

50th Annual Simulation Symposium (ANSS 2017)

2017 Spring Simulation Multi-Conference (SpringSim'17)

Simulation Series Volume 49 Number 1

Virginia Beach, Virginia, USA
23 – 26 April 2017

Editors:

**Shafagh Jafer
Jose J. Padilla
Erika Frydenlund**

ISBN: 978-1-5108-3820-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com



Some format issues inherent in the e-media version may also appear in this print version.

© 2017 SIMULATION COUNCILS, INC.

Responsibility for the accuracy of all statement in each paper rests solely with the author(s). Statements are not necessarily representative of, nor endorsed by, The Society for Modeling and Simulation International.

Printed by Curran Associates, Inc. (2017)

Permission is granted to photocopy portions of this publication for personal use and for the use of students provided credit is given to the conference and publication. Permission does not extend to other types of reproduction nor to copying for incorporation into commercial advertising nor for any other profit-making purpose. Other publications are encouraged to include 300- to 500-word abstracts or excerpts from any paper contained in this book, provided credits are given to the author and the conference. For permission to publish a complete paper write: The Society for Modeling and Simulation International (SCS), 2598 Fortune Way, Suite I, San Diego, CA 92081, USA.

Additional copies of the Proceedings are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
curran@proceedings.com
www.proceedings.com/0128.html

or

The Society for Modeling
and Simulation International
2598 Fortune Way, Ste I
Vista, CA 92081 USA
www.scs.org

ISBN: 978-1-5108-3820-8
PRINTED IN THE UNITED STATES

TABLE OF CONTENTS

MODELING OF A HUMAN DRIVER FOR A CAR DRIVING SIMULATOR.....	1
<i>A. Kopyt, T. Dziewonski, D. Jastrzebski, M. Miroslaw, K. Golon</i>	
SIMULATING MARKET-ORIENTED POLICY INTERVENTIONS FOR STIMULATING ANTIBIOTICS DEVELOPMENT.....	12
<i>C. Okhravi, C. Kronlid, E. Baraldi, S. McKeever, O. Lindahl</i>	
DISTRIBUTED SIMULATION USING DDS AND CLOUD COMPUTING.....	24
<i>M. Madden, P. Glaab</i>	
DEVS MODELLING AND SIMULATION FOR HEALTHCARE PROCESS APPLICATION FOR HOSPITAL EMERGENCY DEPARTMENT	36
<i>M. Sbayou, Y. Bouanan, G. Zacharewicz, J. Ribault, J. Francois</i>	
THROUGH THE VIRTUAL BARRIER: VIRTUAL PROTOTYPING AND ANALYSIS WITH MODEL-BASED SYSTEMS ENGINEERING.....	48
<i>O. Valverde, L. Sun</i>	
VISUALIZATION OF EVENT EXECUTION IN A DISCRETE EVENT SYSTEM.....	58
<i>S. Collins, N. Gonda, L. Dumaliang, J. Leathrum Jr., R. Mielke</i>	
A FRAMEWORK FOR MODELLING THE RIPPLE EFFECT OF CROWDING AT PUBLIC TRANSPORT FACILITIES.....	70
<i>N. Huynh, J. Barthelemy</i>	
MABSDairy: A MULTISCALE AGENT BASED SIMULATION OF A DAIRY HERD	82
<i>M. Al-Mamun, Y. Grohn</i>	
AN EFFICIENT SIMULATION ALGORITHM FOR CONTINUOUS-TIME AGENT-BASED LINKED LIVES MODELS	94
<i>O. Reinhardt, A. Uhrmacher</i>	
MODELING REAL-TIME SCHEDULERS FOR USE IN SIMULATIONS THROUGH A GRAPHICAL INTERFACE	106
<i>F. Peronaglio, R. Lobato, A. Manacero, R. Spolon</i>	
EXPLORING SIMULATION BASED DYNAMIC TRAFFIC ASSIGNMENT WITH A LARGE-SCALE MICROSCOPIC TRAFFIC SIMULATION MODEL	118
<i>P. Foytik, C. Jordan, R. Robinson</i>	
MODELING AND ANALYSIS OF MULTISTATE FAILURES OF A SYSTEM.....	130
<i>M. Banik, B. Madan</i>	
TOWARDS THE DESIGN OF AN INTEROPERABLE MULTICLOUD SIMULATION SYSTEM.....	141
<i>D. Liu, R. Grande, A. Boukerche</i>	
DEVELOPMENT OF A SIMULATION MODEL FOR PEDESTRIAN EVACUATION UNDER FIRE CONDITION	153
<i>Z. Wang, H. Yang, Z. Zhu</i>	
BIAS EX SILICO – OBSERVATIONS ON SIMULATIONIST’S REGRESS	164
<i>A. Tolk</i>	
DYNAMICS OF KNOWLEDGE-SEEKING INTERACTIONS IN ORGANIZATIONAL NETWORKS.....	173
<i>D. Vernon-Bido, A. Collins</i>	
CAPTURING THE SECURITY EFFECTS OF NETWORK SEGMENTATION VIA A CONTINUOUS-TIME MARKOV CHAIN MODEL.....	182
<i>N. Wagner, C. Sahin, J. Pena, J. Riordan, S. Neumayer</i>	
A MODEL FOR USE IN THE PROGNOSIS OF TENDINOPATHY	194
<i>T. Stevens, J. Szivek, L. Latt, H. Schmitz, A. Zuniga, R. Witte, M. Taljanovic</i>	
DURABLE SOLUTIONS AND POTENTIAL PROTRACTION: THE SYRIAN REFUGEE CASE.....	203
<i>D. Vernon-Bido, J. Padilla, E. Frydenlund, D. Earnest</i>	
Author Index	