

2015 Winter Simulation Conference (WSC 2015)

**Huntington Beach, California, USA
6-9 December 2015**

Pages 823-1632



**IEEE Catalog Number: CFP15WSC-POD
ISBN: 978-1-4673-9973-9**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP15WSC-POD
ISBN (Print-On-Demand):	978-1-4673-9973-9
ISBN (Online):	978-1-4673-9743-8
ISSN:	0891-7736

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

INSIDE DISCRETE-EVENT SIMULATION SOFTWARE: HOW IT WORKS AND WHY IT MATTERS	1
<i>T. J. Schriber ; D. T. Brunner ; J. S. Smith</i>	
BOOTSTRAP CONFIDENCE BANDS AND GOODNESS-OF-FIT TESTS IN SIMULATION INPUT/OUTPUT MODELLING	16
<i>R. Cheng</i>	
RANDOM NUMBER GENERATION WITH MULTIPLE STREAMS FOR SEQUENTIAL AND PARALLEL COMPUTING	31
<i>P. L'Ecuyer</i>	
PARALLEL AND DISTRIBUTED SIMULATION	45
<i>R. Fujimoto</i>	
USE OF THE INTERVAL STATISTICAL PROCEDURE FOR SIMULATION MODEL VALIDATION	60
<i>R. G. Sargent ; D. M. Goldsman ; T. Yaacoub</i>	
DEVS MODELLING AND SIMULATION FOR DEVELOPMENT OF EMBEDDED SYSTEMS	73
<i>G. Wainer</i>	
SIMULATION WITH STOCHASTIC PETRI-NETS	88
<i>V. Volovoi</i>	
TUTORIAL ON A MODELING AND SIMULATION CLOUD SERVICE	103
<i>D. Zehe ; W. Cai ; A. Knoll ; H. Aydt</i>	
A MULTI-AGENT SPATIAL SIMULATION LIBRARY FOR PARALLELIZING TRANSPORT SIMULATIONS	115
<i>Zhiyuan Ma ; M. Fukuda</i>	
CROWD EVACUATION PLANNING USING CARTESIAN GENETIC PROGRAMMING AND AGENT-BASED CROWD MODELING	127
<i>J. Zhong ; W. Cai ; L. Luo</i>	
BUILDING CROWD MOVEMENT MODEL USING SAMPLE-BASED MOBILITY SURVEY	139
<i>L. J. J. Lin ; S. F. Cheng ; H. C. Lau</i>	
A SCALABLE DISCRETE EVENT STOCHASTIC AGENT-BASED MODEL OF INFECTIOUS DISEASE PROPAGATION	151
<i>P. J. Sanchez ; S. M. Sanchez</i>	
AN AGENT-BASED MODEL FOR ASSESSMENT OF AEDES AEGYPTI PUPAL PRODUCTIVITY	159
<i>F. Borges ; A. Gutierrez-Milla ; R. Suppi ; E. Luque ; M. d. B. Arduino</i>	
SIMULATING THE MICRO-LEVEL BEHAVIOR OF EMERGENCY DEPARTMENT FOR MACRO-LEVEL FEATURES PREDICTION	171
<i>Z. Liu ; D. Rexachs ; E. Luque ; F. Epelde ; E. Cabrera</i>	
GUIDELINES FOR DESIGN AND ANALYSIS IN AGENT-BASED SIMULATION STUDIES	183
<i>P. Kasaie ; W. D. Kelton</i>	
PICKLE: A FLEXIBLE ABMS FRAMEWORK FOR DYNAMICALLY GENERATING SERIALIZABLE INTELLIGENT AGENTS	194
<i>T. Medina ; M. Hybinette</i>	
NANOVERSE: A CONSTRAINTS-BASED DECLARATIVE FRAMEWORK FOR RAPID AGENT-BASED MODELING	206
<i>D. B. Borenstein</i>	
HOW DO COMPETITION AND COLLABORATION AFFECT SUPPLY CHAIN PERFORMANCE? AN AGENT BASED MODELING APPROACH	218
<i>N. I. Arivitrida ; S. Robinson ; A. A. Tako</i>	
DESIGN OF SUPPLY CHAIN TOPOLOGY TO MITIGATE DEMAND AND SUPPLY RISKS	230
<i>W. J. Tan ; Z. Li ; W. Cai</i>	
EVALUATING THE SCIENCE-TECHNOLOGY INTERACTION IN NANOTECHNOLOGY: A SIMULATION-BASED STUDY	242
<i>N. Zamzami ; A. Schiffauerova</i>	
AGENT-BASED MODEL OF MARITIME SEARCH OPERATIONS: A VALIDATION USING TEST-DRIVEN SIMULATION MODELLING	254
<i>B. S. Onggo ; M. Karatas</i>	

AGENT IMPLEMENTATION FOR MODELING INSIDER THREAT	266
<i>J. A. Sokolowski ; C. M. Banks</i>	
AN AGENT-BASED MODEL OF EDIT WARS IN WIKIPEDIA: HOW AND WHEN IS CONSENSUS REACHED	276
<i>A. Kalyanasundaram ; W. Wei ; K. M. Carley ; J. D. Herbsleb</i>	
OPTIMIZING AN AGENT-BASED TRAFFIC EVACUATION MODEL USING GENETIC ALGORITHMS	288
<i>M. Durak ; N. Durak ; E. D. Goodman ; R. Till</i>	
EVALUATING ADVANTAGE OF SHARING INFORMATION AMONG VEHICLES TOWARD AVOIDING PHANTOM TRAFFIC JAM	300
<i>S. Ishikawa ; S. Arai</i>	
AGENT DRIVING BEHAVIOR MODELING FOR TRAFFIC SIMULATION AND EMERGENCY DECISION SUPPORT	312
<i>Shengcheng Yuan ; Y. Liu ; H. Zhang ; Soon Ae Chun ; N. R. Adam</i>	
COMPARISON OF DIFFERENT MARKET MAKING STRATEGIES FOR HIGH FREQUENCY TRADERS	324
<i>Y. Xiong ; T. Yamada ; T. Terano</i>	
AN AGENT-BASED APPROACH TO MODELING AIRLINES, CUSTOMERS, AND POLICY IN THE U.S. AIR TRANSPORTATION SYSTEM	336
<i>B. M. Horio ; V. Kumar ; A. H. DeCicco</i>	
ON THE EXACT SIMULATION OF (JUMP) DIFFUSION BRIDGES	348
<i>M. Pollock</i>	
UNBIASED MONTE CARLO COMPUTATION OF SMOOTH FUNCTIONS OF EXPECTATIONS VIA TAYLOR EXPANSIONS	360
<i>J. H. Blanchet ; Nan Chen ; P. W. Glynn</i>	
BUDGET-CONSTRAINED STOCHASTIC APPROXIMATION	368
<i>U. V. Shanbhag ; J. H. Blanchet</i>	
EFFICIENT PROBABILITY ESTIMATION AND SIMULATION OF THE TRUNCATED MULTIVARIATE STUDENT-T DISTRIBUTION	380
<i>Z. I. Botev ; P. L'Ecuyer</i>	
SIMULATING TAIL EVENTS WITH UNSPECIFIED TAIL MODELS	392
<i>H. Lam ; C. Mottet</i>	
GREEN SIMULATION DESIGNS FOR REPEATED EXPERIMENTS	403
<i>M. Feng ; J. Staum</i>	
INPUT UNCERTAINTY AND INDIFFERENCE-ZONE RANKING & SELECTION	414
<i>E. Song ; B. L. Nelson ; L. J. Hong</i>	
MIRROR DESCENT STOCHASTIC APPROXIMATION FOR COMPUTING WORST-CASE STOCHASTIC INPUT MODELS	425
<i>S. Ghosh ; H. Lam</i>	
SUBSET SELECTION FOR SIMULATIONS ACCOUNTING FOR INPUT UNCERTAINTY	437
<i>C. G. Corlu ; B. Biller</i>	
A SEQUENTIAL EXPERIMENT DESIGN FOR INPUT UNCERTAINTY QUANTIFICATION IN STOCHASTIC SIMULATION	447
<i>Yuan Yi ; W. Xie ; Enlu Zhou</i>	
JACKKNIFED VARIANCE ESTIMATORS FOR SIMULATION OUTPUT ANALYSIS	459
<i>K. D. Dingec ; C. Alexopoulos ; D. Goldsman ; J. R. Wilson ; W. Chiu ; T. Aktaran-Kalayci</i>	
ENHANCING UNDERSTANDING OF DISCRETE EVENT SIMULATION MODELS THROUGH ANALYSIS	472
<i>K. A. Olson ; C. M. Overstreet</i>	
THE BIVARIATE MEASURE OF RISK AND ERROR (BMORE) PLOT	484
<i>Mi Lim Lee ; C. Park</i>	
DELAY TIMES IN AN M/M/1 QUEUE: ESTIMATING THE SAMPLING DISTRIBUTIONS FOR THE STEADY-STATE MEAN AND MSER TRUNCATION POINT	493
<i>K. P. White ; Sung Nam Hwang</i>	
AN ADDITIVE GLOBAL AND LOCAL GAUSSIAN PROCESS MODEL FOR LARGE DATA SETS	505
<i>Qun Meng ; S. H. Ng</i>	
INTERACTIVE VISUAL ANALYSIS OF LARGE SIMULATION ENSEMBLES	517
<i>K. Matkovic ; D. Gracanin ; M. Jelovic ; H. Hauser</i>	
A QUANTITATIVE STUDY ON EXECUTION TIME VARIABILITY IN COMPUTING EXPERIMENTS	529
<i>P. E. Nogueira ; R. Matias</i>	

