Contents – Part IV

M&S Applications

A Basic Proxy System Design for Integrating Complicated Distributed Simulation Systems .............................................. 3
  Xiaodong Zhu, Ge Li, Peng Wang, and Xibao Wang

Dynamical Flocking of Multi-agent Systems with Multiple Leaders and Uncertain Parameters .............................................. 13
  Fusheng Wang and Hongyong Yang

A Novel Method of Pedestrian Detection Aided by Color Self-similarity Feature .................................................. 21
  Dong-ying Shen, Mei-hua Xu, and Ai-ying Guo

An Ameliorated Two Segment Large-Scale Terrain Real-Time Rendering Technology .................................................. 30
  Jiang Zhang, Lian-xing Jia, and Bo Liu

A Handover Decision Algorithm with an Adaptive Threshold Applied in HAPS Communication System ............................. 38
  Shu-yan Ni, Shan Jin, and Hai-li Hong

An Overview of Simulation-Oriented Model Reuse .................................................. 48
  Ying Liu, Lin Zhang, Weicun Zhang, and Xiaolin Hu

Multi-model Switching Method Based on Sphere-Based SVM Classifier Selector and Its Application to Hydrogen Purity Multi-model Soft Sensor Modeling in Continuous Catalytic Reforming ............................. 57
  Yi-Fan Shuang and Xing-Sheng Gu

Weighted Feature Correlation and Fusion Saliency .................................................. 73
  Yiwen Dou, Kuangrong Hao, and Yongsheng Ding

A Two-Stage Simulation Optimization Method Based on Metamodel .......................... 82
  Zhizhao Liu, Wei Li, and Ming Yang

Internet Communication Engine (ICE) Based Simulation Framework (ISF) .................................................. 92
  Hang Ji, Xiao Song, Xuejun Zhang, Jing Bi, and Haitao Yuan

A Survey of the BCI and Its Application Prospect .................................................. 102
  Xiashuang Wang, Guanghong Gong, Ni Li, and Yaofei Ma
An Improved Jousselme Evidence Distance ........................................... 112
Haiying Wang, Wei Li, Xiaochao Qian, and Ming Yang

Finite-Time Stability Analysis of Fractional-Order High-Order Hopfield
Neural Networks with Delays .......................................................... 121
Pan Wang

Dynamic Data Analysis of High-Speed Train Based on MEMD
and Compressive Sensing ............................................................... 131
Zhidan Wu and Weidong Jin

Feature Representation Based on Improved Word-Vector Clustering
Using AP and E^2LSH ........................................................................ 140
Hongmei Li, Wenning Hao, Hongjun Zhang, and Gang Chen

The Intrusion Detection Model of Multi-dimension Data Based on Artificial
Immune System .............................................................................. 149
Weikai Wang, Lihong Ren, and Yongsheng Ding

Simulation and Analysis of Magnetic Beads Sorting in High Gradient
Magnetic Field and Efficiency Study .................................................. 161
Wenjun Gao, Wei Tao, and Hui Zhao

RUM-TCG: A Test Code Generation Tool for Simulation Model Based
on RUM ....................................................................................... 172
Tianlin Li, Yiping Yao, Huilong Chen, and Sirui Bao

Simulating Streaming Software Applications Running on Clusters
of Processors and Smartphone ....................................................... 180
Rafael Soto, Carolina Bonacic, Mauricio Marin,
and Veronica Gil-Costa

Laser Simulation Software: Seelight .................................................. 191
Yun Hu, Pin Lv, Quan Sun, Qiu Yan Tang, Jing Wang,
and Changwen Zheng

Simulation Software

The Design of a Small-Scale Epidemic Spreading Simulation System ...... 201
Yuyu Luo, Zhichao Song, Kai Sheng, Hong Duan, and Xiaogang Qiu

Human Behavior Recognition Method Based on Improved Energy Image
Species and Pyramid HOG Feature .................................................... 216
Lina Liu, Jiarui Wen, Shiwei Ma, and Ling Rui

