.**

14:00	A COMPONENT ORIENTED APPROACH TO MULTIDISCIPLINARY SIMULATION OF MECHATRONIC SYSTEMS <i>Kasper R. *, Vlasenko D., Sintotskiy G. (*University of Magdeburg, Germany)</i>
14:20	CONTACT PROCESSING IN THE SIMULATION OF THE MULTI-BODY SYSTEMS <i>Schmucker U., Rusin V. *, Konyev M. (*Fraunhofer Institute for Factory Operation and Automation, Magdeburg, Germany)</i>
14:40	SIMULATING THE DYNAMICS OF NANOPositionING AND NANOMEASURING MACHINES USING METHODS OF MULTI-BODY SYSTEM DYNAMICS <i>Gerlach E. *, Zimmermann K., Oberthür S., Tröbs A. (*Technical University of Ilmenau, Germany)</i>
15:00	BEYOND THE LIMITS OF KINEMATICS IN PLANNING KEYFRAMED BIPED LOCOMOTION <i>Juhász T. *, Urbanček T. (*Fraunhofer Institute for Factory Operation and Automation, Magdeburg, Germany)</i>
15:20	USE OF SEMI-EMPIRICAL PRESSURE RELIEF VALVE MODEL IN FREQUENCY DOMAIN ANALYSIS OF FLUID POWER CIRCUITS <i>Handroos H. *, Nishiumi T. (*Lappeenranta University of Technology, Finland)</i>
15:40	COMPUTATIONALLY EFFICIENT TWO-REGIME FLOW ORIFICE MODEL FOR REAL-TIME SIMULATION <i>Åman R. *, Handroos H., Eskola T. (*Lappeenranta University of Technology, Finland)</i>

Monday, 10 Sept., Room: P9, 14:00

**MO-2-P9: SIMULATIONS, MODELLING AND OPTIMIZATION OF VLSI CIRCUITS (S10)**

Session Organizer(s): **Strle D.**

Session Chair: **Strle D.**, Session Co-chair: **Vallette F.**

14:00	MODELING AND SIMULATION OF MOS TRANSISTOR MISMATCH <i>Cijan G. *, Tuma T., Bürmen Á. (*Regional Development Agency of Northern Primorska, Šempeter pri Gorici, Slovenia)</i>
14:20	SIMULATED ANNEALING FOR SIZING OF INTEGRATED CIRCUITS IN SPICE <i>Olenšek J., Bürmen Á. *, Puhan J., Tuma T. (*University of Ljubljana, Slovenia)</i>
14:40	MODELLING FRAMEWORK FOR HIGH-LEVEL EVALUATION OF EMBEDDED SYSTEMS <i>Perko K. *, Trost A. (*Sipronika d.o.o., Ljubljana, Slovenia)</i>
15:00	SENSITIVITY ANALYSIS IN MOSFET ANALOG INTEGRATED CIRCUITS <i>Vallette F. *, Vasilescu G., Garda P. (*Université Pierre et Marie Curie - Paris 6, France)</i>
15:20	SIMULATION SYSTEM FOR RUN-TIME RECONFIGURABLE NETWORKS-ON-CHIP <i>Albrecht C. *, Koch R., Pionteck T., Maehle E. (*University of Lübeck, Germany)</i>
15:40	SPEEDING UP VERILOG GATE-LEVEL SIMULATION WITH BI-PARTITIONING <i>Janin L. *, Edwards D. (*The University of Manchester, United Kingdom)</i>

Monday, 10 Sept., Room: P12, 14:00

**MO-2-P12: TRAFFIC SYSTEMS**

Session Chair: **Savio S.**, Session Co-chair: **Šraml M.**

14:00	AN APPROACH TO PREDICT DESIGN CHOICES IMPACT ON RAILWAY SERVICE DEPENDABILITY <i>Dazzi G., Firpo P., Savio S. (*University of Genova, Italy)</i>
14:20	DISCRETE SIMULATION OF TRAFFIC FLOWS IN HIGHWAY TUNNELS <i>Laković S., Šraml M. *, Tollazzi T., Potrč I. (*University of Maribor, Slovenia)</i>
14:40	THE ANALYSIS OF PEDESTRIANS STREAM ON THE ROUNDABOUT CAPACITY USING MICRO-SIMULATION MODEL <i>Tollazzi T., Lerher T., Šraml M. (*University of Maribor, Slovenia)</i>

15:00	CUSTOMISING VEHICLE ATTRIBUTES FOR ROAD TRAFFIC MICROSIMULATION MODELLING <i>Stazic B. (*University of South Australia, Adelaide, Australia)</i>
15:20	THE SCALE EFFICIENCY MODEL OF AIRSPACE SECTOR CAPACITY <i>Li S. (*National Penghu University, Taiwan)</i>
15:40	AN INTEGRATED APPROACH TO LOCAL PUBLIC TRANSPORT SERVICES AND EFFICIENCY IN COMPANY MANAGEMENT. A MODEL APPLICATION <i>Cirianni F., Leonardi G., Ianno D. (*University of Reggio Calabria, Italy)</i>

Monday, 10 Sept., Room: P2, 14:00

**MO-2-P2: STUDENT COMPETITION I**

Session Chair: **Škrjanc I.**, Session Co-chair: **Zobel R., Kindler E.**

14:00	A TRUST-BASED MODEL FOR MULTI-AGENT SYSTEMS <i>Samek J. (*Brno University of Technology, Czech Republic)</i>
14:20	MULTI-AGENT SIMULATION OF THE INDUSTRIAL REFRIGERATOR MATERIAL FLOWS <i>Ivashkin Y. A., Sheshenina L. A. (*Moscow State University of Applied Biotechnology, Russian Federation)</i>
14:40	INTEGRATION OF SIMULATION, ANALYSIS OF VARIANCE AND GOAL PROGRAMMING FOR MINIMIZATION OF MAKESPAN AND TARDINESS <i>Dabbaghi A., Dehghanbaghi M., Azadeh A., Ghaderi F. (*University of Tehran, Iran)</i>
15:00	APPLICATION OF GENETIC ALGORITHM TO A BICRITERIA SINGLE MACHINE SCHEDULING PROBLEM OF MINIMIZING MAXIMUM EARLINESS AND NUMBER OF TARDY JOBS <i>Dehghanbaghi M., Dabbaghi A., Jolai F., Yazdani M. (*University of Tehran, Iran)</i>
15:20	THE SYNTHESIS TECHNOLOGY OF COMPLEX SYSTEMS' IMITATING MODELS BASED ON CONCEPTUAL PATTERNS <i>Kodema V. A. (*Kola Science Centre RAS, Apatity, Russian Federation)</i>
15:40	SIMULATION OF A MOBILE ROBOT WITH A LRF AND MAP BUILDING <i>Teslić L., Klančar G., Škrjanc I. (*University of Ljubljana, Slovenia)</i>

Monday, 10 Sept., Room: P3, 16:20

**MO-3-P3: ALTERNATIVE MODELLING AND COMPARISONS AND BENCHMARKING IN MODELLING AND SIMULATION I (S22-I)**

Session Organizer(s): **Breitenecker F., Wiechert W.**

Session Chair: **Breitenecker F.**, Session Co-chair: **Jávor A.**

16:20	MODELLING OF DYNAMIC WATER QUALITY CHANGES BY MEANS OF TIME SERIES METHODS <i>Alegue J. D., Gnauck A., Luther B. (*Brandenburg University of Technology at Cottbus, Germany)</i>
16:40	FEM MODELLING VS. RANDOM WALK MODELLING FOR POLLUTION SPREAD IN GROUNDWATER FLOW <i>Judex F., Teufelsbauer H., Breitenecker F. (*ARC Seibersdorf GmbH, Seibersdorf, Austria)</i>
17:00	INTELLIGENT AGENT CONTROLLED SIMULATION WITH THE CASSANDRA SYSTEM <i>Jávor A., Für A. (*Budapest University of Technology and Economics, Hungary)</i>
17:20	FULLY AGENT BASED MODELLINGS OF EPIDEMIC SPREAD USING ANYLOGIC <i>Emrich Š., Suslov S., Judex F. (*Vienna University of Technology, Austria)</i>
17:40	HYBRID SIMULATION OF TUMOR GROWTH COMBINING CELLULAR AUTOMATA WITH CONTINUOUS STATE DYNAMICS <i>Leitner D., Blaickner M., Mohr T., Estelberger W., Wassertheurer S. (*Austrian Research Centers GmbH, Vienna, Austria)</i>
18:00	A HYBRID MODELLING APPROACH FOR INFLUENZA EPIDEMICS BASED ON CELLULAR AUTOMATA AND AGENT BASED TECHNIQUES <i>Emrich Š., Breitenecker F., Zauner G., Popper N., Gyimesi M. (*Vienna University of Technology, Austria)</i>

Monday, 10 Sept., Room: P4, 16:20

**MO-3-P4: EDUCATION IN SIMULATION / SIMULATION IN EDUCATION II (S01-II)**

Session Organizer(s): **Wiechert W.**

Session Chair: **Wiechert W.**, Session Co-chair: **Kljajić M.**

16:20	VIRTUAL CITY AND TRAFFIC SIMULATION GAME BASED ON SCIENTIFIC MODELS <i>Brannolte U., Harder R. J., Kraus T. J. (*Bauhaus-University of Weimar, Germany)</i>
16:40	DEVELOPMENT OF WEB ACCESSIBLE MEDICAL EDUCATIONAL SIMULATORS <i>Stodulka P., Privitzer P., Kofránek J., Tribula M., Vacek O. (*Charles University in Prague, Czech Republic)</i>
17:00	THE DIGITAL FACTORY: A NEW COURSE FOR UNIVERSITARY EDUCATION <i>Arndt W., Busetti M., Hedstüick U. (*University of Applied Sciences, Konstanz, Germany)</i>
17:20	A PHP/MATLAB BASED E-LEARNING SYSTEM FOR EDUCATION IN ENGINEERING MATHEMATICS AND IN MODELLING AND SIMULATION <i>Zauner G., Popper N., Breitenecker F. (*"Die Drahtwarenhandlung" – Simulation Services, Vienna, Austria)</i>

17:40	A DYNAMIC APPROACH TO THE EDUCATION-INVESTMENT DECISION STRATEGY USING OPTIMAL CONTROL THEORY <i>Kalogeropoulos G. A., Pantelous A. A. (*University of Athens, Greece)</i>
18:00	THE MEANS AND MOTIVATION FOR ANIMATING GRAPHICS IN ENGINEERING APPLICATIONS <i>Yakimenko O. (*Naval Postgraduate School, Monterey, CA, United States of America)</i>

Monday, 10 Sept., Room: P6, 16:20	
<b>MO-3-P6: MATHEMATICAL / NUMERICAL METHODS I</b>	
Session Chair: <b>Kunovský J.</b> , Session Co-chair: <b>Văduva C. I.</b>	
16:20	MODELING AND SIMULATION OF FRACTIONAL SYSTEMS USING ORTHOGONAL FUNCTIONS <i>Bouafoura M. K.*, Braiek N. B. (*Ecole Polytechnique de Tunisie, La Marsa, Tunisia)</i>
16:40	ON SIMULATION OF A BIVARIATE UNIFORM BINOMIAL PROCESS AND ITS USE TO SCAN STATISTICS <i>Văduva I. C. (*University of Bucharest, Romania)</i>
17:00	STOCHASTIC MODELLING OF INSURANCE <i>Didenko K.*, Jansons V., Jurenoks V., Pettere G. (*Riga Technical University, Latvia)</i>
17:20	STIFF SYSTEMS IN THEORY AND PRACTICE <i>Kunovský J.*, Pindryč M., Šátek V., Zbořil F. (*Brno University of Technology, Czech Republic)</i>
17:40	ADAPTING POWER-SERIES INTEGRATION TO REAL-TIME SIMULATION <i>Howe R., Kraus M., Kunovský J. (*Brno University of Technology, Czech Republic)</i>
18:00	ESTIMATION OF BURN INJURIES FROM TEMPERATURE MEASUREMENT USED IN EVALUATION OF FIRE PROTECTIVE GARMENTS <i>Gašperin M.*, Juričič Đ., Musizza B., Mekjavić I. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>