CUMULATIVE MEAN BOUNDS FOR QUALITY CONTROL ANALYSIS	541
<i>D. I. Singham ; M. P. Atkinson</i>	
OBM CONFIDENCE INTERVALS: SOMETHING FOR NOTHING?	551
<i>Y. Yeh ; B. Schmeiser</i>	
SEQUEM: ESTIMATING EXTREME STEADY-STATE QUANTILES VIA THE MAXIMUM TRANSFORMATION	562
<i>C. Alexopoulos ; D. Goldsman ; A. Mokashi ; K. W. Tien ; J. R. Wilson</i>	
THE MNO-PQRS POISSON POINT PROCESS: GENERATING THE NEXT EVENT TIME	575
<i>H. Chen ; B. Schmeiser</i>	
COMBINED INVERSION AND THINNING METHODS FOR SIMULATING NONSTATIONARY NON-POISSON ARRIVAL PROCESSES	586
<i>R. Liu ; M. E. Kuhl ; Y. Liu ; J. R. Wilson</i>	
MODELING CUSTOMER DEMAND IN PRINT SERVICE ENVIRONMENTS USING BOOTSTRAPPING.....	598
<i>S. Rai ; B. Hu ; R. K. Ettam</i>	
ON THE ROBUSTNESS OF FISHMAN'S BOUND-BASED METHOD FOR THE NETWORK RELIABILITY PROBLEM.....	609
<i>H. Cancela ; M. El Khadiri ; G. Rubino ; B. Tuffin</i>	
ESTIMATING A FAILURE PROBABILITY USING A COMBINATION OF VARIANCE-REDUCTION TECHNIQUES	621
<i>M. K. Nakayama</i>	
TAIL DISTRIBUTION OF THE MAXIMUM OF CORRELATED GAUSSIAN RANDOM VARIABLES.....	633
<i>Z. I. Botev ; M. Mandjes ; A. Ridder</i>	
ROBUST SIMULATION OF STOCHASTIC SYSTEMS WITH INPUT UNCERTAINTIES MODELED BY STATISTICAL DIVERGENCES	643
<i>Z. Hu ; L. J. Hong</i>	
ESTIMATION OF CONDITIONAL VALUE-AT-RISK FOR INPUT UNCERTAINTY WITH BUDGET ALLOCATION	655
<i>H. Zhu ; E. Zhou</i>	
QUANTIFYING STATISTICAL UNCERTAINTY FOR DEPENDENT INPUT MODELS WITH FACTOR STRUCTURE	667
<i>W. Xie ; Hongtan Sun ; Cheng Li</i>	
DATABASE MONTE CARLO FOR SIMULATION ON DEMAND	679
<i>I. Rosenbaum ; J. Staum</i>	
MONOTONIC RESPONSE SURFACE ESTIMATION BY CONSTRAINED COEFFICIENTS	689
<i>F. A. Ahrens</i>	
STRUCTURAL EQUATION MODELING FOR SIMULATION METAMODELING	701
<i>K. G. Mertens ; I. Lorscheid ; M. Meyer</i>	
WEAVING MULTI-AGENT MODELING AND BIG DATA FOR STOCHASTIC PROCESS INFERENCE.....	713
<i>W. Dong</i>	
SEARCHING FOR EFFECTS IN BIG DATA: WHY P-VALUES ARE NOT ADVISED AND WHAT TO USE INSTEAD	725
<i>M. A. Hofmann</i>	
PARTICLE FILTERING USING AGENT-BASED TRANSMISSION MODELS.....	737
<i>K. Kreuger ; N. Osgood</i>	
TOWARDS LARGE-SCALE WHAT-IF TRAFFIC SIMULATION WITH EXACT-DIFFERENTIAL SIMULATION	748
<i>M. Hanai ; T. Suzumura ; G. Theodoropoulos ; K. S. Perumalla</i>	
PERFORMANCE OPTIMIZATION FOR AGENT-BASED TRAFFIC SIMULATION BY DYNAMIC AGENT ASSIGNMENT	757
<i>H. Kanezashi ; T. Suzumura</i>	
A HIGH PERFORMANCE MULTI-MODAL TRAFFIC SIMULATION PLATFORM AND ITS CASE STUDY WITH THE DUBLIN CITY	767
<i>T. Suzumura ; G. McArdle ; H. Kanezashi</i>	
VISUAL ANALYTICS OF MANUFACTURING SIMULATION DATA	779
<i>N. Feldkamp ; S. Bergmann ; S. Strassburger</i>	
BIG DATA-DRIVEN SERVICE LEVEL ANALYSIS FOR A RETAIL STORE	791
<i>R. Gaku ; S. Takakuwa</i>	
SIMULATION EXPERIMENTS: BETTER DATA, NOT JUST BIG DATA	800
<i>S. M. Sanchez</i>	

SIMULATION OF KNOWLEDGE TRANSFORMATION IN PURCHASING PROCESS	812
<i>K. Werner - Lewandowska ; P. Pawlewski</i>	
LINKING SYMBIOTIC SIMULATION TO ENTERPRISE SYSTEMS: FRAMEWORK AND APPLICATIONS	823
<i>B. Tjahjono ; Xu Jiang</i>	
ARE VISUALLY APPEALING SIMULATION MODELS PREFERABLE?	835
<i>L. Chwif ; W. I. Pereira ; J. A. B. Montevechi</i>	
A SIMULATION MODEL FOR EMERGENCY MEDICAL SERVICES CALL CENTERS	844
<i>M. van Buuren ; G. J. Kommer ; R. van der Mei ; S. Bhulai</i>	
IMPROVING BUSINESS PROJECT PERFORMANCE BY INCREASING THE EFFECTIVENESS OF RESOURCE CAPACITY AND ALLOCATION POLICIES	856
<i>P. H. Tag</i>	
USING PROCESS MINING TO MODEL INTERARRIVAL TIMES: INVESTIGATING THE SENSITIVITY OF THE ARPRA FRAMEWORK	868
<i>N. Martin ; B. Depaire ; A. Caris</i>	
INCORPORATING TRUNCATED EXPONENTIAL DISTRIBUTIONS IN QUEUEING MODELS WITH ADJUSTABLE SERVICE-RATE CONTROL	880
<i>P. Babin ; A. Greenwood</i>	
GIS BASED DISCRETE EVENT MODELING AND SIMULATION OF BIOMASS SUPPLY CHAIN	967
<i>K. Sahoo ; S. Mani</i>	
A SIMULATION FRAMEWORK FOR THE COMPARISON OF REVERSE LOGISTIC NETWORK CONFIGURATIONS	979
<i>F. S. Yanikara ; M. E. Kuhl</i>	
SIMULATION AND OPTIMIZATION OF ENERGY EFFICIENT OPERATION OF HVAC SYSTEM AS DEMAND RESPONSE WITH DISTRIBUTED ENERGY RESOURCES	991
<i>Y. M. Lee ; R. Horesh ; L. Liberti</i>	
QUANTIFYING THE INFLUENCE OF TEMPERATURE SETPOINTS, BUILDING AND SYSTEM FEATURES ON ENERGY CONSUMPTION	1000
<i>A. Ghahramani ; K. Dutta ; Z. Yang ; G. Ozcelik ; B. Becerik-Gerber</i>	
AN AGENT-BASED SIMULATION MODEL OF SPONGE: ALGAE SYMBIOTIC RELATIONSHIPS	1012
<i>B. Lawson ; M. Hill ; A. Hill ; T. Heist ; C. Hughes</i>	
A SIMULATION MODEL FOR CARBON RESOURCE PLANNING OF PRODUCTION SYSTEMS	1024
<i>Z. Chen ; M. Zhou ; P. Shen ; Y. Pan</i>	
AN EVENT-LOG ANALYSIS AND SIMULATION-BASED APPROACH FOR QUANTIFYING SUSTAINABILITY METRICS IN PRODUCTION FACILITIES	1033
<i>S. Rai ; M. Daniels</i>	
LESSONS ON THE DESIGN OF GAMING SIMULATIONS FOR CONVERGENCE AND DIVERGENCE IN VOLATILE INNOVATION ENVIRONMENTS	1044
<i>J. van den Hoogen ; S. Meijer</i>	
MAKE IT USABLE: HIGHLIGHTING THE IMPORTANCE OF IMPROVING THE INTUITIVENESS AND USABILITY OF A COMPUTER-BASED TRAINING SIMULATION	1056
<i>S. R. Serge ; J. A. Stevens ; L. Eifert</i>	
LEARNING MAINTENANCE, REPAIR AND OPERATIONS (MRO) CONCEPTS IN OFFSHORE WIND INDUSTRY THROUGH GAME-BASED LEARNING	1068
<i>N. Mustafee ; A. Wienke ; A. Smart ; P. Godsiff</i>	
A CLOUD SOFTWARE SYSTEM FOR VISUALIZATION OF GAME-BASED LEARNING DATA COLLECTED ON MOBILE DEVICES	1080
<i>J. R. Jones ; O. Balci ; A. Norton</i>	
A BIM-BASED EDUCATIONAL GAMING PROTOTYPE FOR UNDERGRADUATE RESEARCH AND EDUCATION IN DESIGN FOR SUSTAINABLE AGING	1091
<i>W. Wu ; I. Kaushik</i>	
APPLICATION OF METAMODELING TO THE VALUATION OF LARGE VARIABLE ANNUITY PORTFOLIOS	1103
<i>G. Gan</i>	
AN ASYNCHRONOUS GVT COMPUTING ALGORITHM IN NEURON TIME WARP-MULTI THREAD	1115
<i>Z. Lin ; Y. Yao</i>	

SIMIAN INTEGRATED FRAMEWORK FOR PARALLEL DISCRETE EVENT SIMULATION ON GPUS	1127
<i>G. Chapuis ; S. Eidenbenz ; N. Santhi ; E. J. Park</i>	
A GENERAL FRAMEWORK FOR EXPERIMENTAL DESIGN, UNCERTAINTY QUANTIFICATION AND SENSITIVITY ANALYSIS OF COMPUTER SIMULATION MODELS	1139
<i>Sichao Wu ; H. S. Mortveit</i>	
SIMULATION MODELING OF CUSTOMER CHECKOUT CONFIGURATIONS.....	1151
<i>M. D. Rossetti ; A. T. Pham</i>	
INTELLIGENT SCHEDULING AND MOTION CONTROL FOR HOUSEHOLD VACUUM CLEANING ROBOT SYSTEM USING SIMULATION BASED OPTIMIZATION	1163
<i>H. Lee ; A. Banerjee</i>	
ESTIMATION OF BOURGOYNE AND YOUNG MODEL COEFFICIENTS USING MARKOV CHAIN MONTE CARLO SIMULATION.....	1172
<i>S. Formighieri ; P. J. d. F. Filho</i>	
EVALUATING THE DIRECT BLAST EFFECT IN MULTISTATIC SONAR NETWORKS USING MONTE CARLO SIMULATION.....	1184
<i>M. Karatas ; E. Craparo</i>	
SIMULATION OF OIL DRILLING TIME SERIES USING MONTE CARLO AND BAYESIAN NETWORKS.....	1195
<i>M. D. C. e Lima ; S. M. Nassar ; P. J. d. F. Filho</i>	
OPTIMIZATION OF ANALOG CIRCUITS VIA SIMULATION AND A LAGRANGIAN-TYPE GRADIENT-BASED METHOD	1206
<i>E. Lim ; Y. Kim ; J. Choi</i>	
A MULTIPLE-PURPOSE SIMULATION-BASED INVENTORY OPTIMIZATION SYSTEM: APPLIED TO A LARGE DETERGENT COMPANY IN CHINA	1218
<i>Xiaobo Zheng ; Miao He ; Lin Tang ; Changrui Ren ; Bing Shao</i>	
A MULTI-SCALE, PHYSICS ENGINE-BASED SIMULATION OF CELLULAR MIGRATION.....	1230
<i>T. Applewhite-Grosso ; N. D. Griffeth ; E. Lannon ; U. Unachukwu ; S. Redenti ; N. Batista</i>	
PARTICLE FILTERING IN A SEIRV SIMULATION MODEL OF H1N1 INFLUENZA.....	1240
<i>A. Safarishahrbijari ; T. Lawrence ; R. Lomotey ; J. Liu ; C. Waldner ; N. Osgood</i>	
SIMULATING WAIT TIME IN HEALTHCARE: ACCOUNTING FOR TRANSITION PROCESS VARIABILITY USING SURVIVAL ANALYSES	1252
<i>S. Levin ; M. Garifullin</i>	
SIMULATION BASED OPTIMIZATION: APPLICATIONS IN HEALTHCARE.....	1261
<i>T. M. Lal ; T. Roh ; T. Huschka</i>	
EMSSIM: EMERGENCY MEDICAL SERVICE SIMULATOR WITH GEOGRAPHIC AND MEDICAL DETAILS	1272
<i>I. C. Moon ; J. W. Bae ; Junseok Lee ; Doyun Kim ; Hyunrok Lee ; Taesik Lee ; Won-Chul Cha ; Ju-Hyun Kim ; Gi Woon Kim</i>	
SIMULATING THE PROVISION OF ANTIRETROVIRAL THERAPY IN ZAMBIA	1285
<i>E. M. Kabaso ; C. S. M. Currie ; S. C. Brailsford</i>	
MODELING TUBERCULOSIS IN BARCELONA. A SOLUTION TO SPEED-UP AGENT-BASED SIMULATIONS.....	1295
<i>C. Montañola-Sales ; J. F. Gilabert-Navarro ; J. Casanovas-Garcia ; C. Prats ; D. López ; J. Valls ; P. J. Cardona ; C. Vilaplana</i>	
USING SIMULATION TO EXAMINE APPOINTMENT OVERBOOKING SCHEMES FOR A MEDICAL IMAGING CENTER.....	1307
<i>Yan Chen ; Yong-Hong Kuo ; H. Balasubramanian ; Chaobai Wen</i>	
A DYNAMIC NETWORK ANALYSIS APPROACH FOR EVALUATING KNOWLEDGE DISSEMINATION IN A MULTI-DISCIPLINARY COLLABORATION NETWORK IN OBESITY RESEARCH	1319
<i>Hyojung Kang ; D. Munoz</i>	
PERFORMANCE EVALUATION OF AN INTEGRATED CARE FOR GERIATRIC DEPARTMENTS USING DISCRETE-EVENT SIMULATION	1331
<i>T. Franck ; V. Augusto ; X. Xie ; R. Gonthier ; E. Achour</i>	
SIMULATION MODELING TO OPTIMIZE HEALTHCARE DELIVERY IN AN OUTPATIENT CLINIC.....	1355
<i>S. Norouzzadeh ; N. Riebling ; L. Carter ; J. Conigliaro ; M. E. Doerfler</i>	
A SIMULATION MODEL FOR ANALYZING THE NURSE WORKLOAD IN A UNIVERSITY HOSPITAL WARD	1367
<i>A. Pepino ; A. Torri ; A. Mazzitelli ; O. Tamburis</i>	