Locality Constrained Dictionary Learning for Human Behavior
Recognition: Using AMEI and EMEI .............................................. 225
Lina Liu, Shiwei Ma, Ling Rui, and Jiarui Wen
Social Simulations

Pedestrian Navigation Using iZES Framework for Bounding Heading Drift . . . 235
  Liqiang Zhang, Zhong Su, and Qing Li

Research on Step-Length Self-learning Pedestrian Self-location System . . . 245
  Hui Zhao and Qing Li

Optimal Allocation of Resources by Interest Groups:
A Mathematical Model ............................................. 255
  Max-Sebastian Dovi

Modeling and Simulation of Organizational Routines Deliberately
Designed by Management ............................................. 263
  Dehua Gao, Xiuquan Deng, Yan Xu, and Bing Bai

Large-Scale Pedestrian Evacuation Modeling During Nuclear
 Leakage Accident ..................................................... 271
  Sihang Qiu, Zhen Li, Liang Ma, Zhengqiu Zhu, Bin Chen, Xiaogang Qiu,
  and Xingbing Li

The Geographical Characteristics of WeChat Propagation Network ........... 282
  Chuan Ai, Bin Chen, Lingnan He, Yichong Bai, Liang Liu, Xingbing Li,
  Zhichao Song, and Xiaogang Qiu

A Novel Real-Time Pedestrian Detection System on Monocular Vision ...... 293
  Aiying Guo, Meihua Xu, and Feng Ran

Improvement of Non-maximum Suppression in Pedestrian Detection Based
on HOG Features ..................................................... 304
  Qi Wang, Meihua Xu, Aiying Guo, and Feng Ran

Social Spatial Heterogeneity and System Entrainment in Modeling Human
and Nature Dynamics ................................................. 311
  Zining Yang, Mark Abdollahian, and Patrick deWerk Neal

Global Community Connectivity of Complex Networks ...................... 319
  Jun Jia, Xiao-feng Hu, and Xiao-yuan He

Optimization of Public Transit Network Caused by Adjustment
of Land Use ............................................................ 330
  Jinli Wei, Shengyou Wang, Shouhui Duan, and Chen Qi

A New Method of Evacuation Under Fire Environment ...................... 340
  Jing Zhou, Xiao Song, and Zenghui Zhang

A Review of Opinion Dynamics ........................................ 349
  Ziping Xie, Xiao Song, and Qiyuan Li
Simulation-Based Population Dynamics Analysis: Korean Population Aging ........................................................ 358
   Jang Won Bae, Euihyun Paik, and Karandeep Singh

Opinion Formation Using the Gür Game ......................................................... 368
   Shu-Yuan Wu and Theodore Brown

Can a Buffering Strategy Reduce Workload Related Stress?
An Exploration Using an Agent Based Model ......................................... 378
   Harshal Hayatnagarkar, Meghendra Singh, Suman Kumar,
   Mayuri Duggirala, and Vivek Balaraman

Shandong Sports Industry Resources Trading Platform’s Construction
and Operation Research ................................................................. 389
   Licai Zhang and Yimin Liu

Hierarchical Analysis Model of Human Motion ........................................ 396
   Xiangchen Li, Tianyu Huang, and Jihai Sun

An Approach for Analysis of Magnetic Disturbance Based on Maxwell
Modeling for the Load of Simulation Turntable ................................ 406
   Feng Yue, Tao Lv, and Shuang Wang

Evaluation of Process Simulation Model Based on a Multi-level Test
Case Method ................................................................................. 420
   Lili Jia, Beike Zhang, and Yangyang Song

Research on Test Technology of Security and Stability Control Technology
of UHVDC Based on Real-Time Digital Simulation ................................. 432
   Lei Fu, Fengqing Wei, and Yuehai Yu

Verification, Validation and Accreditation (VV&A) of M&S

Performance Analysis of Enhanced AODV Protocols in a Mobile
Ad Hoc Network Environment ............................................................. 445
   Hwa-Mok Lee, Sun-Hong Kim, Da-Woong Jung, and Seong Yong Jang