Monday, 10 Sept., Room: P7, 16:20	
<b>MO-3-P7: REAL TIME SYSTEMS</b>	
Session Chair: <b>Seabra E.</b> , Session Co-chair: <b>Mramor Kosta N.</b>	
16:20	SIMULATION OF REAL TIME SYSTEMS BEHAVIOUR CONSIDERING HUMAN-MACHINE INTERFACE <i>Seabra E.*, Machado J. (*University of Minho, Portugal)</i>
16:40	HIERARCHICAL DIFF-EDF: AN AGENT BASED SCHEDULER FOR HETEROGENEOUS REAL-TIME PACKET NETWORKS <i>Saleh M.*, Othman Z. A., Zin A. M. (*University Kebangsaan Malaysia, Bangi, Selangor, Malaysia)</i>
17:00	REAL-TIME SIMULATION FOR DISTRIBUTED GENERATION IN POWER SYSTEM <i>Guillaud X.*, Venne P., Degobert P., Salha F. (*Ecole Centrale de Lille, France)</i>
17:20	REAL-TIME PROCESS CONTROL WITH CONCURRENT JAVA <i>Rekdalsbakken W.*, Styve A. (*Aalesund University College, Norway)</i>
17:40	CONTROL OF SCANNING PROBE MICROSCOPES USING QUARTZ TUNING FORKS <i>Jurčič Zlobec B., Vuk M., Mramor Kosta N. (*University of Ljubljana, Slovenia)</i>
18:00	SIMULATION-AIDED PROCESS COVERAGE FOR DELIVERY RELIABILITY UNDER SHORT DELIVERY SCHEDULES USING REAL-TIME EVENT BASED FEEDBACK LOOPS <i>Dangelmaier W., Döring A.*, Laroque C., Timm T. (*University of Paderborn, Germany)</i>

Monday, 10 Sept., Room: P8, 16:20	
<b>MO-3-P8: PROCESS ENGINEERING I</b>	
Session Chair: <b>Tanttu T. J.</b> , Session Co-chair: <b>Mostoufi N.</b>	
16:20	MODELING AND SIMULATION OF A COPPER ELECTROLYSIS CELL GROUP <i>Laitinen I. S., Tanttu J. T. (*Tampere University of Technology, Finland)</i>
16:40	IMPROVING THE USAGE OF PROCESS DATA COLLECTED IN PROCESS INDUSTRY AND POWER PLANTS <i>Karlsson C.*, Avelin A., Dahlquist E. (*Mälardalen University, Vasteras, Sweden)</i>
17:00	DYNAMIC OPTIMIZATION OF ACETYLENE HYDROGENATION UNIT USING A HYBRID GA-SQP ALGORITHM <i>Mansoornejad B., Mostoufi N.*, Jalali-Farahani F. (*University of Tehran, Iran)</i>
17:20	INDUSTRIAL APPLICATION OF REAL-TIME SIMULATION MODEL OF WALKING-BEAM REHEATING FURNACE <i>Jaklič A.*, Vode F., Kolenko T., Zupančič B. (*Institute of Metals and Technology, Ljubljana, Slovenia)</i>
17:40	ESTIMATION OF THE EDGER'S INFLUENCE ON THE STRIP-WIDTH WITH THE DEFORMATION ENERGY AND THE IMPLEMENTATION IN THE ACRONI STEELWORKS <i>Vode F.*, Jaklič A., Kokalj T. (*Institute of Metals and Technology, Ljubljana, Slovenia)</i>
18:00	SIMULATION MODEL OF THE THERMODYNAMIC CYCLE OF A THREE-CYLINDER DOUBLE-ACTING STEAM ENGINE <i>Thöndel E. (*Czech Technical University in Prague, Czech Republic)</i>

Monday, 10 Sept., Room: P9, 16:20	
<b>MO-3-P9: DECISION SUPPORT SYSTEMS</b>	
Session Chair: <b>Bobrowski L.</b> , Session Co-chair: <b>Hibino H.</b>	
16:20	RANKED MODELING ON TIME-DATA WITH INEXACT TIMING <i>Bobrowski L.*, Łukaszuk T. (*Białystok Technical University, Poland)</i>
16:40	SIMULATION ENVIRONMENT FOR MANUFACTURING CELL TO SUPPORT FULL PRODUCTION PERFORMANCE AT PRODUCT LAUNCH <i>Hibino H. (*Technical Research Institute of JSPMI, Tokyo, Japan)</i>
17:00	MULTILEVEL PROCESS DIMENSIONING REGARDING CONTRARY TARGET VALUES <i>Denkena B., Brandes A., Henning H., Rabinovitch A. (*Leibniz Universität Hannover, Germany)</i>
17:20	DEVELOPMENT AND APPLICATION OF HUMAN RESOURCES TRANSITION SIMULATION MODEL IN SLOVENIAN ARMED FORCES <i>Škraba A.*, Kljajić M., Knaflič A., Kofjač D., Podbregar I. (*University of Maribor, Slovenia)</i>
17:40	DYNAMIC VALIDATION OF MODELS: A CASE STUDY ON PLUG-FLOW REACTOR <i>Ropponen A.*, Konkarikoski K., Ritala R. (*Tampere University of Technology, Finland)</i>
18:00	A DECISION SUPPORT SYSTEM FOR FORENSIC ENTOMOLOGY

Morvan G. \*, Jolly D., Dupont D., Kubiak P. (\*Université d'Artois, Béthune, France)

Monday, 10 Sept., Room: P12, 16:20

**MO-3-P12: DIGITAL FACTORY/SIMULATION AND OPTIMIZATION OF INDUSTRIAL PROCESSES I (S07-I)**

Session Organizer(s): **Jósvai J., März L.**

Session Chair: **Jósvai J.**, Session Co-chair: **März L.**

16:20	DYNAMIS-P - DEVELOPMENT OF NEW METHOD FOR DYNAMIC DIMENSIONING <i>Krauss A. *, Müller E. (*Technical University of Chemnitz, Germany)</i>
16:40	SIMULATION AND PRODUCTION PLANNING, A SPECIAL CASE IN SHORT SERIES PRODUCTION <i>Jósvai J. (*Széchenyi István University, Győr, Hungary)</i>
17:00	FULLY EMBEDDED SIMULATION MODELS IN MANUFACTURING PROCESSES <i>Tauböck S. *, Steiner M., Klug M. (*Profactor Research &amp; Solutions, Seibersdorf, Austria)</i>
17:20	A MODELING AND OPTIMIZATION TOOL FOR THE EXPANDABLE POLYSTYRENE BATCH PROCESS <i>Heikkinen M. *, Nurminen V., Hiltunen T., Hiltunen Y. (*University of Kuopio, Finland)</i>
17:40	DEADLOCK DETECTION IN HIGH LEVEL ARCHITECTURE FEDERATIONS USING AXIOMATIC DESIGN THEORY <i>Togay C. *, Bicer V., Dogru A. H. (*Middle East Technical University, Ankara, Turkey)</i>
18:00	REQUIREMENTS ANALYSIS FOR MODEL-BASED SIMULATION PROCESSES <i>Anderl R., Yaman O. (*Technical University of Darmstadt, Germany)</i>

Monday, 10 Sept., Room: P2, 16:20

**MO-3-P2: STUDENT COMPETITION II**

Session Chair: **Škrjanc I.**, Session Co-chair: **Zobel R., Kindler E.**

16:20	BIFURCATIONS AND CHAOS IN AUTOMATIC CONTROL SYSTEM <i>Kocewiak L. H. (*Warsaw University of Technology, Poland)</i>
16:40	CONFIGURATION OF UAV AUTOPILOTS' DYNAMICS USING A 3 DOF AIRCRAFT MOTION SIMULATOR <i>Tomažič T. *, Matko D. (*University of Ljubljana, Slovenia)</i>
17:00	MODELLING AND SIMULATION OF SUPPRESSION VIBRATION MECHANICAL SYSTEMS <i>Hruška J. *, Vondřích J., Thöndel E. (*Czech Technical University in Prague, Czech Republic)</i>
17:20	MODELING FREEWAY TRAFFIC FLOW: AN LPV APPROACH <i>Luspay T. *, Varga I., Kulcsár B., Bokor J. (*Budapest University of Technology and Economics, Hungary)</i>

## TUESDAY

Tuesday, 11 Sept., Room: P1, 09:00

**PLENARY-II**

Session Chair: **Karba R.**

9:00-9.45	INTEGRATED MULTISCALE SIMULATION OF CONTINUOUS CASTING OF STEEL <i>Šarler B. *, Vertnik R., Gjerkes H., Lorbiecka A., Manojlović G., Cesar J. (*University of Nova Gorica, Slovenia)</i>
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Tuesday, 11 Sept., Room: P3, 10:05

**TU-1-P3: SUCCESSFUL APPLICATION OF SIMULATION IN INDUSTRY I (S08-I)**

Session Organizer(s): **Juslin K.**

Session Chair: **Juslin K.**, Session Co-chair: **Juuso K. E.**

10:05	MODELING OF THE DYNAMICAL BEHAVIOR OF POWER PLANTS WITH A COMMERCIAL SOFTWARE SHELL <i>Zehtner W. *, Spliethoff H., Woyke W. (*University of München, Germany)</i>
10:25	SEVERE ACCIDENT SIMULATIONS IN APROS NUCLEAR PLANT ANALYSER FOR VVER-440/213 REACTORS AND THE VISUALISATION OF THE RESULTS <i>Csige A., Aszódi A. (*Budapest University of Technology and Economics, Hungary)</i>
10:45	VIRTUAL COMMISSIONING OF A LARGE LNG PLANT WITH THE DCS „800XA“ BY ABB <i>Krause H. (*Secolon, Minden, Germany)</i>
11:05	SIMULATION FOR VIRTUAL COMMISSIONING <i>Schumann R. *, Hoyer M., Premier G. C. (*Hanover University of Applied Sciences and Arts, Germany)</i>
11:25	A FULL-SCOPE APROS-BASED SIMULATOR FOR HUMAN-MACHINE STUDIES <i>Nihhwing C. *, Kvalem J. (*Institute for Energy Technology, Halden, Norway)</i>
11:45	FORECASTING BATCH COOKING RESULTS WITH INTELLIGENT DYNAMIC SIMULATION <i>Juuso E. K. (*University of Oulu, Finland)</i>

Tuesday, 11 Sept., Room: P4, 10:05

**TU-1-P4: ARTIFICIAL INTELLIGENCE METHODS II**

Session Chair: **Gavăt I.**, Session Co-chair: **Kordík P.**

10:05	OPTIMIZATION OF MODELS: LOOKING FOR THE BEST STRATEGY <i>Kordík P. *, Kovářik O., Šnorek M. (*Czech Technical University in Prague, Czech Republic)</i>
10:25	SPEECH RECOGNITION BY USING ASRS_RL <i>Gavăt I. *, Dumitru C. O. (*Polytechnic University of Bucharest, Romania)</i>
10:45	NEURAL NETWORK BASED QUALITY INCREASE OF SURFACE ROUGHNESS RESULTS IN FREE FORM MACHINING

	<i>Korošec M. *, Duhovnik J., Kopač J. (*University of Ljubljana, Slovenia)</i>
11:05	NONLINEAR PCA IN FAULT DETECTION AND ISOLATION <i>Bratina B. *, Tovornik B. (*University of Maribor, Slovenia)</i>
11:25	TEXT ENCODING AND RECALL SPEEDUP FOR CORRELATION MATRIX MEMORIES <i>Beran T. *, Macek T., Skrbek M. (*Czech Technical University in Prague, Czech Republic)</i>

Tuesday, 11 Sept. , Room: P6, 10:05

**TU-1-P6: MATHEMATICAL / NUMERICAL METHODS II**

Session Chair: **Venturino E.**, Session Co-chair: **Vairo G.**

10:05	MATHEMATICAL MODELS OF THE AUJESZKY DISEASE IN THE CUNEO PROVINCE FARMS, ITALY. <i>Abbona D., Sona B., Venturino E. (*University of Torino, Italy)</i>
10:25	A VIRTUAL ENGINEERING APPROACH FOR CHATTER PREDICTION <i>Barthel C. (*University Magdeburg, Germany)</i>
10:45	FEM MODELING OF PIEZORESISTIVE FORCE SENSOR FOR MEDICAL RETRACTOR AND DESIGN VERIFICATION <i>Penič S. *, Aljančič U., Vrtačnik D., Resnik D., Možek M., Makovec M., Bošnjak R., Amon S. (*University of Ljubljana, Slovenia)</i>
11:05	THREE-DIMENSIONAL FINITE ELEMENT ANALYSIS OF OSSEOINTEGRATED DENTAL IMPLANTS <i>Baggi L., Cappelloni I., Maceri F., Vairo G. (*University of Rome "Tor Vergata", Italy)</i>
11:25	MODELING AND SIMULATION OF DIFFUSION IN CHROMATOGRAPHIC RESIN USING SPATIALLY STRUCTURED RANDOM MEDIA AND A PARALLEL CELLULAR AUTOMATON <i>Nöh K. *, Finke M., Wiechert W., von Lieres E. (*Research Centre Jülich, Germany)</i>