STROKE CARE SYSTEMS: CAN SIMULATION MODELING CATCH UP WITH THE RECENT ADVANCES IN STROKE TREATMENT?.....	1379
<i>M. Keshkaran ; J. Hearne ; B. Abbasi ; L. Churilov</i>	
SIMULATION OF STROKE CARE SYSTEMS	1391
<i>T. Monks ; K. Pearn ; M. Allen</i>	
SIMULATION CONCEPTUAL MODELING FOR OPTIMIZING ACUTE STROKE CARE ORGANIZATION	1403
<i>D. J. van der Zee ; M. M. H. Lahr ; G. J. Luijckx ; E. Buskens</i>	
COMPREHENSIVE OPERATIONAL MODELING AND SIMULATION POLICY DEVELOPMENT: PRIVATE SECTOR HEALTHCARE SYSTEMS AND THE US MILITARY HEALTHCARE SYSTEM.....	1415
<i>D. L. Morgareidge</i>	
ON THE SCALABILITY OF AGENT-BASED MODELING FOR MEDICAL NANOROBOTICS	1427
<i>E. S. Liu</i>	
OBJECT ORIENTED FRAMEWORK FOR HEALTHCARE SIMULATION	1436
<i>A. Venkitasubramanian ; S. D. Roberts ; J. A. Joines</i>	
DISCRETE EVENT SIMULATION OF WHOLE CARE PATHWAYS TO ESTIMATE COST-EFFECTIVENESS IN CLINICAL GUIDELINES	1447
<i>J. Eatock ; J. Lord ; M. Trapero-Bertran ; A. Anagnostou</i>	
PROJECTING LONG-TERM IMPACT OF MODEST SODIUM REDUCTION IN LOS ANGELES COUNTY.....	1459
<i>I. Vidyanti ; R. Basurto-Davila</i>	
STOCHASTIC APPROXIMATION FOR REGULATING CIRCADIAN CYCLES, A PRECISION MEDICINE VIEWPOINT	1471
<i>A. Nikolaei ; F. J. Vázquez-Abad</i>	
EVIDENCE FROM HEALTHCARE MODELING: WHAT IS ITS NATURE, AND HOW SHOULD IT BE USED?	1483
<i>S. Brailsford ; J. H. Klein ; T. Young</i>	
EVALUATING THE FINANCIAL IMPACT OF MODELING AND SIMULATION IN HEALTHCARE: PROPOSED FRAMEWORK WITH A CASE STUDY	1492
<i>S. Soorapanth ; T. Young</i>	
PERFORMANCE EVALUATION OF HEALTH INFORMATION SYSTEMS USING ARIS MODELING AND DISCRETE-EVENT SIMULATION	1503
<i>V. Augusto ; O. Rejeb ; X. Xie ; S. Aloui ; L. Perrier ; P. Biron ; T. Durand</i>	
TOWARDS A SIMULATION BASED METHODOLOGY FOR SCHEDULING PATIENT AND PROVIDERS AT OUTPATIENT CLINICS.....	1515
<i>D. Walker ; E. Shanks ; D. Montoya ; C. Weiman ; E. Pérez ; L. DePagter</i>	
MODELLING AND SIMULATION OF AN OUTPATIENT SURGERY UNIT	1525
<i>M. Roura ; Q. Halley ; V. Augusto</i>	
EFFECT OF UNCERTAINTY IN CALIBRATION ON THE CORRELATION STRUCTURE OF THE RHEUMATOID FACTOR IMMUNOASSAY CALIBRATION FUNCTION	1537
<i>V. Ramamohan ; J. T. Abbott ; Y. Yih</i>	
A HYBRID SIMULATION MODEL OF INBOUND LOGISTICS OPERATIONS IN REGIONAL FOOD SUPPLY SYSTEMS.....	1549
<i>A. Mittal ; C. C. Krejci</i>	
HYBRID SIMULATION OF PRODUCTION PROCESS OF PUPUNHA PALM	1561
<i>J. A. B. Montevechi ; E. M. M. Silva ; A. P. R. da Costa ; D. C. de Sena ; A. P. G. Scheidegger</i>	
USING SIMULATION TO ASSIST RECRUITMENT IN SEASONALLY DEPENDANT CONTACT CENTERS	1573
<i>L. May ; P. O. Siebers</i>	
AN INVESTIGATION OF HYBRID SIMULATION FOR MODELING SUSTAINABILITY IN HEALTHCARE	1585
<i>M. Fakhimi ; L. K. Stergioulas ; N. Mustafee</i>	
TOWARDS A FRAMEWORK FOR CONCEPTUAL MODEL HYBRIDIZATION IN HEALTHCARE	1597
<i>J. Zulkepli ; T. Eldabi</i>	
TOWARDS A GUIDE TO DOMAIN-SPECIFIC HYBRID SIMULATION	1609
<i>A. Djanatliev ; R. German</i>	
A TAXONOMY FOR CLASSIFYING TERMINOLOGIES THAT DESCRIBE SIMULATIONS WITH MULTIPLE MODELS.....	1621
<i>C. J. Lynch ; S. Y. Diallo</i>	

TOWARDS A THEORY OF MULTI-METHOD M&S APPROACH: PART III	1633
<i>M. Balaban ; P. Hester ; S. Diallo</i>	
HYBRID SIMULATION IN HEALTHCARE: NEW CONCEPTS AND NEW TOOLS	1645
<i>S. C. Brailsford</i>	
INFORMING THE MANAGEMENT OF PEDIATRIC HEART TRANSPLANT WAITING LISTS: COMPLEMENTARY USE OF SIMULATION AND ANALYTICAL MODELING	1654
<i>S. Crowe ; C. Vasilakis ; S. Gallivan ; C. Bull ; M. Fenton</i>	
OVERVIEW OF MULTIMODALITY MOTION TRACKING FOR TRAINING OF CENTRAL VENOUS CATHETER PLACEMENT	1666
<i>E. I. Mejia ; R. Yudkowsky ; J. Bui ; M. Lineberry ; C. Luciano</i>	
HYBRID SIMULATION STUDIES AND HYBRID SIMULATION SYSTEMS: DEFINITIONS, CHALLENGES, AND BENEFITS	1678
<i>N. Mustafee ; J. Powell ; S. C. Brailsford ; S. Diallo ; J. Padilla ; A. Tolk</i>	
DISTRIBUTED, INTEGRATED AND INTERACTIVE TRAFFIC SIMULATIONS	1693
<i>J. Raghothama ; S. Meijer</i>	
A META-MODEL FOR INCLUDING SOCIAL BEHAVIOR AND DATA INTO SMART CITY MANAGEMENT SIMULATIONS	1705
<i>L. B. Zomer ; E. Moustaid ; S. Meijer</i>	
HLA-BASED OPTIMISTIC SYNCHRONIZATION WITH SLX	1717
<i>S. Strassburger</i>	
AN INTRODUCTORY TUTORIAL ON VERIFICATION AND VALIDATION OF SIMULATION MODELS	1729
<i>R. G. Sargent</i>	
INTRODUCTION TO SIMULATION	1741
<i>K. P. White ; R. G. Ingalls</i>	
TUTORIAL: TIPS FOR SUCCESSFUL PRACTICE OF SIMULATION	1756
<i>D. T. Sturrock</i>	
TUTORIAL: SIMULATION METAMODELING	1765
<i>R. R. Barton</i>	
AN INTRODUCTION TO SIMULATION OPTIMIZATION	1780
<i>Nanjing Jian ; S. G. Henderson</i>	
WORK SMARTER, NOT HARDER: A TUTORIAL ON DESIGNING AND CONDUCTING SIMULATION EXPERIMENTS	1795
<i>S. M. Sanchez ; H. Wan</i>	
STATISTICAL ANALYSIS OF SIMULATION OUTPUT DATA: THE PRACTICAL STATE OF THE ART	1810
<i>A. M. Law</i>	
A TUTORIAL ON CONCEPTUAL MODELING FOR SIMULATION	1820
<i>S. Robinson</i>	
SIMULATING HEALTH CARE SYSTEMS: A TUTORIAL	1835
<i>M. A. Centeno ; K. A. Díaz</i>	
MODELING DEPENDENCE IN SIMULATION INPUT: THE CASE FOR COPULAS	1850
<i>R. Pasupathy ; K. Nagaraj</i>	
AGENT_ZERO AND GENERATIVE SOCIAL SCIENCE	1865
<i>J. M. Epstein</i>	
DISCRETE-EVENT AND AGENT-BASED SIMULATION AND WHERE TO USE EACH	1866
<i>A. M. Law</i>	
IMITATION CHALLENGES: FROM UNIFORM RANDOM VARIABLES TO COMPLEX SYSTEMS	1867
<i>P. L'Ecuyer</i>	
EVALUATING A BAYESIAN APPROACH TO DEMAND FORECASTING WITH SIMULATION	1868
<i>R. L. Bradley ; J. J. Bergman ; J. S. Noble ; R. G. McGarvey</i>	
PREDICTING DONATIONS USING A FORECASTING-SIMULATION MODEL	1880
<i>I. A. Nuamah ; L. Davis ; S. Jiang ; N. Lane</i>	
QUANTIFYING VARIABILITY IMPACTS UPON SUPPLY CHAIN PERFORMANCE	1892
<i>J. A. Castilho ; T. E. Lang ; D. K. Peterson ; V. Volovoi</i>	
SIMULATION OF TRUCK CONGESTION IN CHENNAI PORT	1904
<i>G. D. Rajamanickam ; G. Ramadurai</i>	
THE EFFECT OF INPUT/OUTPUT LOCATION IN AN AUTOMATED STORAGE/RETRIEVAL SYSTEM WITH TWO CRANES	1916
<i>H. Tokola ; E. Niemi</i>	