Simulation Validation Technology of the C4ISR System Based on
Component-Oriented Development Platform .................................... 455
   Wenyuan Xu, Li Guo, Shengxiao Zhang, Dongmei Zhao, and Hao Li

Research on Reuse Modeling for C4ISR Simulation Verification System . 463
   Hao Li, Wenyuan Xu, Shengxiao Zhang, Li Guo, and Dongmei Zhao

Application Development of Monitor and Diagnosis System Based
on Simulation Platform .................................................................. 472
   Qicai Wu and Haibin Yuan
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Method of FCM Representation with Optimization Algorithm</td>
<td>482</td>
</tr>
<tr>
<td><em>Haibin Yuan and QiCai Wu</em></td>
<td></td>
</tr>
<tr>
<td>Research on Simulation System Design for Vulnerability/Lethality</td>
<td>493</td>
</tr>
<tr>
<td><em>Bin Tan, Liangwen Shi, Zilong Cong, and Yuheng Wang</em></td>
<td></td>
</tr>
<tr>
<td>A Method of Virtual Reliability Test for Complex Structure and System</td>
<td>500</td>
</tr>
<tr>
<td><em>Pengfei Chen, Yuxin He, and Shurong Sun</em></td>
<td></td>
</tr>
<tr>
<td>Credibility Evaluation of Simulation Models Using Group Analytic</td>
<td>508</td>
</tr>
<tr>
<td><em>Hierarchy Process Based on Priority Probability Conversion.</em></td>
<td></td>
</tr>
<tr>
<td><em>Gengjiao Yang, Yuanjun Laili, Lin Zhang, and Xiaolin Hu</em></td>
<td></td>
</tr>
<tr>
<td>Simulation and Algorithm Verification for Polar Region Inertial</td>
<td>516</td>
</tr>
<tr>
<td><em>Based on Low Latitude Test Sailing.</em></td>
<td></td>
</tr>
<tr>
<td><em>Jing Lei and Wenqi Wu</em></td>
<td></td>
</tr>
<tr>
<td>Research on Uncertainty Analysis Method of Aircraft’s HWIL Simulation</td>
<td>524</td>
</tr>
<tr>
<td><em>Huapin Geng, Wenhua Kong, and Yingkang Wang</em></td>
<td></td>
</tr>
<tr>
<td>Design and Implementation of Fault Patterns Online Evaluation System</td>
<td>533</td>
</tr>
<tr>
<td><em>for Aircraft.</em></td>
<td></td>
</tr>
<tr>
<td><em>Wen-hua Kong</em></td>
<td></td>
</tr>
<tr>
<td>Data Fusion of Small Sample Flying Test Data and Big Sample Simulation</td>
<td>543</td>
</tr>
<tr>
<td><em>Test Data Based on Equivalent Sample for Equipment Efficiency.</em></td>
<td></td>
</tr>
<tr>
<td><em>Evaluation.</em></td>
<td></td>
</tr>
<tr>
<td><em>Xiaolei Ning, Yingxia Wu, Hailin Zhang, and Xin Zhao</em></td>
<td></td>
</tr>
<tr>
<td>Research on VV&amp;A Strategy of Modeling and Simulation</td>
<td>553</td>
</tr>
<tr>
<td><em>for Rocket Motor.</em></td>
<td></td>
</tr>
<tr>
<td><em>Yun-teng Ma, Xue-ren Wang, Bai-lin Zha, Jin-jin Wang, Yi-ang Shi,</em></td>
<td></td>
</tr>
<tr>
<td><em>and Hui-peng Yan</em></td>
<td></td>
</tr>
<tr>
<td><strong>Author Index</strong></td>
<td>561</td>
</tr>
</tbody>
</table>
Theory, Methodology, Tools and Applications for Modeling and Simulation of Complex Systems
16th Asia Simulation Conference and SCS Autumn Simulation Multi-Conference, AsiaSim/SCS AutumnSim 2016, Beijing, China, October 8-11, 2016, Proceedings, Part IV
Zhang, L.; Song, X.; Wu, Y. (Eds.)
2016, XV, 569 p. 296 illus., Softcover
ISBN: 978-981-10-2671-3