Tuesday, 11 Sept. , Room: P7, 10:05

**TU-1-P7: MODELLING AND SIMULATION IN MEDICINE AND PHARMACY II (S14-II)**

Session Organizer(s): **Drinovec J., Mrhar A., Atanasijević-Kunc M.**

Session Chair: **Atanasijević-Kunc M.**, Session Co-chair: **Božikov J.**

10:05	MEDICAL AND ECONOMIC BURDEN OF HYPERTENSION ASSESSED BY MODELLING AND SIMULATION <i>Bruderman M. *, Atanasijević-Kunc M., Drinovec J., Mrhar A. (*KRKA d.d., Novo mesto, Slovenia)</i>
10:25	A SIMULATION OF THE FORMATION OF MELANOCYTIC NEVI <i>Manestar-Blažič T., Božikov J. (*University of Zagreb, Croatia)</i>
10:45	NUMERICAL MODELING OF ELECTRIC FIELD DISTRIBUTION IN SUBCUTANEOUS TUMORS TREATED WITH NEEDLE ELECTRODES <i>Čorović S. *, Miklavčič D. (*University of Ljubljana, Slovenia)</i>
11:05	BORDER FLUX BALLANCE APPROACH TOWARDS MODELLING ACID-BASE CHEMISTRY AND BLOOD GASES TRANSPORT <i>Kofránek J., Matoušek S. *, Andrlík M. (*Charles University in Prague, Czech Republic)</i>
11:25	PHYSIOLOGICAL FEEDBACK MODELLING IN MEDICAL EDUCATION <i>Wünsch Z., Matuš M. *, Kofránek J. (*Charles University in Prague, Czech Republic)</i>
11:45	MODELING ARTERIAL AND LEFT VENTRICULAR COUPLING FOR NON-INVASIVE MEASUREMENTS <i>Wasserthauer S., Mayer C. *, Breitenecker F. (*Austrian Research Centers GmbH, Vienna, Austria)</i>

Tuesday, 11 Sept. , Room: P8, 10:05

**TU-1-P8: PROCESS ENGINEERING II**

Session Chair: **Kocijan J.**, Session Co-chair: **Vaja I.**

10:05	DYNAMIC MODEL OF A THERMAL SOLAR COLLECTOR <i>Gambarotta A., Vaja I. (*University of Parma, Italy)</i>
10:25	GAS-LIQUID SEPARATOR MODELLING AND SIMULATION WITH GAUSSIAN PROCESS MODELS <i>Kocijan J. *, Likar B. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>
10:45	DYNAMIC SIMULATION AND OPTIMIZATION OF A PLUG-FLOW REACTOR WITHIN THE MINLP SYNTHESIS OF OVERALL PROCESS SCHEMES <i>Ropotar M. *, Kravanja Z. (*Tanin Sevnica kemična industrija, d.d., Slovenia)</i>
11:05	MODELLING A FOOD INDUSTRY PROCES BY DECISION TREE <i>Sobota-Šalamon B., Dobša J. *, Mihoković V. (*University of Zagreb, Croatia)</i>
11:25	SIMULATION MODEL OF THE HYDRO POWER PLANT SHKOPETI <i>Prillwitz F. *, Al-Ali S. E., Haase T., Weber H., Sage L. (*University of Rostock, Germany)</i>
11:45	TRANSIENT STABILITY SIMULATION OF COMBINED POWER PLANT DURING FAULTS ON 400 AND 110 KV TRANSMISSION LINES <i>Nikolovski S., Marić P. *, Baus Z., Slipac G. (*J.J. Strossmayer University of Osijek, Croatia)</i>

Tuesday, 11 Sept. , Room: P9, 10:05

**TU-1-P9: SIMULATION IN ECONOMICS AND BUSINESS II (S02-II)**

Session Organizer(s): **Štemberger M., Orsoni A.**

Session Chair: **Indihar Štemberger M.**, Session Co-chair: **Orsoni A.**

10:05	DYNAMIC SIMULATION OF A STUDENT E-LEARNING PERFORMANCE PROFILE THROUGH WEB-BASED DATA-LOG MINING <i>Karadimas N. V. *, Nikolopoulos V., Mparadis G., Orsoni A. (*National Technical University of Athens, Greece)</i>
10:25	PERFORMANCE MODELS FOR LIQUID BOND PORTFOLIO MANAGEMENT <i>Orsoni A. *, Iglesias D. (*Kingston University, United Kingdom)</i>
10:45	SELECTION OF THE SIMULATION SOFTWARE FOR THE MANAGEMENT OF THE OPERATIONS AT AN INTERNATIONAL AIRPORT



	<i>Otamendi J. *, Pastor J. M., García Higuera A. (*Universidad Rey Juan Carlos, Madrid, Spain)</i>
11:05	GRAPHICAL VISUALIZATION FOR THE MANAGEMENT OF SPREADSHEET SIMULATIONS <i>Pastor J. M., Otamendi J. *, García Higuera A. (*Universidad Rey Juan Carlos, Madrid, Spain)</i>
11:25	MODELING SMART MARKET PRICING MECHANISM IN PACKET-SWITCHED COMMUNICATION NETWORKS <i>Turk T. (*University of Ljubljana, Slovenia)</i>
11:45	A SIMULATION OF THE MACROECONOMIC EFFECTS OF INTRODUCING THE EURO IN SLOVENIA <i>Weyerstrass K. *, Neck R. (*Institut for Advanced Studies, Vienna, Austria)</i>

Tuesday, 11 Sept. , Room: P12, 10:05

### TU-1-P12: DISCRETE EVENT SYSTEMS I

Session Chair: **Pechinkin V. A.**, Session Co-chair: **Bispo C.**

10:05	ANALYSIS OF MULTI-SERVER QUEUEING SYSTEM WITH SEMI-MARKOVIAN INPUT FLOW AND NEGATIVE CUSTOMERS ACTED UPON QUEUE END <i>Manzo R., Pechinkin A. V. *, Shorgin S. (*Russian Academy of Sciences, Moscow, Russian Federation)</i>
10:25	SIMULATING ACTIVITY NETWORKS IN JAVA <i>Rebello M., Fernandes Z., Bispo C. (*Instituto Superior Técnico, Lisboa, Portugal)</i>
10:45	A SIMULATOR FOR A GENERAL PACKET NETWORK DEVICE - SIMULATING A NEW SCHEDULER <i>Kos A. *, Tomažič S. (*University of Ljubljana, Slovenia)</i>
11:05	EXPERIMENTAL EVALUATION OF CUMULATIVE LOOKAHEAD IN CONSERVATIVE PARALLEL SIMULATION <i>Solčány V. *, Šafařík J. (*Slovak University of Technology, Bratislava, Slovakia)</i>
11:25	A GENERAL PROGRAMMING MODEL FOR DISCRETE-TIME DISTRIBUTED SIMULATION <i>Duarte J. (*University of West Bohemia, Czech Republic)</i>
11:45	SIMULATION STUDY OF A PRIVATE DIAGNOSTIC CENTER <i>Altsitsiadis E. *, Agelis L., Gryllou E., Altsitsiadis A. *, Triarides K. (*Aristoteles University of Thessaloniki, Greece)</i>

Tuesday, 11 Sept. , Room: P1, 13:30

### PLENARY-III

Session Chair: **Šnorek M.**

13:30-14:15	EXPERIENCES AND TRENDS IN MODELLING AND SIMULATION OF INTEGRATED INDUSTRIAL PROCESSES <i>Juslin K. (*VTT Technical Research Centre of Finland, Espoo, Finland)</i>
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Tuesday, 11 Sept. , Room: P3, 14:35

### TU-2-P3: MECHANICAL ENGINEERING II

Session Chair: **Munitić A.**, Session Co-chair: **Petrić J.**

14:35	START-UP SIMULATION FOR A SOLAR DESALINATION PLANT <i>Roca L. *, Yebra L., Berenguel M., Dormido S., Alarcón D. C. (*Convento Universidad de Almería, Spain)</i>
14:55	SYSTEM DYNAMICS SIMULATION MODELING OF THE VESSELS SYSTEMS AND PROCESSES <i>Munitić A. *, Slišković M., Tomašević M., Ristov P. (*University of Split, Croatia)</i>
15:15	SYSTEM FOR INTERACTIVE 3D VEHICLE DYNAMICS ANALYSIS <i>Ambrož M. *, Prebil I. (*University of Ljubljana, Slovenia)</i>
15:35	DYNAMIC MODEL OF ELECTRICAL WHEELCHAIR WITH SLIPING DETECTION <i>Emam H. *, Hamam Y., Monacelli E., Mougharbel I. (*University of Versailles Saint Quentin, France)</i>
15:55	MATHEMATICAL MODELING OF CLOSED-CIRCUIT HYDROSTATIC TRANSMISSION <i>Petrić J. *, Nižetić D., Ivanić I. (*University of Zagreb, Croatia)</i>
16:15	LINEAR AND NONLINEAR MODELING FOR AN ELECTRONIC THROTTLE BODY <i>Teuscher E., Alt B. *, Svaricek F., Blath J. P., Schultalbers M. (*University of German Armed Forces, Germany)</i>

Tuesday, 11 Sept. , Room: P4, 14:35

### TU-2-P4: ROBOTICS

Session Chair: **Cafuta P.**, Session Co-chair: **Bonković M.**

14:35	ROBUST OPTIMIZATION UNDER UNCERTAIN FACTORS OF ENVIRONMENT FOR SIMPLE GAIT OF BIPED ROBOTS <i>Ito N. *, Hasegawa H. (*Shibaura Institute of Technology, Japan)</i>
14:55	HUMAN-INSPIRED JUMPING ROBOT - DEVELOPMENT AND CONTROL OF DYNAMIC MODEL <i>Omrčen D. *, Babič J. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>
15:15	MODELING AND CONTROL OF AUTONOMOUS SKIING ROBOT <i>Lahajnar L. *, Kos A., Nemeč B. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>
15:35	MODIFIED BROYDEN METHOD FOR NOISE VISUAL SERVOING <i>Bonković M. *, Hacı A., Cecić M. (*University of Split, Croatia)</i>
15:55	WRIST EXERCISER - EXERCISING FOR MODELING AND SIMULATION <i>Čurk B., Cafuta P. (*University of Maribor, Slovenia)</i>
16:15	PATH PLANNING FOR ELECTRICAL WHEELCHAIR, ACCESSIBILITY AND COMFORT FOR DISABLED PEOPLE <i>Taychouri F. *, Hamam Y., Monacelli E., Chebbo N. (*University of Versailles Saint Quentin, France)</i>

Tuesday, 11 Sept. , Room: P6, 14:35

### TU-2-P6: AGENT-BASED AND DYNAMIC APPROACHES TO MODELLING IN ECONOMICS (S19)

Session Organizer(s): **Wöckl J., Almeder C.**

Session Chair: **Wöckl J.**, Session Co-chair: **Almeder C.**

14:35	MARKDOWN MANAGEMENT IN PRACTICE <i>Weidinger W. *, Gimpl-Heersink L., Gimpl J., Taudes A. (*Prolytic, Vienna, Austria)</i>
14:55	TRANSITION TO PARENTHOOD: THE ROLE OF SOCIAL INTERACTIONS AND ENDOGENOUS NETWORKS <i>Diaz B. A., Fent T. *, Prskawetz A., Bernardi L. (*Vienna Institute of Demography, Austria)</i>
15:15	USING ANYLOGIC AND AGENT-BASED APPROACH TO MODEL CONSUMER MARKET <i>Garifullin M., Borshchev A. *, Popkov T. (*XJ Technologies Company, Saint Petersburg, Russian Federation)</i>
15:35	A HYBRID SIMULATION OPTIMIZATION APPROACH FOR SUPPLY CHAINS <i>Almeder C. *, Preusser M. (*University of Vienna, Austria)</i>
15:55	MODELLING ADVERTISING AND PRODUCTION STRATEGIES USING CELLULAR AUTOMATA <i>Wöckl J. * (*Vienna University of Economics and Business Administration, Austria)</i>
16:15	UNDERSTANDING RETAIL PRODUCTIVITY BY SIMULATING MANAGEMENT PRACTICES <i>Siebers P. *, Aickelin U., Celia H., Clegg C. W. (*University of Nottingham, United Kingdom)</i>