IMPROVING PARCEL TRANSSHIPMENT OPERATIONS - IMPACT OF DIFFERENT OBJECTIVE FUNCTIONS IN A COMBINED SIMULATION AND OPTIMIZATION APPROACH	1924
<i>U. Clausen ; D. Diekmann ; J. Baudach ; J. Kaffka ; M. Pötting</i>	
FROM FARM TO PORT: SIMULATION OF THE GRAIN LOGISTICS IN BRAZIL	1936
<i>M. M. Fioroni ; L. A. G. Franzese ; I. R. de Santana ; P. E. P. Lelis ; C. B. da Silva ; G. D. Telles ; J. A. S. Quintáns ; F. K. Maeda ; R. Varani</i>	
UNDERSTANDING THE DYNAMIC BEHAVIOUR OF THREE ECHELON RETAIL SUPPLY CHAIN DISRUPTIONS.....	1948
<i>J. Crowe ; M. Mesabbah ; A. Arisha</i>	
LEAD TIME MODELING IN PRODUCTION PLANNING.....	1996
<i>E. Albey ; R. Uzsoy</i>	
ADAPTIVE ROUTING AND GUIDANCE APPROACH FOR TRANSPORTATION EVACUATION	2008
<i>B. Zhang ; W. K. V. Chan ; S. V. Ukkusuri</i>	
A REINFORCEMENT LEARNING APPROACH FOR A DECISION SUPPORT SYSTEM FOR LOGISTICS NETWORKS.....	2020
<i>M. Rabe ; F. Dross</i>	
STRATEGY EVALUATION USING SYSTEM DYNAMICS AND MULTI-OBJECTIVE OPTIMIZATION FOR AN INTERNAL SUPPLY CHAIN	2033
<i>T. Aslam ; A. H. C. Ng</i>	
A THREE-ECHELON SYSTEM DYNAMICS MODEL ON SUPPLY CHAIN RISK MITIGATION THROUGH INFORMATION SHARING	2045
<i>Haobin Li ; Loo Hay Lee ; Ek Peng Chew ; Yuanjie Long</i>	
(R, S, S) INVENTORY CONTROL POLICY AND SUPPLIER SELECTION IN A TWO-ECHELON SUPPLY CHAIN: AN OPTIMIZATION VIA SIMULATION APPROACH	2057
<i>M. Göçken ; A. Boru ; A. T. Dosdogru ; F. Geyik</i>	
CONTROL VARIATE METHODS FOR PERFORMANCE EVALUATION OF HEURISTIC INVENTORY CONTROL POLICIES	2068
<i>S. Oh</i>	
SOLVING THE NEWSVENDOR PROBLEM UNDER PARAMETRIC UNCERTAINTY USING SIMULATION	2078
<i>D. F. Muñoz ; D. G. Muñoz</i>	
A METHODOLOGY FOR CONTINUOUS QUALITY ASSURANCE OF PRODUCTION DATA	2088
<i>J. Bokrantz ; A. Skoogh ; J. Andersson ; J. Ruda ; D. Lämkull</i>	
INTEGRATING DATA ANALYTICS AND SIMULATION METHODS TO SUPPORT MANUFACTURING DECISION MAKING	2100
<i>D. Kibria ; Q. Hatim ; S. Kumara ; G. Shao</i>	
AN INTERACTIVE DECISION SUPPORT SYSTEM USING SIMULATION-BASED OPTIMIZATION AND DATA MINING	2112
<i>I. Karlsson ; A. H. C. Ng ; A. Syberfeldt ; S. Bandaru</i>	
AUTOMATING THE PRODUCTION PLANNING OF A 3D PRINTING FACTORY	2136
<i>J. P. N. Freens ; I. J. B. F. Adan ; A. Y. Pogromsky ; H. Ploegmakers</i>	
USING SIMULATION TO IMPROVE PLANNING DECISIONS IN MIXED-MODEL ASSEMBLY LINES	2148
<i>A. Biele ; L. Mönch</i>	
MACHINE LEARNING-BASED METAMODELS FOR SAWING SIMULATION	2160
<i>M. Morin ; F. Paradis ; A. Rolland ; J. Wery ; F. Laviolette ; F. Laviolette</i>	
IMPROVING A HARDWOOD FLOORING CUTTING SYSTEM THROUGH SIMULATION AND OPTIMIZATION	2172
<i>J. Wery ; P. Marier ; J. Gaudreault ; C. Chabot ; A. Thomas</i>	
SIMULATION-BASED MULTI-OBJECTIVE BOTTLENECK IMPROVEMENT: TOWARDS AN AUTOMATED TOOLSET FOR INDUSTRY	2183
<i>J. Bernedixen ; L. Pehrsson ; A. H. C. Ng ; T. Antonsson</i>	
CLOUD BASED DATA CAPTURE AND REPRESENTATION FOR SIMULATION IN SMALL AND MEDIUM ENTERPRISES.....	2195
<i>J. Byrne ; P. Liston ; D. C. e. Ferreira ; P. Byrne</i>	
TOWARDS A VIRTUAL FACTORY PROTOTYPE	2207
<i>S. Jain ; D. Lechevalier ; Jungyub Woo ; S. J. Shin</i>	
STATE PROBABILITIES FOR AN M/M/1 QUEUING SYSTEM WITH TWO CAPACITY LEVELs	2219
<i>A. Hübl ; K. Altendorfer</i>	
LEAN, SIMULATION AND OPTIMIZATION: A WIN-WIN COMBINATION	2227
<i>A. G. Uriarte ; M. U. Moris ; A. H. C. Ng ; J. Oscarsson</i>	

LEAN MANUFACTURING METHODS IN SIMULATION LITERATURE: REVIEW AND ASSOCIATION ANALYSIS	2239
<i>H. Tokola ; E. Niemi ; V. Väistö</i>	
A SIMULATION ANALYSIS OF THE VEHICLE AXLE AND SPRING ASSEMBLY LINES	2249
<i>K. H. G. Bae ; Long Zheng ; F. Imani</i>	
A MODULAR APPROACH FOR MODELING ACTIVE PHARMACEUTICAL INGREDIENT MANUFACTURING PLANT: A CASE STUDY	2260
<i>N. S. Kulkarni</i>	
SIMULATION MODELING OF BOTTLING LINE WATER DEMAND LEVELS USING REFERENCE NETS AND STOCHASTIC MODELS.....	2272
<i>S. Hubert ; F. Baur ; A. Delgado ; T. Helmers ; N. Räßiger</i>	
A SIMULATION-OPTIMIZATION STRATEGY TO DEAL SIMULTANEOUSLY WITH TENS OF DECISION VARIABLES AND MULTIPLE PERFORMANCE MEASURES IN MANUFACTURING.....	2295
<i>E. N. Pérez ; Y. M. Méndez-Vázquez ; M. C. Ríos</i>	
FLEXIBLE JOB-SHOP SCHEDULING WITH OVERLAPPING MACHINE SETS	2307
<i>Tao Zhang ; Shufang Xie ; O. Rose</i>	
STOCHASTIC CUSTOMER ORDER SCHEDULING USING SIMULATION-BASED GENETIC ALGORITHM	2317
<i>X. Xu ; Y. Zhao ; H. Li ; Z. Zhou ; Yanni Liu</i>	
APPROXIMATION OF DISPATCHING RULES FOR MANUFACTURING SIMULATION USING DATA MINING METHODS.....	2329
<i>S. Bergmann ; N. Feldkamp ; S. Strassburger</i>	
ADVANCING AUTONOMOUS SWARM CAPABILITIES: FROM SIMULATION TO EXPERIMENTATION	2341
<i>T. H. Chung</i>	
HIERARCHICAL, EXTENSIBLE SEARCH-BASED FRAMEWORK FOR AIRLIFT AND SEALIFT SCHEDULING USING DISCRETE EVENT SIMULATION	2342
<i>T. S. Hussain ; L. Tiberio ; E. VanderZee</i>	
ROBUST AND FLEXIBLE AIR MOBILITY SCHEDULING USING STOCHASTIC SIMULATION-BASED ASSESSMENT	2354
<i>T. S. Hussain ; R. Shapiro ; S. R. Sommer ; N. Ogden ; J. Dea ; J. Collins ; J. Baum ; A. E. Vela ; A. Chang</i>	
A SIMULATION MODEL TO EVALUATE AN EMERGENCY RESPONSE SYSTEM FOR OFFSHORE HELICOPTER DITCHES	2366
<i>M. Brachner</i>	
DETECTING TEAM BEHAVIOR USING FOCUS OF ATTENTION.....	2378
<i>B. J. Wimpey ; C. Lennon ; M. A. Fields</i>	
INCORPORATING AUTOMATION: USING MODELING AND SIMULATION TO ENABLE TASK RE-ALLOCATION	2388
<i>T. J. Goodman ; M. E. Miller ; C. F. Rusnock</i>	
COMPARATIVE STUDY OF COMMAND AND CONTROL STRUCTURE BETWEEN ROK AND US FIELD ARTILLERY BATTALION.....	2400
<i>Ahram Kang ; Doyun Kim ; Junseok Lee ; Jang Won Bae ; Il-Chul Moon</i>	
MODELING ADVERSARIAL DYNAMICS	2412
<i>I. J. Martinez-Moyano ; R. Oliva ; D. Morrison ; D. Sallach</i>	
MULTI-LAYERED SECURITY INVESTMENT OPTIMIZATION USING A SIMULATION EMBEDDED WITHIN A GENETIC ALGORITHM	2424
<i>N. J. K. Brown ; K. A. Jones ; L. K. Nozick ; N. Xu</i>	
CRITICAL INFRASTRUCTURE NETWORK ANALYSIS ENABLED BY SIMULATION METAMODELING.....	2436
<i>S. L. Rosen ; D. Slater ; E. Beeker ; S. Guharay ; G. Jacyna</i>	
BATTLEFIELD SIMULATIONS FOR CANADIAN ARMY INDIRECT FIRE MODERNIZATION OPTIONS ANALYSIS	2448
<i>E. Pelleter</i>	
INTEGRATED STOCHASTIC OPTIMIZATION AND STATISTICAL EXPERIMENTAL DESIGN FOR MULTI-ROBOT TARGET TRACKING	2463
<i>T. H. Chung ; J. C. Spall</i>	
SYSTEM OF SYSTEMS CYBER EFFECTS SIMULATION ONTOLOGY	2475
<i>D. Ormrod ; B. Turnbull ; K. O'Sullivan</i>	
CONCEPTUAL MODELING AND VALIDATION OF A HA/DR SCENARIO USING A WEIGHTED SYSTEM DECOMPOSITION MODEL	2487
<i>A. J. Turner ; D. N. Mayris</i>	