Tuesday, 11 Sept. , Room: P7, 14:35

#### TU-2-P7: MANUFACTURING SYSTEMS

Session Chair: **Williams J. E.**, Session Co-chair: **Mušič G.**

14:35	SIMULATION HELPS EVALUATE AND REDESIGN SEAT ARMREST ASSEMBLY <i>Lammers E. J., Ulgen O. M., Williams E. J. * (*University of Michigan, Dearborn, MI, United States of America)</i>
14:55	CONTROL OF MANUFACTURING SYSTEM BY AGENTS OF MATERIALS, PARTS AND PRODUCTS <i>Mitrouchev P. *, Brun-Picard D., Jenko M. (*INPG-UJF-CNRS, Grenoble, Slovenia)</i>
15:15	OPTIMAL SELECTION OF INFORMATION TERMINALS FOR DATA ACQUISITION IN MANUFACTURING PROCESSES <i>Kleindienst J. *, Juričič D. (*Kolektor Sinabit d.o.o., Ljubljana, Slovenia)</i>
15:35	ADMISSIBLE BEHAVIOUR BASED ANALYSIS OF DEADLOCK IN PETRI NET CONTROLLERS <i>Mušič G. *, Matko D. (*University of Ljubljana, Slovenia)</i>
15:55	MODELING AND SIMULATION OF MANUFACTURING SYSTEMS <i>Bogdan S. *, Kovačić Z., Smolič-Ročak N. (*University of Zagreb, Croatia)</i>
16:15	TRANSPORT OPTIMIZATION IN JOB-SHOP PRODUCTION USING LINEAR PROGRAMING <i>Lenart L. *, Tomšič M., Kušar J., Starbek M. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>

Tuesday, 11 Sept. , Room: P8, 14:35

#### TU-2-P8: SIMULATION IN ELECTRIC POWER SYSTEMS (S13)

Session Organizer(s): **Mihalič R.**

Session Chair: **Mihalič R.**, Session Co-chair: **Ruhle O.**

14:35	SOPHISTICATED REAL-TIME TESTS ON PROTECTION RELAYS AND TURBINE CONTROLLERS WITH DINEMO-II AND PSSTMNETOMAC <i>De Wilde V., Duschl-Graw G. *, Pannhorst D., Ruhle O. (*TFH Berlin - University of Applied Sciences, Berlin, Germany)</i>
14:55	BLACK-OUT PREVENTION BY DYNAMIC SECURITY ASSESSMENT FOR LARGE ELECTRICAL POWER GRIDS <i>Lerch E., Ruhle O. * (*Siemens AG, Erlangen, Germany)</i>
15:15	SIMULATION OF LARGE WIND FARMS USING COHERENCY APPROACH <i>Rudion K. *, Ruhle O., Styczynski Z. A. (*Otto-von-Guericke-University Magdeburg, Germany)</i>
15:35	MODELLING OF FACTS DEVICES FOR TRANSIENT-STABILITY ASSESSMENT USING DIRECT METHODS <i>Ažbe V. *, Mihalič R. (*University of Ljubljana, Slovenia)</i>
15:55	MODELLING OF POWER ELECTRONICS BY PSCAD: FREQUENCY SCANNING METHOD <i>Blažič B. *, Papič I. (*University of Ljubljana, Slovenia)</i>
16:15	DEVELOPMENT OF NONLINEAR TRANSFORMER MODEL APPROPRIATE FOR LOSS CALCULATION WHEN HIGHER HARMONICS ARE PRESENT <i>Toman M. *, Štumberger G., Dolinar D. (*University of Maribor, Slovenia)</i>

Tuesday, 11 Sept. , Room: P9, 14:35

#### TU-2-P9: MULTIDISCIPLINARY DESIGN OPTIMIZATION (S11)

Session Organizer(s): **Dellino G., Lino P., Meloni C., Rizzo A.**

Session Chair: **Meloni C.**, Session Co-chair: **Dellino G.**

14:35	CAD-BASED OPTIMIZATION AND APPLICATIONS IN AUTOMOTIVE ENGINEERING <i>Horváth Z. *, Morauszki T., Tóth K. (*Széchenyi István University, Győr, Hungary)</i>
14:55	OPTIMIZATION ISSUES IN MODELING IPMC DEVICES <i>Bonomo C., Dellino G. *, Fortuna L., Giannone P., Graziani S., Lino P., Meloni C., Rizzo A. (*Politecnico di Bari, Italy)</i>
15:15	MULTI OBJECTIVE OPTIMISATION OF AUTOMOTIVE COMPONENTS <i>Clarich A. *, Poian M., Poloni C. (*ESTECO srl, Trieste, Italy)</i>
15:35	MODELS FOR THE DESIGN AND OPTIMIZATION OF CNG INJECTION SYSTEMS <i>Dellino G., Lino P., Meloni C. *, Rizzo A. (*Politecnico di Bari, Italy)</i>
15:55	MULTIFORMALISM MBS MODELS FOR AN HIL APPLICATION IN VEHICLE DYNAMICS <i>Hahn M. *, Toepper S. (*iXtronics GmbH, Paderborn, Germany)</i>
16:15	NUMERICAL ANALYSIS OF MASONRY WALLS OUT-OF-PLANE LOADED <i>Milani G., Olivito R. S. *, Tralli A., Zuccarello F. A. (*University of Calabria, Italy)</i>

Tuesday, 11 Sept. , Room: P12, 14:35	
<b>TU-2-P12: BIOSCIENCES I</b>	
Session Chair: <b>Belič A.</b> , Session Co-chair: <b>Wozniak M.</b>	
14:35	RULE-BASED CLASSIFIERS FOR THE ACUTE ABDOMINAL PAIN DIAGNOSIS □ COMPARATIVE STUDY <i>Wozniak M.* (*Wroclaw University of Technology, Poland)</i>
14:55	PHYSIOLOGY BASED MODEL OF CHOLESTEROL METABOLISM AND ITS INTERACTIONS WITH XENOBIOTICS <i>Belič A.* , Režen T., Kuzman D., Fon Tacer K., Rozman D., Karba R. (*University of Ljubljana, Slovenia)</i>
15:15	SELF-ASSEMBLED DNA COMPUTING FOR DIRECTED GRAPH PROBLEM MODELLING <i>Rajadee N.* , Ono O. (*Meiji University, Japan)</i>
15:35	ANALOG SIMULATION OF CARDIOVASCULAR PHYSIOLOGY: EXERCISE IN MAN <i>Dolenšek J., Podnar T.* , Runovc F., Kordaš M. (*University of Ljubljana, Slovenia)</i>
15:55	MODELING AND SIMULATION RESULTS ON HIGH SENSITIVITY SCATTERED GAMMA-RAY IMAGING <i>Driol C.* , Nguyen M. K., Truong T. T. (*Université de Cergy-Pontoise, France)</i>
16:15	MODEL BASED INERTIAL SENSING OF HUMAN BODY MOTION KINEMATICS IN SIT-TO-STAND MOVEMENT <i>Musić J.* , Kamnik R., Munih M. (*University of Split, Croatia)</i>

Tuesday, 11 Sept. , Room: P3, 17:00	
<b>TU-3-P3: SUCCESSFUL APPLICATION OF SIMULATION IN INDUSTRY II (S08-II)</b>	
Session Organizer(s): <b>Juslin K.</b>	
Session Chair: <b>Juslin K.</b> , Session Co-chair: <b>Schumann R.</b>	
17:00	A COMPANY SPECIFIC SIMULATOR OF A DRINKING WATER TREATMENT PLANT <i>Worm I.* , Oudmans J., van Schagen K., Rietveld L. (*Duinwaterbedrijf Zuid-Holland, Voorburg, Netherlands)</i>
17:20	SIMULATION AS A MEANS TO TEST ADVANCED CONTROL ALGORITHMS IN SUPPRESSING ROTOR VIBRATIONS IN ELECTRIC MACHINES <i>Zenger K. F.* , Orivuori J., Sinervo A., Altowati A., Hrbcek J., Arkkio A., Laiho A., Tammi K. (*Helsinki University of Technology, Finland)</i>
17:40	DECISION SUPPORT AND SIMULATION METHODS FOR ASSEMBLY SYSTEM SALES ENGINEERS <i>Heilala J.* , Väättäinen O., Montonen J., Kulmala H., Laaksonen T. (*VTT Technical Research Centre of Finland, Finland)</i>
18:00	DYNAMIC SIMULATION OF PRODUCT PROCESS <i>Pesonen L. T.* , Salminen S. J., Ylén J., Riihimäki P. (*Nokia Corporation, Oulu, Finland)</i>
18:20	VIRTUAL PRODUCTION FOR INDUSTRIAL MANUFACTURING PLANTS WITH TRANSPORT SYSTEMS <i>Roßmann J., Stern O., Wischniewski R.* (*University of Aachen, Germany)</i>
18:40	UTILIZATION OF DYNAMIC SIMULATION IN THE IMPROVEMENT OF A PULPING PROCESS <i>Savolainen J.* , Kangas P., Tervaskanto M., Ahvenlampi T., Hietanen V. (*VTT Technical Research Centre of Finland, Finland)</i>
19:00	DYNAMIC MODELING OF MAINTENANCE STRATEGIES <i>Jokinen T.* , Ylén J. (*VTT Technical Research Centre of Finland, Finland)</i>

Tuesday, 11 Sept. , Room: P4, 17:00	
<b>TU-3-P4: PETRI NETS</b>	
Session Chair: <b>Tzionas P.</b> , Session Co-chair: <b>Denis B.</b>	
17:00	MODELLING AND SIMULATION OF ALUMINIUM COILS PRODUCTION PROCESS USING COLOURED PETRI NETS <i>Papanagnou C., Tzionas P.* , Xanthopoulos C. (*Technological Educ. Institute of Thessaloniki, Greece)</i>
17:20	TEMPORAL PERFORMANCE EVALUATION OF CONTROL ARCHITECTURE IN AUTOMATION SYSTEMS <i>Meunier P., Denis B.* , Lesage J. (*LURPA / ENS Cachan, Cachan, France)</i>
17:40	SIMULATION AND DESIGN OF SYSTEMS WITH OBJECT ORIENTED PETRI NETS <i>Kočí R.* , Janoušek V. (*Brno University of Technology, Czech Republic)</i>
18:00	IMPROVEMENTS FOR A COLOURED PETRI NET SIMULATOR <i>Mújica M., Piera M. A.* (*Autonomous University of Barcelona, Spain)</i>
18:20	MODELLING AND SIMULATION OF THE CMS TIER0 INPUT BUFFER WITH YASPER <i>Wijnant L., Aerts A.* , Sinanis N., Willers I. (*CERN, Geneva, Switzerland)</i>
18:40	PERFORMANCE ANALYSIS OF SYSTEM MODELS WITH UML AND GENERALIZED NETS <i>Koycheva E.* , Janschek K. (*Technical University of Dresden, Germany)</i>
19:00	DISCRETE EVENT SYSTEMS - PETRI NET BASED MODELING AND SIMULATION IN THEORY AND PRACTICE <i>Becker M.* (*University Hannover, Germany)</i>

Tuesday, 11 Sept. , Room: P6, 17:00	
<b>TU-3-P6: ELECTRICAL ENGINEERING</b>	
Session Chair: <b>Zanasi R.</b> , Session Co-chair: <b>Albu M.</b>	
17:00	MODELING, SIMULATING AND EXPERIMENTAL VALIDATION OF THE AC ELECTRIC ARC IN THE CIRCUIT OF THREE-PHASE ELECTRIC ARC FURNACES <i>Pănoiu M.* , Pănoiu C.* , Şora I., Osaci M., Muscalagiu I. (*Polytechnic University of Timisoara, Romania)</i>
17:20	ANALYTICAL CALCULATION OF SKIN AND PROXIMITY EFFECTS IN THE PRIMARY WINDING OF A PULSE TRANSFORMER <i>Bouaoune B., Marquis Y. M.* , Bernard Y. (*LACMÉ S.A.S., La Fleche, France)</i>
17:40	THE POG TECHNIQUE FOR MODELLING MULTI-PHASE PERMANENT MAGNET SYNCHRONOUS MOTORS <i>Zanasi R.* , Grossi F. (*University of Modena and Reggio Emilia, Italy)</i>

18:00	COMPARISON OF RESPONSES OBTAINED BY THE MAGNETICALLY NONLINEAR TRANSFORMER MODEL USING VARIABLE DYNAMIC AND STATIC INDUCTANCES <i>Seme S.*, Štumberger G. (*University of Maribor, Slovenia)</i>
18:20	ON THE MODEL OF A COMPACT FLUORESCENT LAMP AS LOAD OF A MIXED LV NETWORK <i>Albu M.*, Chirilă A., Deaconu I. (*Polytechnic University of Bucharest, Romania)</i>
18:40	FFT BASED COMPUTATIONAL MODEL FOR EM FIELD DEVELOPMENT ANALYSIS IN LASERS WITH ELECTRO-OPTICAL Q-SWITCH <i>Škrabelj D.*, Marinček M., Drevenšek-Olenik I. (*Fotona d.d., Ljubljana, Slovenia)</i>
19:00	NUMERICAL SIMULATION AND EXPERIMENTAL INVESTIGATION OF THE PULSE FORMATION IN PASSIVELY Q-SWITCHED ND:YAG LASERS <i>Žabkar J.*, Marinček M., Zgonik M. (*Fotona d.d., Ljubljana, Slovenia)</i>