INTEGRATED MODELING OF CONFLICT AND ENERGY	2499
<i>M. J. North ; J. T. Murphy ; P. Sydelko ; I. Martinez-Moyano ; D. L. Sallach ; C. M. Macal</i>	
APPLYING 3D PRINTING AND GENETIC ALGORITHM-GENERATED ANTICIPATORY SYSTEM DYNAMICS MODELS TO A HOMELAND SECURITY CHALLENGE	2511
<i>M. J. North ; P. Sydelko ; I. Martinez-Moyano</i>	
MULTI RESOLUTION MODELING	2523
<i>L. Rabelo ; Kiyoul Kim ; Tae Woong Park ; J. Pastrana ; M. Marin ; G. Lee ; K. Nagadi ; B. Ibrahim ; E. Gutierrez</i>	
APPLYING DATA FARMING FOR MILITARY OPERATION PLANNING IN NATO MSG-124 USING THE INTEROPERATION OF TWO SIMULATIONS OF DIFFERENT RESOLUTION	2535
<i>D. Huber ; D. Kalfass</i>	
EVALUATING THE EFFECTIVENESS OF SITUATIONAL AWARENESS DISSEMINATION IN TACTICAL MOBILE AD HOC NETWORKS	2547
<i>M. Li ; M. Salmanian ; J. D. Brown</i>	
USING SEAS TO ASSESS GPS CONSTELLATION RESILIENCY IN AN URBAN CANYON ENVIRONMENT	2559
<i>A. Burns ; J. O. Miller ; R. R. Hill</i>	
DO WE NEED A NATIONAL RESEARCH AGENDA FOR MODELING AND SIMULATION?	2571
<i>A. Tolk ; O. Balci ; C. D. Combs ; R. Fujimoto ; C. M. Macal ; B. L. Nelson ; P. Zimmerman</i>	
USING CAUSAL MODELS IN HETEROGENEOUS INFORMATION FUSION TO DETECT TERRORISTS	2586
<i>P. K. Davis ; D. Manheim ; W. L. Perry ; J. Hollywood</i>	
USING SIMULATION TO STUDY SERVICE-RATE CONTROLS TO STABILIZE PERFORMANCE IN A SINGLE-SERVER QUEUE WITH TIME-VARYING ARRIVAL RATE	2598
<i>N. Ma ; W. Whitt</i>	
ESTIMATING AND INTERPRETING THE WAITING TIME FOR CUSTOMERS ARRIVING TO A NON-STATIONARY QUEUEING SYSTEM	2610
<i>J. S. Smith ; B. L. Nelson</i>	
MULTIFORMALISM, MULTIRESOLUTION, MULTISCALE MODELING	2622
<i>F. Dandashi ; V. Lakshminarayanan ; N. Schult</i>	
A MODEL-DRIVEN ENGINEERING APPROACH TO SIMULATION EXPERIMENT DESIGN AND EXECUTION	2632
<i>A. Teran-Somohano ; A. E. Smith ; J. Ledet ; L. Yilmaz ; H. Oguztuzun</i>	
A MODEL-DRIVEN AND SIMULATION-BASED METHOD TO ANALYZE BUILDING EVACUATION PLANS	2644
<i>D. Gianni ; P. Bocciarelli ; A. D'Ambrogio ; G. Iazeolla</i>	
BUSINESS MODELS FOR CLOUD COMPUTING: EXPERIENCES FROM DEVELOPING MODELING & SIMULATION AS A SERVICE APPLICATIONS IN INDUSTRY	2656
<i>T. Kiss ; H. Dagdeviren ; S. J. E. Taylor ; A. Anagnostou ; N. Fantini</i>	
TOWARDS AUTOMATING THE DEVELOPMENT OF FEDERATED DISTRIBUTED SIMULATIONS FOR MODELING SUSTAINABLE URBAN INFRASTRUCTURES	2668
<i>A. Jain ; R. Fujimoto ; J. Crittenden ; Mengmeng Liu ; Jongchan Kim ; Zhongming Lu</i>	
EVALUATION OF TENDER SOLUTIONS FOR AVIATION TRAINING USING DISCRETE EVENT SIMULATION AND BEST PERFORMANCE CRITERIA	2680
<i>A. Novak ; L. Tracey ; V. Nguyen ; M. Johnstone ; V. Le ; D. Creighton</i>	
TOWARDS AN ENCYCLOPEDIA OF MODELING AND SIMULATION METHODOLOGY	2692
<i>S. Diallo ; N. Mustafee ; G. Zacharewicz</i>	
A SURVEY ON METHODOLOGICAL ASPECTS OF COMPUTER SIMULATION AS RESEARCH TECHNIQUE	2704
<i>I. J. Timm ; F. Lorig</i>	
EFFICIENT SIMULATION FOR BRANCHING LINEAR RECURSIONS	2716
<i>N. Chen ; M. Olvera-Cravioto</i>	
REASONING BEYOND PREDICTIVE VALIDITY: THE ROLE OF PLAUSIBILITY IN DECISION-SUPPORTING SOCIAL SIMULATION	2728
<i>M. A. Hofmann</i>	
EVALUATING TWO-RANGE ROBUST OPTIMIZATION FOR PROJECT SELECTION	2740
<i>R. Duzgiin ; A. Thiele</i>	
DATA-DRIVEN DYNAMIC DECISION MODELS	2752
<i>J. J. Nay ; J. M. Gilligan</i>	
ML3: A LANGUAGE FOR COMPACT MODELING OF LINKED LIVES IN COMPUTATIONAL DEMOGRAPHY	2764
<i>T. Warnke ; A. Steiniger ; A. M. Uhrmacher ; A. Klabunde ; F. Willekens</i>	

A SIMULATION OPTIMIZATION FRAMEWORK FOR DISCRETE EVENT LOGISTICS SYSTEMS (DELS)	2776
<i>T. Srock ; L. F. McGinnis</i>	
BEHAVIORAL DEVS METAMODELING	2788
<i>H. S. Sarjoughian ; A. Alshareef ; Y. Lei</i>	
CONCEPTUAL MODELING: DEFINITION, PURPOSE AND BENEFITS	2812
<i>S. Robinson ; G. Arbez ; L. G. Birta ; A. Tolk ; G. Wagner</i>	
A DISCUSSION ON SIMULATIONS' VISUALIZATION USAGE	2827
<i>A. J. Collins ; D. K. Ball ; J. Romberger</i>	
PARAMETERIZED BENCHMARKING OF PARALLEL DISCRETE EVENT SIMULATION SYSTEMS: COMMUNICATION, COMPUTATION, AND MEMORY	2836
<i>EunJung Park ; S. Eidenbenz ; N. Santhi ; G. Chapuis ; B. Settlemeyer</i>	
TRADEOFFS BETWEEN OBJECTIVE MEASURES AND EXECUTION SPEED IN ITERATIVE OPTIMIZATION-BASED SIMULATION (IOS).....	2848
<i>M. Dehghanimohammabadi ; T. K. Keyser</i>	
DEPENDENCE AMONG TANDEM QUEUES AND THE SECOND MOMENT RESULT ON THE THEORY OF CONSTRAINTS.....	2860
<i>K. Wu ; N. Zhao</i>	
ANALYSIS OF A MAP/PH/1 QUEUE WITH DISCRETIONARY PRIORITY	2872
<i>N. Zhao ; Y. Guo ; Z. Lian ; M. Wang</i>	
SIMULATION-BASED PERFORMANCE ASSESSMENT OF PRODUCTION PLANNING FORMULATIONS FOR SEMICONDUCTOR WAFER FABRICATION	2884
<i>T. Ziarnetzky ; N. B. Kacar ; L. Mönch ; R. Uzsoy</i>	
REDUCING SIMULATION MODEL COMPLEXITY BY USING AN ADJUSTABLE BASE MODEL FOR PATH-BASED AUTOMATED MATERIAL HANDLING SYSTEMS - A CASE STUDY IN THE SEMICONDUCTOR INDUSTRY	2896
<i>S. Rank ; C. Hammel ; T. Schmidt ; G. Schneider</i>	
SCHEDULING FOR AN AUTOMATED GUIDED VEHICLE IN FLEXIBLE MACHINE SYSTEMS	2908
<i>M. Wang ; Yaoming Zhou</i>	
COMPLEXITY ANALYSIS THROUGH THE MODELING OF HUMAN BEHAVIOR IN A COMPLEX SUPPLY CHAIN PLANNING ENVIRONMENT	2917
<i>C. Sun ; T. Ponsignon ; T. Rose ; A. Narayanan</i>	
SIMULATION STUDIES ON MODEL SELECTION IN PM PLANNING OPTIMIZATION	2929
<i>M. Lee ; J. R. Morrison ; A. A. Kalir</i>	
SIMULATION MODEL TO CONTROL RISK LEVELS ON PROCESS EQUIPMENT THROUGH METROLOGY IN SEMICONDUCTOR MANUFACTURING	2941
<i>A. Sendón ; S. Dauzère-Pérès ; J. Pinaton</i>	
YIELD INTEGRATED SCHEDULING USING MACHINE CONDITION PARAMETER.....	2953
<i>D. Doleschal ; G. Weigert ; A. Klemmt</i>	
MASM: A LOOK BACK AND A PEEK AHEAD.....	2964
<i>J. Fowler</i>	
LEARNING-BASED RELEASE CONTROL OF SEMICONDUCTOR WAFER FABRICATION FACILITIES	2965
<i>L. Li ; Zhongbo Chen ; Qingyun Yu ; Nan Xiang</i>	
RESERVATION BASED DISPATCHING RULE FOR WAFER FAB WITH ENGINEERING LOTS	2974
<i>Y. H. Chung ; S. C. Park ; B. H. Kim ; J. C. Seo</i>	
MAKESPAN COMPUTATION OF LOT SWITCHING PERIOD IN SINGLE-ARMED CLUSTER TOOLS	2983
<i>H. J. Kim ; J. H. Lee</i>	
A FRAMEWORK FOR EFFECTIVE SHOP FLOOR CONTROL IN WAFER fabs	3001
<i>Z. Zhou ; O. Rose</i>	
THE SIMIAN CONCEPT: PARALLEL DISCRETE EVENT SIMULATION WITH INTERPRETED LANGUAGES AND JUST-IN-TIME COMPILATION	3013
<i>N. Santhi ; S. Eidenbenz ; J. Liu</i>	
TIME WARP STATE RESTORATION VIA DELTA ENCODING.....	3025
<i>J. M. LaPre ; E. J. Gonsiorowski ; C. D. Carothers ; J. Jenkins ; P. Carns ; R. Ross</i>	
CATE: AN OPEN AND HIGHLY CONFIGURABLE FRAMEWORK FOR PERFORMANCE EVALUATION OF PACKET CLASSIFICATION ALGORITHMS.....	3037
<i>W. Gusew ; S. Hager ; B. Scheuermann</i>	