Tuesday, 11 Sept. , Room: P7, 17:00

### TU-3-P7: CONTROL SYSTEMS I

Session Chair: **Krabbes M.**, Session Co-chair: **Moriwaki K.**

17:00	CHALLENGES OF CONVENTIONAL EQUIPMENT ON MODEL BASED CONTROL CONCEPTS <i>Krabbes M.*, Meißner C. (*University of Applied Sciences, Leipzig, Germany)</i>
17:20	COMPLEX SCHEMES OF FILTERING IN EXPERIMENTAL DATA ESTIMATION <i>Zorin A. (*Saint Petersburg State University, Russian Federation)</i>
17:40	MATHEMATICAL MODELLING OF AN AUTONOMOUS VEHICLE FOR NAVIGATION CONTROL <i>Moriwaki K.*, Tanaka K. (*The University of Shiga Prefecture, Shiga, Japan)</i>

18:00	BOND GRAPH COMPONENTS FOR MODELLING AN ELECTRICALLY POWERED VEHICLE <i>Fakri A.*, Rocaries F. (*ESIEE - Paris, France)</i>
18:20	PIEZOELECTRIC FUNCTIONALLY GRADED LAYERS IN VIBRATION CONTROL OF LAMINATED PLATES <i>Pietrzakowski M. (*Warsaw University of Technology, Poland)</i>
18:40	STATISTICAL MODELING OF MULTI-DIMENSIONAL FIELDS <i>Borštnik Bračič A.*, Govekar E., Grabec I. (*University of Ljubljana, Slovenia)</i>
19:00	MODELING AND SIMULATION OF THE PRIMARY CIRCUIT OF THE PAKS NUCLEAR POWER PLANT FOR CONTROL AND DIAGNOSIS <i>Németh E., Fazekas C., Szederkényi G.*, Hangos K. M. (*Computer and Automation Research Institute, Budapest, Hungary)</i>

Tuesday, 11 Sept. , Room: P8, 17:00

### TU-3-P8: SIMULATORS

Session Chair: **Murray-Smith D. J.**, Session Co-chair: **Brito C. A.**

17:00	A GRADUATE-LEVEL MULTI-PURPOSE EDUCATIONAL CASE STUDY ON MODELLING AND SIMULATION OF THE NEUROMUSCULAR SYSTEM <i>Murray-Smith D. J.*, Zhao S. (*University of Glasgow, United Kingdom)</i>
17:20	MODELLING OF THE RESPIRATORY SYSTEM FOR EXERCISE CONDITIONS: A CASE STUDY IN PHYSIOLOGICAL SYSTEM SIMULATION <i>Thamrin H.*, Murray-Smith D. J. (*University of Glasgow, United Kingdom)</i>
17:40	COMPUTER-BASED SURGICAL SIMULATION SYSTEM FOR STUDENTS TRAINING <i>Yaacoub F.*, Hamam Y., Abche A. (*ESIEE - Paris, France)</i>
18:00	TWO APPROACHES TO MOBILE ROBOTS SIMULATOR DESIGN <i>Klančar G.*, Brezak M., Petrovič I., Matko D. (*University of Ljubljana, Slovenia)</i>
18:20	THE TRAINING SIMULATOR FOR THE GHAZI-BAROTHA HYDRO-POWERPLANT <i>Blažič S.*, Matko D. (*University of Ljubljana, Slovenia)</i>
18:40	HYDROELECTRIC POWER DAMS NETWORK SIMULATION <i>Brito A. C. (*University of Porto, Portugal)</i>
19:00	HIGH PERFORMANCE CLUSTER COMPUTING ON A FLYING SIMULATOR <i>Kvasnica P.*, Kvasnica I. (*University of Trenčín, Slovakia)</i>

Tuesday, 11 Sept. , Room: P9, 17:00

### TU-3-P9: FUZZY SYSTEMS (S09)

Session Organizer(s): **Škrjanc I.**

Session Chair: **Škrjanc I.**, Session Co-chair: **Sáez D.**

17:00	A COMPARISON BETWEEN EQUIDISTANT PWL APPROXIMATIONS AND FUZZY CLUSTERING APPLIED TO THE INITIAL VALUE PROBLEM FOR ODES <i>García A., Oblak S., Agamennoni O.*, Škrjanc I. (*Universidad Nacional del Sur, Bahía Blanca, Argentina)</i>
17:20	A HIERARCHICAL FUZZY APPROACH TO TEMPORAL PATTERN RECOGNITION <i>Herbst G.*, Bocklisch S. F. (*Technical University of Chemnitz, Germany)</i>

17:40	MULTIOBJECTIVE PREDICTIVE CONTROL BASED ON FUZZY HYBRID MODELLING <i>Sáez D. *, Škrjanc I., Núñez A., Oblak S. (*Universidad de Chile, Santiago, Chile)</i>
18:00	THE ROLE OF APPROXIMATION IN ANALYTICAL CONTINUOUS-TIME WIENER-MODEL PREDICTIVE CONTROL <i>Oblak S. *, Garcia A., Škrjanc I., Agamennoni O. (*University of Ljubljana, Slovenia)</i>
18:20	FUZZY MODEL OF BIRD FLOCK FORAGING BEHAVIOR <i>Moškon M. *, Heppner F. H., Mraz M., Zimic N., Lebar Bajec I. (*University of Ljubljana, Slovenia)</i>
18:40	STAGE-DEPENDENT FUZZY LOSS FUNCTION IN MULTISTAGE CLASSIFIER - RESULTS OF SIMULATIONS <i>Burduk R. * (*Wroclaw University of Technology, Poland)</i>
19:00	FUZZY VECTORIAL DIRECTIONAL PROCESSING IN DENOISING OF MULTICHANNEL IMAGES <i>Ponomaryov V. *, Rosales A., Gallegos F., Romero A. (*National Polytechnic Institute of Mexico, Mexico-city, Mexico)</i>

Tuesday, 11 Sept., Room: P12, 17:00

**TU-3-P12: DIGITAL FACTORY/SIMULATION AND OPTIMIZATION OF INDUSTRIAL PROCESSES II (S07-II)**

Session Organizer(s): **Jósvai J., März L.**

Session Chair: **März L.**, Session Co-chair: **Jósvai J.**

17:00	PRACTICAL OPTIMIZATION BY OR AND SIMULATION <i>van Dijk N. *, van der Sluis E. (*University of Amsterdam, Netherlands)</i>
17:20	MINIMUM STOCK COSTS AT GIVEN TIMES FOR DELIVERY WITH SIMULATION AND OPTIMIZATION <i>Thurnher P. *, März L. (*V-Research GmbH, Dornbirn, Austria)</i>
17:40	AUTOMATIC CREATION OF SIMULATION MODELS FROM DATA MODELS OF LOGISTIC AND MANUFACTURING PROCESSES <i>Tauböck S. *, Breitenecker F. (*Profactor Research &amp; Solutions, Seibersdorf, Austria)</i>
18:00	OPTIMISATION OF SCHEDULING PROBLEMS BASED ON TIMED PETRI NETS <i>Löscher T. *, Mušič G., Breitenecker F. (*Vienna University of Technology, Austria)</i>
18:20	MACRO-REACHABILITY TREE EXPLORATION FOR D.E.S. DESIGN OPTIMIZATION <i>Latorre J. I., Jiménez E., Pérez M. * (*University of La Rioja, Spain)</i>
18:40	MODEL MIXING FOR LONG-TERM EXTRAPOLATION <i>Ettler P. *, Kárný M., Nedoma P. (*COMPUREG Plzen, s.r.o., Czech Republic)</i>
19:00	DEVELOPMENT OF SIMULATION-BASED ENVIRONMENT FOR MULTI-ECHELON CYCLIC PLANNING AND OPTIMISATION <i>Merkuryeva G., Napalkova L. * (*Riga Technical University, Latvia)</i>

## WEDNESDAY

Wednesday, 12 Sept., Room: P1, 09:00

**PLENARY-IV**

Session Chair: **Jávor A.**

9:00-9:45	AN ODE FOR THE RENAISSANCE <i>Breitenecker F. *, Breitenecker K. *, Judex F., Popper N., Wassertheurer S. (*Vienna University of Technology, Austria)</i>
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Wednesday, 12 Sept., Room: P3, 10:05

**WE-1-P3: MODELLING OF STRUCTURAL DYNAMIC SYSTEMS – MODEL REDUCTION METHODS (S24)**

Session Organizer(s): **Schwarz P., Breitenecker F.**

Session Chair: **Schwarz P.**, Session Co-chair: **Breitenecker F.**

10:05	AUTOMATED BEHAVIORAL MODELING AND ANALYTICAL MODEL-ORDER REDUCTION BY APPLICATION OF SYMBOLIC CIRCUIT ANALYSIS FOR MULTI-PHYSICAL SYSTEMS <i>Sommer R. *, Halfmann T., Broz J. (*IMMS gGmbH / Technical University Ilmenau, Germany)</i>
10:25	A TOOL-BOX APPROACH TO COMPUTER-AIDED GENERATION OF REDUCED-ORDER MODELS <i>Schwarz P. *, Bastian J., Clauß C., Haase J., Koehler A., Otte G., Schneider P. (*Fraunhofer Institute for Integrated Circuits, Dresden, Germany)</i>
10:45	STRUCTURE OF SIMULATORS FOR HYBRID SYSTEMS - GENERAL DEVELOPMENT AND INTRODUCTION OF A CONCEPT OF EXTERNAL AND INTERNAL STATE EVENTS <i>Breitenecker F. *, Judex F., Popper N., Troch I., Funovits J. (*Vienna University of Technology, Austria)</i>
11:05	NUMERICAL SIMULATION OF CONTINUOUS SYSTEMS WITH STRUCTURAL DYNAMICS <i>Enge-Rosenblatt O. *, Bastian J., Clauß C., Schwarz P. (*Fraunhofer Institute for Integrated Circuits, Dresden, Germany)</i>
11:25	DISCRETE HYBRID AUTOMATA APPROACH TO STRUCTURAL DYNAMIC MODELLING AND SIMULATION <i>Mušič G. *, Zupančič B. (*University of Ljubljana, Slovenia)</i>
11:45	CLASSICAL AND STATECHART-BASED MODELING OF STATE EVENTS AND OF STRUCTURAL CHANGES IN THE MODELICA – SIMULATOR MOSILAB <i>Zauner G. *, Judex F., Schwarz P. (*"Die Drahtwarenhandlung" – Simulation Services, Vienna, Austria)</i>
12:05	MODELING OF STRUCTURAL-DYNAMIC SYSTEMS BY UML STATECHARTS IN ANYLOGIC <i>Leitner D. *, Kropf J., Karpov Y., Senichenkov Y., Kolesov Y., Zauner G. (*Vienna University of Technology, Austria)</i>

Wednesday, 12 Sept., Room: P4, 10:05	
<b>WE-1-P4: ARTIFICIAL INTELLIGENCE METHODS III</b>	
Session Chair: <b>Saito S.</b> , Session Co-chair: <b>Šnorek M.</b>	
10:05	UNIVERSITY TIMETABLING IN MINIMUM AREA OF CLASSROOM USING EVOLUTIONARY COMPUTATION BY VIRUS EVOLUTIONARY THEORY <i>Saito S. *, Tanifuji C. (*Tokyo University of Science, Japan)</i>
10:25	ON VISUALIZATION OF DIVERSITY IN EVOLUTIONARY ALGORITHMS BASED ON SIMULATION OF PHYSICAL SYSTEM <i>Drchal J. *, Šnorek M. (*Czech Technical University in Prague, Czech Republic)</i>
10:45	CONTINUAL EVOLUTION ALGORITHM FOR BUILDING OF ANN-BASED MODELS <i>Buk Z. *, Šnorek M. (*Czech Technical University in Prague, Czech Republic)</i>
11:05	HYBRID GENETIC-ALGORITHM / BRANCH & BOUND TECHNIQUE TO SOLVE A TIME-DEPENDENT TRANSPORTATION PROBLEM <i>Brudaru O. *, Valmar B. (*Technical University "Gh. Asachi" Iasi, Romania)</i>
11:25	ADAPTIVE PLAN SYSTEM WITH GENETIC ALGORITHM BASED ON SYNTHESIS OF LOCAL AND GLOBAL SEARCH METHOD FOR MULTI-PEAK OPTIMIZATION PROBLEMS <i>Hasegawa H. * (*Shibaura Institute of Technology, Japan)</i>
11:45	MODELING THE LASER DROPLET-FORMATION PROCESS AND OPTIMIZING WITH GENETIC ALGORITHMS <i>Kokalj T. *, Grabec I., Govekar E. (*Institute of Metals and Technology, Ljubljana, Slovenia)</i>

Wednesday, 12 Sept., Room: P6, 10:05	
<b>WE-1-P6: MODELLING OF CRYOGENIC SYSTEMS AND THEIR APPLICATIONS (S03)</b>	
Session Organizer(s): <b>Rachid A., Chadli M., Coppier H.</b>	
Session Chair: <b>Coppier H.</b> , Session Co-chair: <b>Chadli M.</b>	
10:05	DYNAMIC SIMULATION OF LARGE SCALE HELIUM REFRIGERATOR: THE 400 WATT @ 1.8 K TEST FACILITY <i>Deschildre C., Barraud A., Bonnay P., Briend P., Girard A., Poncet J. M., Roussel P. *, Sequeira S. (*CEA-Grenoble, France)</i>
10:25	A DYNAMIC SIMULATOR FOR LARGE SCALE CRYOGENIC SYSTEMS <i>Brađu B. *, Gayet P., Niculescu S. (*CERN, Geneva, Switzerland)</i>
10:45	FROM IDENTIFYING AND MODELING TO CONTROL: THE MULTICONTROLLER, AN ADVANCED CONTROL LOOP STRATEGY FOR CRYOGENIC SYSTEMS AT CERN <i>Cabaret S. * (*CERN, Geneva, Switzerland)</i>
11:05	PROCESS IDENTIFICATION THROUGH TESTS ON CRYOGENIC SYSTEM <i>Pezzetti M. *, Rachid A., Chadli M., Coppier H. (*CERN, Geneva, Switzerland)</i>
11:25	MODELLING WORKSTATION FOR A KRYPTON CONDENSER SYSTEM <i>Moraux A. P. H. *, Pezzetti M., Coppier H., Rachid A., Chadli M. (*CERN, Geneva, Switzerland)</i>

Wednesday, 12 Sept., Room: P7, 10:05	
<b>WE-1-P7: CONTROL SYSTEMS II</b>	
Session Chair: <b>Guidorzi R.</b> , Session Co-chair: <b>Huba M.</b>	
10:05	VIRTUAL PID TOOLBOX (VPT) <i>Kozák Š. (*Slovak University of Technology, Bratislava, Slovakia)</i>
10:25	IDENTIFICATION TECHNIQUES IN VNAV AUTOPILOT DESIGN FOR A LIGHT SPORT AIRCRAFT <i>Guidorzi R. *, Diversi R., Soverini U. (*University of Bologna, Italy)</i>
10:45	THE COMPARISON OF UNMANNED UNDERWATER VEHICLES' CONTROL STRATEGIES <i>Podržaj P. *, Kariž Z. (*University of Ljubljana, Slovenia)</i>
11:05	SIMULATION OF SINGLE INPUT DISTRIBUTED PARAMETER SYSTEMS VIA VIRTUAL CONTROLLER DESIGN <i>Schlake J. *, Konigorski U. (*Technical University of Darmstadt, Germany)</i>
11:25	CONSTRAINED POLE ASSIGNMENT CONTROL FOR SECOND ORDER PLANT WITH STABLE ZERO <i>Huba M. *, Ľapák P. (*Slovak University of Technology, Bratislava, Slovakia)</i>
11:45	ROBUST CONTROL DESIGN METHODS FOR REDUCED ORDER MODELS <i>Ahrholdt U. *, Konigorski U. (*Technical University of Darmstadt, Germany)</i>

Wednesday, 12 Sept., Room: P8, 10:05	
<b>WE-1-P8: COMPUTATIONAL INTELLIGENCE AND DISCRETE SIMULATION (S05)</b>	
Session Organizer(s): <b>Huyet A.L, Pierreval H.</b>	
Session Chair: <b>Huyet A.</b> , Session Co-chair: <b>Pierreval H.</b>	
10:05	HIERARCHICAL CONTROL FOR CONTINUOUS FLOW SIMULATION OF MANUFACTURING SYSTEMS <i>Tamani K. *, Boukezzoula R., Habchi G. (*University of Savoie, France)</i>
10:25	AN AUTOMATED APPROACH TO INPUT DATA MANAGEMENT IN DISCRETE EVENT SIMULATION PROJECTS: A PROOF-OF-CONCEPT DEMONSTRATOR <i>Skooth A., André J. *, Dudas C., Svensson J., Moris M. U., Johansson B. (*Chalmers University of Technology, Gothenburg, Sweden)</i>
10:45	COMBINING SIMULATION AND ARTIFICIAL NEURAL NETWORKS: AN OVERVIEW <i>Mouelhi W. *, Huyet A., Pierreval H. (*LIMOS/IFMA, Aubiere, France)</i>
11:05	SIMULATION OF ATTITUDE TRANSFORMATION BY USING AUTOMATA NETWORKS <i>Robert-Demontrond P., Thiel D. * (*University of Nantes, France)</i>
11:25	INTELLIGENT SHORT TERM SCHEDULING OF A PRODUCTION CELL WITH PARALLEL FACILITIES <i>Juuso E. K. *, Jagdev H. S. (*University of Oulu, Finland)</i>

11:45	APPLICATION OF STOCHASTIC PROGRAMMING FOR SUPPLY CHAIN INVENTORY OPTIMIZATION UNDER UNCERTAIN DEMAND AND LEAD TIME <i>Soshko O. *, Merkuryev Y., Van Landeghem H. (*Riga Technical University, Latvia)</i>
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Wednesday, 12 Sept., Room: P9, 10:05

**WE-1-P9: SIMULATION OF MULTIFIELD AND MULTISCALE PROBLEMS IN STRUCTURAL AND MATERIAL ENGINEERING (S18)**

Session Organizer(s): **Callari C., Maceri F.**

Session Chair: **Callari C.**, Session Co-chair: **Maceri F.**

10:05	A SURVEY ON RECENT DEVELOPMENTS IN SECOND-ORDER INTEGRATION METHODS FOR J2 PLASTICITY MODEL <i>Artioli E. *, Auricchio F., da Veiga L. B. (*University of Pavia, Italy)</i>
10:25	A TIME DISCONTINUOUS PROCEDURE FOR THE HYDRAULIC CRACK SIMULATION IN COHESIVE POROUS MEDIA <i>Secchi S. *, Simoni L., Schrefler B. (*CRN - ISIB, Padova, Italy)</i>
10:45	SIMULATION OF STRAIN LOCALIZATION IN MULTI-PHASE MEDIA BY A MULTI-SCALE APPROACH <i>Callari C. *, Armero F., Abati A. (*Universita degli Studi del Molise, Termoli, Italy)</i>
11:05	COLLISIONS AND FRACTURES: A PREDICTIVE THEORY <i>Freddi F. *, Frémond M. (*University of Parma, Italy)</i>
11:25	INFLUENCE OF MICRO-CRACKING ON THE EFFECTIVE PROPERTIES OF COMPOSITE MATERIALS <i>Bruno D., Greco F. *, Lonetti P., Nevone Blasi P. (*University of Calabria, Italy)</i>

Wednesday, 12 Sept., Room: P12, 10:05

**WE-1-P12: BIOSCIENCES II**

Session Chair: **Al-ani T.**, Session Co-chair: **Belič A.**

10:05	SELECTING A NEW ROBOT FOR THE CLINICAL LABORATORY BY USING A SIMULATION MODEL <i>Ruuhonen T. P. *, Neittaanmäki P., Leppänen E., Lähdevaara H. (*University of Jyväskylä, Finland)</i>
10:25	EVALUATING THE EFFECTS OF A PNEUMATIC TUBE DELIVERY SYSTEM ON THE PATIENT'S LENGTH OF STAY IN AN EMERGENCY DEPARTMENT BY USING A SIMULATION MODEL <i>Ruuhonen T. P. *, Neittaanmäki P., Teittinen J. (*University of Jyväskylä, Finland)</i>
10:45	SIMULATING THE EFFECTS OF SCHOOL CLOSING INTERVENTIONS AGAINST PANDEMIC INFLUENZA <i>Schwehm M. *, Vidondo B., Brockmann S., Eichner M. (*University of Tübingen, Germany)</i>
11:05	IDENTIFICATION OF WIENER MODELS USING OPTIMAL LOCAL LINEAR MODELS <i>Kozek M. *, Sinanović S. (*Vienna University of Technology, Austria)</i>
11:25	REALISTIC SIMULATION OF AN INSECT CHORUS BASED ON COUPLED SONG OSCILLATORS <i>Hartbauer M. * (*Karl-Franzens University Graz, Austria)</i>
11:45	MIMICKING THE SPATIAL SELF DEFENSE EFFECT IN A TOXIC PHYTOPLANKTON - ZOOPLANKTON SYSTEM <i>Chattopadhyay J., Chatterjee S. *, Venturino E. (*University of Torino, Italy)</i>

## THURSDAY

Thursday, 13 Sept., Room: P1, 09:00

**PLENARY-V**

Session Chair: **Schumann R.**

9:00-9:45	THE CHALLENGE OF MODELING HIGH SPEED FLOWS <i>Longo J. M. A. *, Hannemann K., Hannemann V. (*German Aerospace Center (DLR), Braunschweig, Germany)</i>
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Thursday, 13 Sept., Room: P3, 10:05

**TH-1-P3: ALTERNATIVE MODELLING AND COMPARISONS AND BENCHMARKING IN MODELLING AND SIMULATION II (S22-II)**

Session Organizer(s): **Breitenecker F., Wiechert W.**

Session Chair: **Wiechert W.**, Session Co-chair: **Popper N.**

10:05	THE INFLOW BOUNDARY CONDITION IN LBGK BLOOD FLOW SIMULATIONS <i>Leitner D. *, Kropf J., Wassertheurer S. (*Austrian Research Centers GmbH, Vienna, Austria)</i>
10:25	MODELLING THE RADIOACTIVE GROUND POLLUTION BY TRANSURANIUM ELEMENTS USING CELLULAR AUTOMATA <i>Breitenecker K. *, Brandl A., Böck H., Villa M. (*Atomic Institut of the Austrian Universities, Vienna, Austria)</i>
10:45	COMPARING THE EFFICIENCY OF PARALLELISATION TECHNIQUES FOR SIMULATION TASKS BY MEANS OF THE ARGESIM BENCHMARKS FOR PARALLEL SIMULATION <i>Fink R. *, Breitenecker F., Höfinger G., Pawletta S. (*IAV GmbH, Wismar, Germany)</i>
11:05	MODELLING SIR-TYPE EPIDEMICS BY ODES, PDES, DIFFERENCE EQUATIONS AND CELLULAR AUTOMATA - A COMPARATIVE STUDY <i>Schneckenreither G. *, Popper N., Zauner G. (*Vienna University of Technology, Austria)</i>
11:25	A CLASSIFICATION OF MODELLING AND SIMULATION APPROACHES BASED ON THE ARGESIM BENCHMARKS <i>Pawlik S. *, Popper N., Breitenecker F. (*Vienna University of Technology, Austria)</i>
11:45	WHEN SIMULATION IS AS COMPLEX AS REALITY: VISUALIZATION AS A DATA EVALUATION TOOL FOR MANY-PARTICLE MODELS <i>Reichardt R., Grollius S., Droste P., Wiechert W. * (*University of Siegen, Germany)</i>

12:05	A DEVICE FOR ESTIMATING THE FOOTWEAR QUALITY AND PHYSIOLOGICAL SIMULATION OF THE HUMAN FOOT <i>Babič M.*, Mekjavić I., Lenart B., Vrhovec B. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>
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Thursday, 13 Sept., Room: P4, 10:05

**TH-1-P4: COMPLEX SYSTEMS**

Session Chair: **Manesis S.**, Session Co-chair: **Hrubý M.**

10:05	MULTI-ZONE MODELING AND SIMULATION OF INDUSTRIAL LARGE-LENGTH CONTINUOUS FURNACES FOR BRICK PRODUCTION <i>Manesis S.*, Mourtzoukos S. (*University of Patras, Greece)</i>
10:25	MODELLING AND SIMULATION OF TRANSPORTATION SYSTEMS: PLANNING FOR A BUS PRIORITY SYSTEM <i>Papageorgiou G.*, Damianou P., Pitsillides A., Aphas T., Ioannou P. (*University of Cyprus, Cyprus)</i>
10:45	MODELLING THE STRUCTURED AND COMPLEX DECISION SITUATIONS <i>Hrubý M. (*Brno University of Technology, Czech Republic)</i>
11:05	A SYSTEM DYNAMICS MODEL FOR THE DIABETES PREVALENCE IN AUSTRIA <i>Kristöfel P.*, Breitenecker F., Gyimesi M., Popper N. (*Vienna University of Technology, Austria)</i>
11:25	SIMULATOR FOR MULTI-SCALE MUSCULOSKELETAL MODELS WITH REFLEX CIRCUITS <i>Fazekas C.*, Cserecsik D., Szederkényi G., Hangos K. M. (*Computer and Automation Research Institute, Budapest, Hungary)</i>
11:45	CONCEPTUAL MODELLING OF CONTINUOUS - DISCRETE PRODUCTION SYSTEMS <i>Perši N.*, Dušak V. (*University of Zagreb, Croatia)</i>