MODELING AND SIMULATION APPLIED TO LINK DIMENSIONING OF STREAM IP TRAFFIC WITH INCREMENTAL VALIDATION	3049
<i>E. L. Ursini ; P. S. Martins ; V. S. Timóteo ; F. R. Massaro</i>	
MODELING AND SIMULATION OF WEB-OF-THINGS SYSTEMS PART 1: SENSOR NODES	3061
<i>M. Diaconescu ; G. Wagner</i>	
WAITING TIME PREDICTORS FOR MULTI-SKILL CALL CENTERS	3073
<i>M. Thiongane ; W. Chan ; P. L'Ecuyer</i>	
THE IMPACT OF BIG DATA ON M&S: DO WE NEED TO GET "BIG"	3085
<i>S. J. E. Taylor</i>	
MODELING THE COMMUNICATIONS IN AN EMERGENCY PLAN WITH P-DEVS	3086
<i>C. Ruiz-Martin ; G. A. Wainer ; A. Lopez-Paredes</i>	
AN AGENT BASED MODEL OF SPREAD OF COMPETING RUMORS THROUGH ONLINE INTERACTIONS ON SOCIAL MEDIA	3088
<i>C. Kaligotla ; E. Yöcesan ; S. E. Chick</i>	
TOWARD AN INTEGRATED FRAMEWORK FOR THE SIMULATION, FORMAL ANALYSIS AND ENACTMENT OF DISCRETE EVENTS SYSTEMS MODELS	3090
<i>H. O. Aliyu ; M. K. Traoré</i>	
TOWARDS A FRAMEWORK FOR EDUCATIONAL SIMULATION IN MANAGEMENT SCIENCE AND ECONOMICS	3092
<i>O. Merkt</i>	
A COMPREHENSIVE STUDY ON NEW CONCEPTUAL CONTAINER HANDLING SYSTEM	3094
<i>C. Zhou ; E. P. Chew ; L. H. Lee</i>	
OPTIMIZATION APPLIED WITH AGENT BASED MODELLING IN THE CONTEXT OF URBAN ENERGY PLANNING	3096
<i>Xiubei Ge ; E. Kremers</i>	
MODELING AND SIMULATING FISHERIES MANAGEMENT	3098
<i>S. Sigurðardóttir</i>	
AN ASPECT-ORIENTED APPROACH TO LARGE-SCALE URBAN SIMULATIONS	3100
<i>A. Valadares ; C. V. Lopes</i>	
IMPROVING A HARDWOOD FLOORING CUTTING SYSTEM THROUGH SIMULATION AND OPTIMIZATION	3102
<i>J. Wery</i>	
USING PERCENTILE MATCHING TO SIMULATE LABOR PROGRESSION AND THE EFFECT OF LABOR DURATION ON BIRTH COMPLICATIONS	3104
<i>K. Hicklin ; J. S. Ivy ; J. R. Wilson ; E. Myers</i>	
MULTI-OBJECTIVE SIMULATION OPTIMIZATION ON FINITE SETS: OPTIMAL ALLOCATION VIA SCALARIZATION	3106
<i>G. Feldman ; S. R. Hunter ; R. Pasupathy</i>	
ITERATIVE OPTIMIZATION-BASED SIMULATION (IOS) WITH DETERMINISTIC AND STOCHASTIC TRIGGER EVENTS IN SIMULATED TIME	3108
<i>M. Dehghanimohammabadi ; T. K. Keyser</i>	
USING AGENT-BASED SIMULATION TO UNDERSTAND POPULATION DYNAMICS AND COEVOLUTION IN HOST-PATHOGEN RELATIONSHIPS	3110
<i>R. Williams ; S. Williams ; A. Das</i>	
ROLE OF ENTREPRENEURIAL SUPPORT FOR NETWORKING IN INNOVATION ECOSYSTEMS: AN AGENT BASED APPROACH	3112
<i>M. Akbas ; C. Gunaratne ; O.O. Garibay ; I. Garibay ; T. O'Neal</i>	
AGENT BASED SMART GRID MODELLING	3114
<i>G. Jeon ; Yun Bae Kim ; Jinsoo Park</i>	
AN AGENT-BASED MODELING APPROACH TO IMPROVE COORDINATION BETWEEN HUMANITARIAN RELIEF PROVIDERS	3116
<i>M. Menth ; J. L. H. Stamm</i>	
LOGISTICS 4.0 - A CHALLENGE FOR SIMULATION	3118
<i>I. J. Timm ; F. Lorig</i>	
AGENT BASED MODEL OF FISHER BEHAVIOR AS A DYNAMIC CONSTRAINT RESOLUTION PROBLEM	3120
<i>C. Pastrav ; S. Sigurðardóttir ; J. R. Viðarsson ; A. K. Danielsdóttir</i>	
EVOLVING AGENT COGNITION WITH NETLOGO LEVELSPACE	3122
<i>B. Head ; A. Hjorth ; C. Brady ; U. Wilensky</i>	
BUILDING HIGH FIDELITY HUMAN BEHAVIOR MODELS IN THE SIGMA COGNITIVE ARCHITECTURE	3124
<i>V. Ustun ; P. S. Rosenbloom ; J. Kim ; Lingshan Li</i>	

HUMAN-IN-THE-LOOP AGENT-BASED SIMULATION FOR IMPROVED AUTONOMOUS SURVEILLANCE USING UNMANNED VEHICLES	3126
<i>S. Minaeian ; Y. Yuan ; J. Liu ; Y. J. Son</i>	
CROWD DYNAMICS MODELING AND COLLISION AVOIDANCE WITH OPENMP	3128
<i>A. Gutierrez-Milla ; F. Borges ; R. Suppi ; E. Luque</i>	
SOCIAL SIMULATION FOR ANALYSIS, INTERACTION, TRAINING AND COMMUNITY AWARENESS	3130
<i>L. Padgham ; D. Singh ; F. Zambetta</i>	
AGENT-BASED SIMULATION OF THE DIFFUSION DYNAMICS AND CONCENTRATION OF TOXIC MATERIALS FROM QUANTUM DOTS-BASED NANOPARTICLES.....	3132
<i>D. B. Agusdinata</i>	
AGENT-BASED ANALYSIS FOR DESIGN OF SIGNAGE SYSTEMS IN LARGE-SCALE FACILITIES	3134
<i>S. Utsumi ; S. Takahashi ; K. Ohori ; H. Anai</i>	
COMBINATION OF AN EVOLUTIONARY AGENT-BASED MODEL OF TRANSITIONS IN SHIPPING TECHNOLOGIES WITH A SYSTEM DYNAMICS EXPECTATIONS FORMULATION	3136
<i>F. Senger ; J. Hartwig</i>	
ABMS SIMULATOR OF PROPAGATION OF NOSOCOMIAL INFECTION IN EMERGENCY DEPARTMENTS.....	3138
<i>C. Jaramillo ; D. Rexachs ; E. Luque ; F. Epelde</i>	
PROJECTING THE IMPACT OF IMPLEMENTING PRE-EXPOSURE PROPHYLAXIS FOR HIV AMONG MEN WHO HAVE SEX WITH MEN IN BALTIMORE CITY.....	3140
<i>P. Kasaei ; J. Pennington ; S. A. Berry ; M. S. Shah ; D. German ; C. P. Flynn ; C. Beyrer ; D. W. Dowdy</i>	
INFORMATION DIRECTED SAMPLING FOR STOCHASTIC ROOT FINDING.....	3142
<i>S. Rodriguez ; M. Ludkovski</i>	
THROUGHPUT AND FLOW-TIME IN A PRODUCTION LINE WITH PARTIAL MACHINE AVAILABILITY AND IMPERFECT QUALITY PROCESSING	3144
<i>M. Eyal ; I. Tirkel</i>	
OPTIMAL BUDGET ALLOCATION STRATEGIES FOR REAL TIME BIDDING IN DISPLAY ADVERTISING	3146
<i>P. Murali ; Ying Li ; P. Mazzoleni ; R. Vaculin</i>	
MEASURING AND VISUALIZING COMBAT EFFECTIVENESS	3148
<i>Youngwoo Lee ; Taesik Lee</i>	
EXTENDING DISCRETE-EVENT SIMULATION FRAMEWORKS FOR NON-STATIONARY PERFORMANCE EVALUATION: REQUIREMENTS AND CASE STUDY	3150
<i>L. A. Pereira ; E. L. C. Mamani ; M. J. Santana ; F. J. Monaco ; P. N. Nobile</i>	
A FAST APPROXIMATION OF AN INHOMOGENEOUS STOCHASTIC LANCHESTER MODEL.....	3152
<i>Donghyun Kim ; Hyungil Moon ; Donghyun Park ; Hayong Shin</i>	
DATA DRIVEN MODEL FOR THE PREDICTION OF THE EXPECTED LIFETIME OF TRANSFORMERS.....	3154
<i>Rui Zhang ; T. Kumar ; Haijing Wang</i>	
CHANCE-CONSTRAINED SCHEDULING WITH RE COURSE FOR MULTI-SKILL CALL CENTERS WITH ARRIVAL-RATE AND ABSENTEEISM UNCERTAINTY	3156
<i>Thuy Anh Ta ; W. Chan ; P. L'Ecuyer ; F. Bastin</i>	
COMPUTATIONAL METHODOLOGY FOR LINEAR FRACTIONAL TRANSPORTATION PROBLEM.....	3158
<i>A. Pradhan ; M. P. Biswal</i>	
SIMULATION OF AUTO DESIGN PERFORMANCE IN THE MARKET TO MEET FUEL EFFICIENCY STANDARDS	3160
<i>W. S. Duff ; R. Dowling ; B. Hung ; G. Lancaster ; L. Ridge</i>	
A MULTI-ASSET MONTE CARLO SIMULATION MODEL FOR THE VALUATION OF VARIABLE ANNUITIES	3162
<i>G. Gan</i>	
PERFORMANCE OF THE CONTINUOUS REVIEW ORDER-UP-TO POLICY FOR ON-LINE STORES UNDER VARIOUS RANDOM DEMAND AND STORAGE CAPACITY LIMITATION	3164
<i>Chao-Hua Chen ; Che-Cheng Yeh</i>	
CONSTRUCTING CLASSIFIERS OF EXPENSIVE SIMULATION-BASED DATA BY SEQUENTIAL EXPERIMENTAL DESIGN.....	3166
<i>J. van der Herten ; I. Couckuyt ; D. Deschrijver ; T. Dhaene</i>	