Thursday, 13 Sept., Room: P6, 10:05

**TH-1-P6: STOCHASTIC SYSTEMS**

Session Chair: **Rădulescu M.**, Session Co-chair: **Morales-Menendez R.**

10:05	NETWORK-INDUCED DELAY MODEL USING HMM FOR CAN-BASED NETWORKED CONTROL SYSTEMS EVALUATION <i>Vargas-Rodriguez R., Morales-Menendez R. (*Center for Innovation in Design and Technology, Monterrey, Mexico)</i>
10:25	GRID-INDEPENDENT METROPOLIS SAMPLING FOR VOLUME VISUALISATION <i>Tanaka S.*, Hatta T., Rambu Ngana F., Saitoh A., Sakamoto N., Nonaka J., Koyamada K. (*Ritsumeikan University, Japan)</i>
10:45	PERFORMANCE MODELLING OF A COMPUTER INTEGRATED MANUFACTURING AND MANAGEMENT SYSTEM <i>Lewoc J. B.*, Izvorski A., Skowronski S. (*Design, Research and Translation Agency Leader, Wroclaw, Poland)</i>
11:05	MODELLING UNCERTAINTY IN JOINTS USING COMPONENT MODE SYNTHESIS AND A STOCHASTIC REDUCED BASIS METHOD <i>Dohnal F.*, Mace B., Ferguson N. (*University of Southampton, United Kingdom)</i>
11:25	CROP PLANNING UNDER RISK AND ENVIRONMENTAL CONSTRAINTS <i>Rădulescu M.*, Rădulescu S.*, Rădulescu C. Z. (*Casa Academiei Romane, Bucharest)</i>
11:45	DYNAMICS IN THE MUTATION-SELECTION BALANCE IN HAPLOIDS: AN APPROACH TO THE FITNESS COMPOSITION OF INDIVIDUAL GENES IN AN INFINITE ASEXUAL POPULATION <i>Fukshansky A. (*Royal Holloway University of London, United Kingdom)</i>

Thursday, 13 Sept., Room: P7, 10:05

**TH-1-P7: CONTROL SYSTEMS III**

Session Chair: **Alexík M.**, Session Co-chair: **Huba M.**

10:05	HOW WELL IS FREE SOFTWARE ABLE TO REPLACE MATLAB IN SOLUTION OF COMMON CONTROL PROBLEMS? (SURVEY) <i>Ondera M., Huba M. (*Slovak University of Technology, Bratislava, Slovakia)</i>
10:25	REAL TIME SIMULATION EXPERIMENTS WITH SELF TUNING CONTROL ALGORITHM <i>Alexík M. (*University of Žilina, Slovakia)</i>
10:45	MODELING AND CONTROL OF WIND TURBINE GENERATOR CONNECTED TO INFINITE BUS <i>Abu-Tabak N.*, Auloge J., Auriol P. (*AMPERE, Ecole Centrale de Lyon, France)</i>
11:05	SELF-ADAPTIVE PREDICTIVE FUNCTIONAL CONTROL OF TEMPERATURE IN AN EXOTHERMIC BATCH REACTOR <i>Karar G.*, Škrjanc I., Zupančič B. (*University of Ljubljana, Slovenia)</i>
11:25	A NOE MODEL IDENTIFICATION ALGORITHM USING PIECEWISE LINEAR FUNCTIONS <i>Castro L.*, Alvarez M. P., Agamennoni O. (*Universidad Nacional del Sur, Bahía Blanca, Argentina)</i>
11:45	COMPUTER SIMULATION OF DISTRIBUTED THERMAL CONTROL FOR POLYMERIC COMPOSITE SPAR CURING PROCESS <i>Shevtsov S. N.*, Hmelevska T. A., Axenov V. N. (*South Center of Russian Academy, Rostov-on-Don, Russian Federation)</i>
12:05	SMART CONTROL PARAMETER SETTING FOR THE SIMULATION OF ELECTRIC DRIVE SYSTEMS <i>Kapeller H.*, Giuliani H., Pirker F. (*Arsenal Research, Vienna, Austria)</i>

Thursday, 13 Sept., Room: P8, 10:05

**TH-1-P8: LOGISTICS / SUPPLY CHAINS**

Session Chair: **Piera A. M.**, Session Co-chair: **Georgijević M.**

10:05	SIMULATION AS LOGISTIC SUPPORT TO DEVELOPMENT PROCESSES (PROBLEMS IN APPLICATION) <i>Georgijević M.*, Bojanić V., Bojanić G. (*University of Novi Sad, Serbia)</i>
10:25	AN EFFICIENT CPN MODELING APPROACH TO TACKLE THE PALLET PACKING PROBLEM <i>Piera A. A.*, Mújica M., Guasch T. (*Autonomous University of Barcelona, Spain)</i>
10:45	ANALYSIS OF VARIOUS FORECASTING APPROACHES FOR LINEAR SUPPLY CHAINS BASED ON DIFFERENT DEMAND DATA TRANSFORMATIONS <i>Schmidt R. (*University of Bern, Switzerland)</i>



11:05	CONTINUOUS-REVIEW REPLENISHMENT WITH CAPACITY CONSTRAINTS AND BREAKDOWNS <i>Enns S. T. (*University of Calgary, Canada)</i>
11:25	IMPROVEMENT OF DELIVERY TIMES BY DYNAMIC VEHICLE ROUTING IN AUTOMATED MATERIAL HANDLING SYSTEMS FOR SEMICONDUCTOR INDUSTRY <i>Böttinger F. *, Fischmann C., Weidele S., Wertz R. (*Fraunhofer Institute Manufacturing Engineering and Automation, Stuttgart, Germany)</i>
11:45	THE SIMULATION ANALYSIS OF MULTI-SHUTTLE AUTOMATED STORAGE AND RETRIEVAL SYSTEMS <i>Leher T. *, Šraml M., Potrč I. (*University of Maribor, Slovenia)</i>

Thursday, 13 Sept., Room: P9, 10:05

### TH-1-P9: SIMULATION ENVIRONMENTS

Session Chair: **Jiménez E.**, Session Co-chair: **Abche A.**

10:05	VIRTUAL REALITY FOR A HUMAN-CENTERED DESIGN METHODOLOGY <i>Mahdjoub M. *, Gomes S., Sagot J., Bluntzer J. (*University of Technology of Belfort-Montbéliard, France)</i>
10:25	DEVELOPMENT OF TERRAIN SIMULATION APPLICATIONS WITH VRML-WEB3D AND GRAPHIC LIBRARIES <i>Jiménez E. *, Martínez E., Pérez M., Sanz F. (*University of La Rioja, Spain)</i>
10:45	COMPARISON OF DIFFERENT 3D (STEREO) VISUALIZATION METHODS - EXPERIMENTAL STUDY <i>Vajta L., Urbancsek T. *, Vajda F., Juhász T. (*Budapest University of Technology and Economics, Hungary)</i>
11:05	VIRTUAL TUTORS IN VIRTUAL ENVIRONMENTS <i>Wloka D., Chaouch K., Holbein L. *, Tümmler J. (*Universität Kassel, Germany)</i>
11:25	INITIALIZATION OF 3-D ITERATIVE IMAGE REGISTRATION TECHNIQUES USING POINT MARKERS <i>Abche A. *, Tzanakos G. S., Micheli-Tzanakou E., Karam E. (*University of Balamand, Lebanon)</i>
11:45	MODELING AND BISTATIC SIMULATION OF A HIGH RESOLUTION 3D PMD-CAMERA <i>Peters V. *, Löffeld O., Hartmann K., Knedlik S. (*University of Siegen, Germany)</i>
12:05	REALISTIC ENVIRONMENTS FOR ONLINE MARITIME SIMULATORS <i>Raicu G. *, Barsan E., Paul A., Hanzu R., Chiotoroiu L. (*Constanta Maritime University, Romania)</i>

Thursday, 13 Sept., Room: P12, 10:05

### TH-1-P12: DISCRETE EVENT SYSTEMS II

Session Chair: **Medina-Marín J.**, Session Co-chair: **Dalle O.**

10:05	MODEL-DRIVEN SOFTWARE DEVELOPMENT AND DISCRETE EVENT SIMULATION <i>Sandu T. *, Knaak N., Page B. (*University of Hamburg, Germany)</i>
10:25	ALGORITHM FOR DEVS STRUCTURE CHANGES <i>Baati L., Frydman C., Giambiasi N. (*Domaine Universitaire de Saint-Jérôme, France)</i>
10:45	AN INSTRUMENTATION FRAMEWORK FOR COMPONENT-BASED SIMULATIONS BASED ON THE SEPARATION OF CONCERNS PARADIGM <i>Dalle O. *, Mrabet C. (*Université de Nice Sophia Antipolis, France)</i>
11:05	CONSTRAINT-BASED SIMULATION OF OUTFITTING PROCESSES IN SHIPBUILDING AND CIVIL ENGINEERING <i>König M. *, Beißert U., Steinhauer D., Bargstädt H. (*Bauhaus-University of Weimar, Germany)</i>
11:25	THE ROLE OF KNOWLEDGE THROUGHOUT THE SIMULATION LIFECYCLE: WHAT DOES A SIMULATION MODEL KNOW? <i>Neumann G. (*University of Magdeburg, Germany)</i>
11:45	A PETRI NET BASED SIMULATOR FOR ACTIVE DATABASE SYSTEMS <i>Medina-Marín J. *, Montufar-Benítez M. A., Pérez-Rojas A., Montano-Arango O., Corona-Armenta J. R., Garnica-González J. (*Autonomous University of Hidalgo State, Mexico)</i>
12:05	A FLOW REGULATION BY GENERALIZED PETRI NET <i>Bourcerie M. (*University of Angers, France)</i>

Thursday, 13 Sept., Room: P3, 13:45

### TH-2-P3: MECHANICAL ENGINEERING III

Session Chair: **Hać M.**, Session Co-chair: **Naghashzadegan M.**

13:45	NUMERICAL MODELING OF THERMAL EXPANSION OF AL-BASED METAL MATRIX COMPOSITES REINFORCED WITH SIC PARTICLES <i>Nam T. H. *, Requena G., Degischer H. P. (*Vienna University of Technology, Austria)</i>
14:05	ON ELASTIC-RIGID COUPLING IN MODELLING OF MOTION OF ELASTIC LINKAGES BY FEM <i>Hać M. (*Warsaw University of Technology, Poland)</i>
14:25	EXPERIMENTAL ANALYSIS OF BUBBLE PUMP WATER-BASED WORKING FLUIDS <i>Monsef H., Naghashzadegan M. *, Roohi S., Farshadmanesh M. (*University of Gulian, Iran)</i>
14:45	EXPERIMENTAL ANALYSIS OF BUBBLE PUMP LIBR SOLUTION WORKING FLUIDS FOR ABSORPTION REFRIGERATION SYSTEM <i>Roohi S., Naghashzadegan M. *, Monsef H. (*University of Gulian, Iran)</i>
15:05	ELIMINATION OF CYBERNETIC IMPERFECTIONS OF THE FATIGUE TESTING MACHINE <i>Jerman B. *, Kramar J. (*University of Ljubljana, Slovenia)</i>

Thursday, 13 Sept., Room: P4, 13:45	
<b>TH-2-P4: ARTIFICIAL INTELLIGENCE METHODS IV</b>	
Session Chair: <b>Al-ani T.</b> , Session Co-chair: <b>Gubina A.</b>	
13:45	AUTOMATIC SLEEP SCORING BASED ONLY ON ELECTROCARDIOGRAM RECORDS <i>Al-ani T.*, Kazbunda R., Novák D. (*ESIEE - Paris, France)</i>
14:05	NEW TRENDS IN SIMULATION OF NEURAL NETWORKS <i>Koutnik J.*, Šnorek M. (*Czech Technical University in Prague, Czech Republic)</i>
14:25	APPLICATION OF LOCAL ANN CONTROLLERS FOR POWER SYSTEM SECONDARY VOLTAGE CONTROL <i>Gubina A.*, Golob R. (*University of Ljubljana, Slovenia)</i>
14:45	ARTIFICIAL NEURAL NETWORKS FOR OPTIMISATION OF TABLET PRODUCTION <i>Belič A.*, Zupančič-Božič D., Škrjanc I., Vrečer F., Karba R. (*University of Ljubljana, Slovenia)</i>
15:05	APPLICATION OF SELF-ORGANIZING MAPS IN ANALYSIS OF WAVE SOLDERING PROCESS <i>Liukkonen M.*, Havia E., Leinonen H., Hiltunen Y. (*University of Kuopio, Finland)</i>

Thursday, 13 Sept., Room: P6, 13:45	
<b>TH-2-P6: MATHEMATICAL / NUMERICAL METHODS III</b>	
Session Chair: <b>Menshikov Y.</b> , Session Co-chair: <b>Teufelsbauer H.</b>	
13:45	AUTOMATIC PARALLELIZATION OF OBJECT ORIENTED MODELS ACROSS METHOD AND SYSTEM <i>Lundvall H.*, Fritzon P. (*Linköping University, Sweden)</i>
14:05	A TWO-DIMENSIONAL SNOW PACK MODEL <i>Teufelsbauer H. (*University of Natural Resources and Applied Life Sciences, Vienna, Austria)</i>
14:25	WAVEGUIDE MODEL OF WIRELESS COMMUNICATION CHANNELS INSIDE BUILDINGS <i>Chaiko Y. (*Riga Technical University, Latvia)</i>
14:45	JOINT DYNAMICS OF FLUID AND STRUCTURE <i>Gale J.*, Tiselj I. (*Institut "Jožef Stefan", Ljubljana, Slovenia)</i>
15:05	IDENTIFICATION OF EXTERNAL LOAD MODELS TO SYSTEMS WITH INEXACT DESCRIPTION <i>Menshikov Y. (*University of Dnepropetrovsk, Dnepropetrovsk, Ukraine)</i>

Thursday, 13 Sept., Room: P7, 13:45	
<b>TH-2-P7: COMMUNICATIONS</b>	
Session Chair: <b>Rumley S.</b> , Session Co-chair: <b>Savić D.</b>	
13:45	DISTRIBUTED AND COMPONENT ORIENTED TOOLS FOR COMMUNICATION NETWORKS USING WEB SERVICES <i>Rumley S.*, Gaumier C., Trefois C. (*Ecole Polytechnique Fédérale de Lausanne, Switzerland)</i>
14:05	SIMULATING DISTRIBUTED APPLICATION IN AN ACTIVE NETWORK <i>Koutny T.*, Safarik J. (*University of West Bohemia, Czech Republic)</i>
14:25	STORING AND EXCHANGING SIMULATION RESULTS IN TELECOMMUNICATIONS <i>Savić D.*, Potorti F., Furfari F., Bešter J., Tomažič S., Pustišek M. (*University of Ljubljana, Slovenia)</i>
14:45	USING ADAPTIVE MULTIMEDIA MOBILE AGENT IN HETEROGENEOUS WIRELESS NETWORKS <i>Raiyn J. (*University of Hannover, Germany)</i>
15:05	CROSSTALK MODELING FOR CALCULATION OF ADSL2+ DOWNSTREAM BIT RATES <i>Mikac V.*, Bažant A., Ilić Ž. (*University of Zagreb, Croatia)</i>

Thursday, 13 Sept., Room: P8, 13:45	
<b>TH-2-P8: INCREASED PREDICTABILITY OF CRASH MODELS (S06)</b>	
Session Organizer(s): <b>Eichberger A.</b>	
Session Chair: <b>Eichberger A.</b> , Session Co-chair: <b>Haufe A.</b>	
13:45	BIORID II – TOOL FOR ANALYSING REAR IMPACTS <i>Rieser A.*, Nußbaumer C. (*The Virtual Vehicle - Competence Center (VIF), Graz, Austria)</i>
14:05	FINITE SPOTWELD ELEMENT – HYBRID TREFFTZ FORMULATION <i>Heubrandtner T., Scharrer G. (*The Virtual Vehicle - Competence Center (VIF), Graz, Austria)</i>
14:25	THE DEVELOPMENT OF A 3D-NAVIER-STOKES CODE FOR THE SIMULATION OF AN AIRBAG INFLATION <i>Sinz W.*, Steffan H. (*Graz University of Technology, Austria)</i>
14:45	NEW DEVELOPMENTS FOR MODELING CONNECTED PARTS OF THE BODY IN WHITE: SPOT WELDING AND ADHESIVE BONDING IN CRASH SIMULATIONS WITH LS-DYNA <i>Haufe A.*, Kolling S., Feucht M., Münz T. (*DYNAmore GmbH, Stuttgart, Germany)</i>
15:05	A NOVEL VIRTUAL DEVELOPMENT PROCESS FOR SIDE IMPACT AT MAGNA STEYR BASED ON NUMERICAL SIMULATIONS VERIFIED BY COMPONENT TESTING <i>Eichberger A.*, Michbronn D., Wörgötter F., Fellner B. (*Graz University of Technology, Austria)</i>

Thursday, 13 Sept., Room: P9, 13:45	
<b>TH-2-P9: DOMAIN MODELLING THROUGH AUTONOMOUS DISCOVERY (S20)</b>	
Session Organizer(s): <b>Bratko I.</b>	
Session Chair: <b>Bratko I.</b> , Session Co-chair: <b>Di Palma F.</b>	
13:45	ON AN ONTOLOGY OF SPATIAL RELATIONS TO DISCOVER OBJECT CONCEPTS IN IMAGES <i>Schlemmer M. J.*, Vincze M. (*Vienna University of Technology, Austria)</i>
14:05	DESIGN OF EXPERIMENT FOR QUALITATIVE EQUATION DISCOVERY: A COMPARISON <i>Di Palma F.*, Reggiani M., Fiorini P. (*University of Verona, Italy)</i>

14:25	Q-POLE: A QUALITATIVE PREDICTION-OBSERVATION LOOP FOR LEARNING BY EXPERIMENTATION Mohan A., Juarez A., Henne T. (*University of Applied Sciences Bonn-Rhein-Sieg, Sankt Augustin, Germany)
14:45	AUTOMATED MODELING IN A ROBOT-OBJECT DOMAIN Sah S., Bratko I., Šuc D. (*University of Ljubljana, Slovenia)

Thursday, 13 Sept., Room: P12, 13:45

**TH-2-12: MODELS NETWORKS FOR PROCESS SYSTEMS SIMULATION (S16)**

Session Organizer(s): **Savković-Stevanović J.**

Session Chair: **Savković-Stevanović J.**, Session Co-chair: **Žerajić S.**

13:45	DISCRETE EVENT SIMULATION OF THE PHARMACEUTICAL ENGINEERING Savković-Stevanović J. (*University of Belgrade, Serbia)
14:05	COMPLEX SYSTEM FOR COGNITIVE PRODUCTS MODELLING Savković-Stevanović J., Mošorinac T. (*University of Belgrade, Serbia)
14:25	PROCESS PLANT KNOWLEDGE BASED SIMULATION FOR DESIGN AND MANUFACTURING Peruničić M., Krstić S., Milivojević M. (*University of Belgrade, Serbia)
14:45	PROCESS ESTERIFICATION AND PRODUCT QUALITY SIMULATION Ivanović M., Djurović J. (*University of Belgrade, Serbia)
15:05	INTEGRATED SOFTWARE ENVIRONMENT FOR BIOPROCESS SIMULATION Žerajić S. (*University of Niš, Serbia)

Thursday, 13 Sept., Room: FOYER, 15:30

**TH-3-FOYER: POSTER SESSION**

Session Organiser: **Blažič S.**

1	MODELING OF COUNTERCURRENT HEAT EXCHANGERS Adamski M. (*Białystok Technical University, Poland)
2	SIMULATION OF POWER FLOWS IN CROATIAN POWER SYSTEM Fekete K., Nikolovski S., Baus Z. (*J.J. Strossmayer University of Osijek, Croatia)
3	SIMULATION STUDY OF A PULSED CORONA DISCHARGE BY MEANS AN ELECTRICAL MODEL Rodríguez-Méndez B. G., López-Callejas R., Pena-Eguiluz R., Mercado-Cabrera A., Valencia-Alvarado R., Barocio S. R. *, de la Piedad-Beneitez A., Benítez-Read J. S., Pacheco-Sotelo J. O. (*Instituto Nacional de Investigaciones Nucleares, Mexico)
4	MATHEMATICAL MODEL OF A DIELECTRIC BARRIER DISCHARGE IN ATMOSPHERIC PRESSURE HELIUM SUPPLIED BY A MULTICELL INVERTER Flores-Fuentes A., Pena-Eguiluz R., López-Callejas R., Mercado-Cabrera A., Valencia-Alvarado R., Barocio S. R. *, de la Piedad-Beneitez A., Benítez-Read J. S., Pacheco-Sotelo J. O. (*Instituto Nacional de Investigaciones Nucleares, Mexico)
5	FINITE ELEMENT ANALYSIS OF CRACK INITIATION IN PARTIALLY ELECTRODED PZT TRANSDUCERS Dolezal R., Novak J. (*Technical University of Liberec, Czech Republic)
6	TRAINING SIMULATOR FOR ANALYSIS OF ENVIRONMENTAL CONSEQUENCES OF ACCIDENTAL RADIOACTIVITY RELEASES Pecha P., Hofman R., Pechova E. (*Czech Academy of Sciences, Prague, Czech Republic)
7	BOND GRAPH-BASED FAULT DIAGNOSIS STRATEGY APPLIED TO THE THREE-PHASE INDUCTION MOTOR Gonzalez-Contreras B. M. *, Rullán-Lara J. L. (*Autonomous University. of Tlaxcala, Mexico)
8	FROM PSEUDO-MOS TRANSISTOR TO A SOI-MOSFET WITH A NANO-CAVITY Ravariu C. *, Rusu A., Ravariu F. *, Dobrescu D., Dobrescu L. (*Polytechnic University of Bucharest, Romania)
9	TESTING OF OPTIMAL FISHING EFFORT FOR SARDINE IN THE EASTERN ADRIATIC USING SYSTEM DYNAMICS Slišković M. *, Munitić A., Jelić-Mrčelić G. (*University of Split, Croatia)
10	ALGORITHM FOR THE REFERENCE TEMPERATURE CALCULATION IN BUILDINGS Vrečko D. *, Strmčnik S., Vodopivec N. (*Institut "Jožef Stefan", Ljubljana, Slovenia)
11	LARGE SCALE TRAFFIC NETWORK SIMULATION - A HYBRID APPROACH El hmam M. S. *, Abouaissa H., Jolly D. (*Université d'Artois, Béthune, France)
12	SIMULATING TRACTOR'S STATIC STABILITY IN RELATION TO ITS POSITION ON A SLOPE Demšar I. *, Duhovnik J. (*University of Ljubljana, Slovenia)
13	A FUNDAMENTAL STUDY FOR ACUPUNCTURE TECHNIQUE ANALYSIS Chen L. *, Shoda A., Yagihashi M., Narita H., Fujimoto H. (*Nagoya Institute of Technology, Japan)
14	NUMERICAL SIMULATION OF A PLATE-GAP BIOSENSOR WITH AN OUTER POROUS MEMBRANE Ivanauskas F. *, Baronas R. (*Vilnius University, Lithuania)
15	FUZZY ELLIPSOIDAL TECHNIQUES TO INVESTIGATE NECKING PHENOMENA IN METALLIC SHEETS Buonsanti M. *, Calacagno S., Morabito F. C., Versaci M. (*University of Reggio Calabria, Italy)
16	SIMULATION OF ENERGY DEVELOPMENT SCENARIOS IN LATVIA ON REGIONAL LEVEL Vostrikovs S. *, Turlajs D., Kundzina A., Sarma U. (*Riga Technical University, Latvia)
17	DETERMINING THE OPTIMAL OPERATING POINT OF AN INDUCTION GENERATOR Ropoša S. *, Šumberger G. (*University of Maribor, Slovenia)
18	MODELLING REAL-TIME RISK MANAGEMENT SYSTEM Minkevics V. *, Vulfs G., Slihte J. (*Ministry of Finance, Riga, Latvia)
19	ENABLING TOOLS AND TECHNIQUES FOR THE OPTIMIZATION OF THE HERACLES SIMULATION PROGRAM Audit E., Gautard V. *, Pomarede D., Theoris B. (*CEA/DAPNIA/SACLAY, France)
20	A DYNAMIC NUMERICAL MODEL OF TRANSMEMBRANE VOLTAGE INDUCEMENT AND ELECTROPORATION ON IRREGULARLY SHAPED CELLS Pucihar G. *, Kotnik T., Miklavčič D. (*University of Ljubljana, Slovenia)
21	AUGMENTED REALITY BASED TECHNOLOGIES FOR SUPPORTING ASSEMBLY WORK Sääski J. *, Salonen T., Siltanen S., Hakkarainen M., Woodward C. (*VTT Technical Research Centre of Finland, Finland)

22	VERIFICATION OF CONTACT MODELING WITH COMSOL MULTIPHYSICS SOFTWARE <i>Pennec F. *, Achkar H., Peyrou D., Plana R., Pons P., Courtade F. (*Toulouse University, France)</i>
23	NUMERICAL SIMULATION OF NEWTONIAN AND NON-NEWTONIAN FLUIDS IN CHANNEL GEOMETRIES <i>Prokop V. *, Keslerová R., Kozel K. (*Czech Technical Univ. in Prague, Czech Republic)</i>
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