OPTIMAL SIGNAL CONTROL FOR PRE-TIMED SIGNALIZED JUNCTIONS WITH UNCERTAIN TRAFFIC: SIMULATION BASED OPTIMIZATION APPROACH	3168
<i>A. Patel ; J. Venkateswaran ; T. V. Mathew</i>	
SPARE PART MANAGEMENT IN A TESTING WORKSHOP	3170
<i>Xiaobing Li ; Kaire Zhang ; Zhibo Tan</i>	
INVENTORY AND TRANSPORTATION SHARING IN RETAIL SUPPLY CHAINS	3172
<i>R. Post ; M. Mijnhardt ; P. Buijs</i>	
PARTICIPATORY SIMULATIONS OF URBAN FLOODING FOR LEARNING AND DECISION SUPPORT	3174
<i>J. M. Gilligan ; C. Brady ; J. V. Camp ; J. J. Nay ; P. Sengupta</i>	
THE KIDNEY TRANSPLANT PROCESS MODEL	3176
<i>C. Harvey</i>	
EFFICIENT ESTIMATOR OF PROBABILITIES OF LARGE POWER SPILLS IN AN STAND-ALONE SYSTEM WITH WIND GENERATION AND STORAGE	3178
<i>D. Bhaumik ; D. Crommelin ; B. Zwart</i>	
INVESTIGATING WS-PGRADE WORKFLOWS FOR CLOUD-BASED DISTRIBUTED SIMULATION	3180
<i>N. R. Chaudhry ; A. Nouman ; A. Anagnostou ; S. J. E. Taylor</i>	
KNOWLEDGE CONSTRUCTS IN DISCRETE AND CONTINUOUS SIMULATION	3182
<i>J. Trimble</i>	
A FRAMEWORK FOR 3D-MODEL BASED JOB HAZARD ANALYSIS	3184
<i>J. Melzner ; H. J. Bargstadt</i>	
AN EFFICIENT SOLUTION FOR K-CENTER PROBLEMS.....	3186
<i>P. Hillmann ; T. Uhlig ; G. D. Rodosek ; O. Rose</i>	
DYNAMIC PROGRAMMING OF FLIGHTS BASED ON STOCHASTIC DEMANDS	3188
<i>A. C. Budescu ; A. A. J. Perez ; P. F. i Casas ; J. Casanovas</i>	
MODEL-ARCHITECTURE ORIENTED COMBAT SYSTEM EFFECTIVENESS SIMULATION	3190
<i>Yonglin Lei ; Ning Zhu ; Jian Yao ; Zhi Zhu ; H. S. Sarjoughian</i>	
INDIVIDUAL-BASED COD SIMULATION WITH ML-RULES	3192
<i>M. E. Pierce ; T. Warnke ; T. Helms ; A. M. Uhrmacher ; U. Krumme ; C. Hammer</i>	
ANALYZING MACHINE CONCEPTS AND DELIVERY STRATEGIES TO CUT DELIVERY COSTS FOR FOREST FUELS USING A DISCRETE-EVENT SIMULATION MODEL	3194
<i>A. Eriksson ; L. Eliasson</i>	
AN INTEGRATED LEAN ASSESSMENT FRAMEWORK FOR TYRE DISTRIBUTION INDUSTRY	3196
<i>A. Mahfouz ; A. Arisha</i>	
WEB SIMULATION TRAINING ENVIRONMENT FOR AIRCRAFT RESOURCE PLANNING IN WILDFIRE EVENTS.....	3198
<i>J. F. Jové ; A. G. Petit ; J. Casanovas-Garcia</i>	
MEAN-FIELD BASED COMPARISON OF TWO AGE-DEPENDENT SIR MODELS.....	3200
<i>M. Bicher ; G. Schneckenreither ; N. Popper</i>	
AN AGENT-BASED EPIDEMIC MODEL FOR DENGUE SIMULATION IN THE PHILIPPINES.....	3202
<i>F. Miksch ; P. Pichler ; K. J. P. Espinosa ; K. S. T. Casera ; A. N. Navarro ; M. Bicher</i>	
MODELING AND SIMULATION FOR EVALUATING THE C3 STRUCTURE IN A NCW MISSION ENVIRONMENT	3204
<i>H. Nam ; T. Lee</i>	
ON ELICITATION OF PREFERENCES FROM SOCIAL NETWORKS THROUGH SYNTHETIC POPULATION MODELLING.....	3206
<i>P. Szufel ; B. Kaminski ; G. Koloch</i>	
AN APPROACH TO MODELING INTERNET OF THINGS BASED SMART BUILT ENVIRONMENTS	3208
<i>D. Gracanin ; K. Matkovic ; J. Wheeler</i>	
A SIMULATION TOOL THAT FACILITATES THE PLANNING AND THE DEVELOPMENT OF MICRO SMART GRIDS	3210
<i>M. Lutzenberger ; S. Albayrak</i>	
ADDING EMBEDDED SIMULATION TO THE PARALLEL ICE SHEET MODEL.....	3212
<i>P. Dickens ; C. Dufour ; J. Fastook</i>	
AUGMENTED REALITY AND SIMULATION OVER DISTRIBUTED PLATFORMS TO SUPPORT WORKERS	3214
<i>L. Damiani ; R. Revetria ; A. Volpe</i>	
SIMULATION OF THE AIRBUS 380 EVACUATION	3216
<i>P. E. de Millan ; A. A. Juan ; P. F. i. Casas ; C. Montanola-Sales</i>	

ANALYSIS AND OPTIMIZATION OF A DEMOGRAPHIC SIMULATOR FOR PARALLEL ENVIRONMENTS	3218
<i>V. Büsing-Meneses ; C. Montañola-Sales ; J. Casanovas-Garcia ; A. Pellegrini</i>	
A SYSTEM DYNAMICS MODEL ON THE REASONS OF CAR PRICE SHOCKS AFTER ECONOMIC SANCTIONS	3220
<i>B. Barazandeh ; M. Rafieisakhaei</i>	
AN ONLINE GAME SIMULATION ENVIRONMENT FOR DETECTING POTENTIAL DECEPTIVE INSIDERS	3222
<i>Hongmei Chi ; S. M. Ho ; D. Hubbard</i>	
ROBOTIC INTERACTIVE VISUALIZATION EXPERIMENTATION TECHNOLOGY (RIVET): GAME-BASED SIMULATION FOR HUMAN-ROBOT INTERACTION RESEARCH.....	3224
<i>R. Brewer ; K. E. Schaefer ; E. Avery</i>	
IMPROVING MBSE MODELS USING HUMAN PERFORMANCE SIMULATION.....	3226
<i>M. Watson ; C. Rusnock ; M. Miller ; J. Colombi</i>	
EVALUATION OF PERFORMANCE AND RESPONSE CAPACITY IN EMERGENCY DEPARTMENTS	3228
<i>E. Bruballa ; M. Taboada ; A. Wong ; D. Rexachs ; E. Luque</i>	
WHERE DOES COMPUTATIONAL MODELING OF CLIMATE-INDUCED MIGRATION STAND AND WHAT CHALLENGES STILL NEED TO BE OVERCOME.....	3230
<i>C. Till ; J. Haverkamp ; D. White ; B. Bhaduri</i>	
A UNIFIED APPROACH FOR MODELING AND ANALYSIS OF A VERSATILE BATCH-SERVICE QUEUE WITH CORRELATED ARRIVAL.....	3232
<i>S. Pradhan ; U. Gupta</i>	
SIMULATION CASE STUDY: MODELLING DISTINCT BREAKDOWN EVENTS FOR A TUNNEL BORING MACHINE EXCAVATION	3234
<i>M. Werner ; S. AbouRizk</i>	
IMPORTANT CONSTRUCTION CONSTRAINTS IN CONSTRAINT SIMULATION.....	3269
<i>S. Hollermann</i>	
EMPIRICALLY-BASED MODELLING APPROACHES TO THE TRUCK WEIGH-IN-MOTION PROBLEM.....	3288
<i>Y. Wang ; I. Flood</i>	
A TECHNICAL APPROACH OF A SIMULATION-BASED OPTIMIZATION PLATFORM FOR SETUP-PREPARATION VIA VIRTUAL TOOLING BY TESTING THE OPTIMIZATION OF ZERO POINT POSITIONS IN CNC-APPLICATIONS.....	3298
<i>J. Weber</i>	
RAPIDBRIDGE BUILDER - SIMULATION TOOL FOR ACCELERATED BRIDGE DESIGN AND CONSTRUCTION.....	3310
<i>S. Ahn ; S. R. Hislop-Lynch ; S. Caldwell</i>	
IMPROVING QUALITY IN AN ELECTRICAL SAFETY TESTING LABORATORY BY USING A SIMULATION-BASED TOOL	3322
<i>P. Marelli ; M. Coccoola ; R. Portillo ; A. R. Tymoschuk</i>	
WEARABLE SENSOR-BASED ACTIVITY RECOGNITION FOR DATA-DRIVEN SIMULATION OF CONSTRUCTION WORKERS' ACTIVITIES	3333
<i>R. Akhavian ; A. Behzadan</i>	
OCCUPANT BEHAVIOR MODELING FOR SMART BUILDINGS: A CRITICAL REVIEW OF DATA ACQUISITION TECHNOLOGIES AND MODELING METHODOLOGIES	3345
<i>M. Jia ; R. S. Srinivasan</i>	
ANALYSIS OF ENERGY PERFORMANCE OF UNIVERSITY CAMPUS BUILDINGS USING STATISTICAL AND ENERGY MODELING APPROACHES	3356
<i>S. Fathi ; R. S. Srinivasan</i>	
UPDATING GEOLOGICAL CONDITIONS USING BAYES THEOREM AND MARKOV CHAIN.....	3367
<i>L. Zhang ; R. Ekyalimpaa ; S. Hague ; M. Werner ; S. AbouRizk</i>	
ONLINE SIMULATION MODELING OF PREFABRICATED WALL PANEL PRODUCTION USING RFID SYSTEM	3379
<i>M. S. Altaf ; H. Liu ; M. Al-Hussein ; H. Yu</i>	
SIMULATION BASED MULTI-OBJECTIVE COST-TIME TRADE-OFF FOR MULTI-FAMILY RESIDENTIAL OFF-SITE CONSTRUCTION	3391
<i>S. B. Hamdan ; A. Alwisy ; M. Al-Hussein ; S. AbouRizk ; Z. Ajweh</i>	
A COMPARISON OF THE USAGE OF DIFFERENT APPROACHES FOR THE MANAGEMENT OF PLANT ENGINEERING PROJECTS	3402
<i>U. Jessen ; L. Moller ; S. Wenzel ; A. Akbulut ; C. Laroque</i>	

ANALYSIS OF CAPACITY ASSOCIATED TO LEVELS OF SERVICE AT PORT TERMINALS USING SYSTEMIC APPROACH AND SIMULATION OF DISCRETE EVENTS.....	3426
<i>J. F. Netto ; R. C. Botter ; A. C. Medina</i>	
A REVIEW OF ARTIFICIAL INTELLIGENCE BASED BUILDING ENERGY PREDICTION WITH A FOCUS ON ENSEMBLE PREDICTION MODELS	3438
<i>Zeyu Wang ; R. S. Srinivasan</i>	
ITERATIVE REASSIGNMENT ALGORITHM: LEVERAGING OCCUPANCY BASED HVAC CONTROL FOR IMPROVED ENERGY EFFICIENCY	3449
<i>Z. Yang ; A. Ghahramani ; B. Becerik-Gerber</i>	
MODELING SKILLS FOR DES AND SD: AN EXPLORATORY STUDY ON THEIR DEVELOPMENT IN NEW PRACTITIONERS	3461
<i>K. Hoad ; M. Kunc</i>	
IDENTIFICATION OF THE MAIN METHODS USED IN SIMULATION PROJECTS.....	3469
<i>J. A. B. Montevechi ; T. F. Pereira ; C. E. S. da Silva ; R. d. C. Miranda ; A. P. G. Scheidegger</i>	
USING SIMULATION AS A TEACHING TOOL IN AN INTRODUCTORY OPERATIONS MANAGEMENT COURSE.....	3481
<i>T. M. K. Roeder ; J. Miyaoka</i>	
USING NOVA TO CONSTRUCT AGENT-BASED MODELS FOR EPIDEMIOLOGICAL TEACHING AND RESEARCH.....	3490
<i>W. M. Getz ; R. M. Salter ; N. Sippl-Swezey</i>	
DISCRETE-EVENT SIMULATION USING R.....	3502
<i>B. Lawson ; L. M. Leemis</i>	
THE OBJECT-ORIENTED DISCRETE EVENT SIMULATION MODELING: A CASE STUDY ON AIRCRAFT SPARE PART MANAGEMENT.....	3514
<i>H. Li ; Yinchao Zhu ; Yixin Chen ; G. Pedrielli ; N. A. Putjovidianto</i>	
PRODUCTION SIMULATION EDUCATION USING RAPID MODELING AND OPTIMIZATION: SUCCESSFUL STUDIES	3526
<i>M. Frantzen ; A. H. C. Ng</i>	
A SUCCESSFUL EAC-ABET ACCREDITED UNDERGRADUATE PROGRAM IN MODELING AND SIMULATION ENGINEERING (M&SE)	3538
<i>F. D. McKenzie ; R. R. Mielke ; J. F. Leathrum</i>	
TEACHING SUPPLY CHAIN SIMULATION - FROM BEGINNERS TO PROFESSIONALS.....	3548
<i>T. Perera ; T. Rupasinghe</i>	
DISCRETE EVENT OPTIMIZATION: SINGLE-RUN INTEGRATED SIMULATION- OPTIMIZATION USING MATHEMATICAL PROGRAMMING	3557
<i>G. Pedrielli ; A. Matta ; A. Alfieri</i>	
IMPROVING HIT-AND-RUN WITH SINGLE OBSERVATIONS FOR CONTINUOUS SIMULATION OPTIMIZATION	3569
<i>S. Kiatsupaibul ; R. L. Smith ; Z. B. Zabinsky</i>	
PARTITION BASED OPTIMIZATION FOR UPDATING SAMPLE ALLOCATION STRATEGY USING LOOKAHEAD	3577
<i>D. D. Linz ; H. Huang ; Z. B. Zabinsky</i>	
A NEW MYOPIC SEQUENTIAL SAMPLING ALGORITHM FOR MULTI-OBJECTIVE PROBLEMS.....	3589
<i>J. Branke ; Wen Zhang</i>	
A MODEL-BASED APPROACH TO MULTI-OBJECTIVE OPTIMIZATION.....	3599
<i>J. Q. Hale ; E. Zhou</i>	
MULTI-OBJECTIVE SIMULATION OPTIMIZATION ON FINITE SETS: OPTIMAL ALLOCATION VIA SCALARIZATION	3610
<i>G. Feldman ; S. R. Hunter ; R. Pasupathy</i>	
MULTI-OBJECTIVE OPTIMIZATION FOR A HOSPITAL INPATIENT FLOW PROCESS VIA DISCRETE EVENT SIMULATION	3622
<i>Yang Wang ; Loo Hay Lee ; Ek Peng Chew ; Sean Shao Wei Lam ; Seng Kee Low ; Marcus Eng Hock Ong ; Haobin Li</i>	
AGGREGATED LINE MODELING FOR SIMULATION AND OPTIMIZATION OF MANUFACTURING SYSTEMS	3632
<i>L. Pehrsson ; M. Frantzén ; T. Aslam ; A. H. C. Ng</i>	
ON THE SCALABILITY OF META-MODELS IN SIMULATION-BASED OPTIMIZATION OF PRODUCTION SYSTEMS	3644
<i>S. Bandaru ; A. H. C. Ng</i>	

UNBIASED MONTE CARLO FOR OPTIMIZATION AND FUNCTIONS OF EXPECTATIONS VIA MULTI-LEVEL RANDOMIZATION	3656
<i>J. H. Blanchet ; P. W. Glynn</i>	
EXPECTED IMPROVEMENT IS EQUIVALENT TO OCBA	3668
<i>I. O. Ryzhov</i>	
NON-MONOTONICITY OF PROBABILITY OF CORRECT SELECTION.....	3678
<i>Y. Peng ; C. H. Chen ; M. C. Fu ; J. Q. Hu</i>	
A STATISTICAL PERSPECTIVE ON LINEAR PROGRAMS WITH UNCERTAIN PARAMETERS	3690
<i>L. Jeff Hong ; H. Lam</i>	
STOCHASTIC OPTIMIZATION USING HELLINGER DISTANCE.....	3702
<i>A. N. Vidyashankar ; J. Xu</i>	
SIMULATION OPTIMIZATION WHEN FACING INPUT UNCERTAINTY.....	3714
<i>E. Zhou ; W. Xie</i>	
SIMULATION-DRIVEN TASK PRIORITIZATION USING A RESTLESS BANDIT MODEL FOR ACTIVE SONAR MISSIONS	3725
<i>C. Y. Wakayama ; Z. B. Zabinsky</i>	
MULTI-OBJECTIVE MULTI-FIDELITY OPTIMIZATION WITH ORDINAL TRANSFORMATION AND OPTIMAL SAMPLING.....	3737
<i>Haobin Li ; Yueqi Li ; L. H. Lee ; Ek Peng Chew ; G. Pedrielli ; C. H. Chen</i>	
OPTIMAL SAMPLING LAWS FOR BI-OBJECTIVE SIMULATION OPTIMIZATION ON FINITE SETS.....	3749
<i>S. R. Hunter ; G. Feldman</i>	
COMPUTATIONAL IMPROVEMENTS IN BOOTSTRAP RANKING & SELECTION PROCEDURES VIA MULTIPLE COMPARISON WITH THE BEST	3758
<i>S. Lee ; B. L. Nelson</i>	
A NOTE ON THE SUBSET SELECTION FOR SIMULATION OPTIMIZATION.....	3768
<i>S. Gao ; W. Chen</i>	
SIMULATION SELECTION FOR EMPIRICAL MODEL COMPARISON	3777
<i>Q. Zhang ; Yongjia Song</i>	
OPTIMAL SEQUENTIAL SAMPLING WITH DELAYED OBSERVATIONS AND UNKNOWN VARIANCE.....	3789
<i>S. E. Chick ; M. Forster ; P. Pertile</i>	
DATA-DRIVEN SCHEMES FOR RESOLVING MISSPECIFIED MDPs: ASYMPTOTICS AND ERROR ANALYSIS.....	3801
<i>H. Jiang ; U. V. Shanbhag</i>	
OPTIMAL IMPORTANCE SAMPLING FOR SIMULATION OF LEVY PROCESSES.....	3813
<i>G. Jiang ; M. C. Fu ; Chenglong Xu</i>	
ON THE MONOTONIC PERFORMANCE OF STOCHASTIC KRIGING PREDICTORS.....	3825
<i>Bing Wang ; Jiaqiao Hu</i>	
KRIGING-BASED SIMULATION-OPTIMIZATION: A STOCHASTIC RECURSION PERSPECTIVE	3834
<i>G. Pedrielli ; S. H. Ng</i>	
QUANTIFYING UNCERTAINTY IN SAMPLE AVERAGE APPROXIMATION.....	3846
<i>H. Lam ; Enlu Zhou</i>	
COMPARING MESSAGE PASSING INTERFACE AND MAPREDUCE FOR LARGE-SCALE PARALLEL RANKING AND SELECTION.....	3858
<i>E. C. Ni ; D. F. Ciocan ; S. G. Henderson ; S. R. Hunter</i>	
ASYMPTOTIC VALIDITY OF THE BAYES-INSPIRED INDIFFERENCE ZONE PROCEDURE: THE NON-NORMAL KNOWN VARIANCE CASE.....	3868
<i>S. Toscano-Palmerin ; P. I. Frazier</i>	
MODELING BEHAVIOR OF NURSES IN CLINICAL MEDICAL UNIT IN UNIVERSITY HOSPITAL: BURNOUT IMPLICATIONS.....	3880
<i>W. Rashwan ; A. Arisha</i>	
SIMULATING SMOKING BEHAVIORS BASED ON COGNITION-DETERMINED, OPINION-BASED SYSTEM DYNAMICS.....	3892
<i>A. B. Naugle ; N. Miner ; M. Aamir ; R. Jeffers ; S. Verzi ; M. Bernard</i>	
SIMULATION OF CROWD BEHAVIOR USING FUZZY SOCIAL FORCE MODEL.....	3901
<i>A. D. Sent ; M. Roisenberg ; P. J. de Freitas Filho</i>	
SIMULATING REGIONAL HYDROLOGY AND WATER MANAGEMENT: AN INTEGRATED AGENT-BASED APPROACH	3913
<i>J. T. Murphy ; J. Ozik ; N. Collier ; M. Altaweeel ; R. B. Lammers ; A. A. Prusevich ; A. Kliskey ; L. Alessa</i>	

EVALUATION OF METROPOLITAN TRAFFIC FLOW WITH AGENT-BASED TRAFFIC SIMULATOR AND APPROXIMATED VEHICLE BEHAVIOR MODEL NEAR INTERSECTIONS	3925
<i>H. Mizuta</i>	
AGENT-BASED ANALYSIS OF PICKER BLOCKING IN MANUAL ORDER PICKING SYSTEMS: EFFECTS OF ROUTING COMBINATIONS ON THROUGHPUT TIME	3937
<i>R. Elbert ; T. Franzke ; C. H. Glock ; E. H. Grosse</i>	
MODELLING THE CO-EVOLUTION OF TRADE AND CULTURE IN PAST SOCIETIES	3949
<i>S. Carrignon ; J. M. Montanier ; X. Rubio-Campillo</i>	
SCHOOL CLOSURE STRATEGIES FOR THE 2009 HONG KONG H1N1 INFLUENZA PANDEMIC	3961
<i>Z. S. Y. Wong ; D. Goldsman ; K. L. Tsui</i>	
TOWARD AN AGENT-BASED SIMULATION OF THE FACTORS IMPACTING DIVERSITY WITHIN A COLLEGE STUDENT BODY.....	3973
<i>S. Davies ; M. Brown</i>	
AN AGENT BASED MODEL OF SPREAD OF COMPETING RUMORS THROUGH ONLINE INTERACTIONS ON SOCIAL MEDIA.....	3985
<i>C. Kaligotla ; E. Yücesan ; S. E. Chick</i>	
MINORITY INFLUENCE IN OPINION SPREADING.....	3997
<i>U. Merlone ; D. Radi ; A. Romano</i>	
TWITTER KNOWS: UNDERSTANDING THE EMERGENCE OF TOPICS IN SOCIAL NETWORKS.....	4009
<i>L. Birdsey ; C. Szabo ; Y. M. Teo</i>	
WHICH MODELS ARE USED IN SOCIAL SIMULATION TO GENERATE SOCIAL NETWORKS? A REVIEW OF 17 YEARS OF PUBLICATIONS IN JASSS	4021
<i>F. Amblard ; A. Bouadjio-Boulle ; C. Sureda Gutiérrez ; B. Gaudou</i>	
APPLICATION OF BAYESIAN SIMULATION FRAMEWORK IN QUANTITATIVELY MEASURING PRESENCE OF COMPETITION IN LIVING SPECIES.....	4033
<i>S. Guharay ; K. Chang</i>	
INFORMATION DIFFUSION IN TWO OVERLAPPING NETWORKS MODEL	4045
<i>M. Kot ; B. Kaminski</i>	
A COMPUTATIONAL MODEL OF TEAM ASSEMBLY IN EMERGING SCIENTIFIC FIELDS	4057
<i>A. Lungeanu ; S. Sullivan ; U. Wilensky ; N. S. Contractor</i>	
LIMITS OF EMPIRICAL VALIDATION: A REVIEW OF ARGUMENTS WITH RESPECT TO SOCIAL SIMULATION	4069
<i>M. A. Hofmann</i>	
IS THREE BETTER THAN ONE? SIMULATING THE EFFECT OF REVIEWER SELECTION AND BEHAVIOR ON THE QUALITY AND EFFICIENCY OF PEER REVIEW.....	4081
<i>F. Bianchi ; F. Squazzoni</i>	
Author Index	