16th Communications and Networking Symposium

(CNS 2013)

2013 Spring Simulation Multi-Conference (SpringSim'13)

Simulation Series Volume 45 Number 3

San Diego, California, USA
7-10 April 2013

Editors:

Hassan Rajaei
Abdolreza Abhari

ISBN: 978-1-62748-031-4

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.

© 2013 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. (2013)

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: 978-1-62748-031-4
PRINTED IN THE UNITED STATES

TABLE OF CONTENTS

Accurate Heavy Tail Distribution Approximation for Multifractal Network Traffic 1
Jeferson Wilian De Godoy Stênico, Lee Luan Ling
A Recommendation System for Twitter Users in The Same Neighborhood 8
Meshary Al Meshary, Abdolreza Abhari
Modeling the Access Market of the Two-Sided Ultra Fast Broadband Platform in New Zealand 13
Farhaan Mirza, Fernando Beltrán
Tagging and Folksonomies for Information Retrieval in Web 2.0 19
Poornima Prabhu, Meshary Al Meshary, Abdolreza Abhari
Multifaceted Modeling and Simulation Framework for System of Systems Using HLA/RTI 25
Byeong Soo Kim, Chang Beom Choi, Tag Gon Kim
Event Detection and Trending in Multiple Social Networking Sites (Extended Abstract) 32
Shakira Banu Kaleel, Meshary Al Meshary, Abdolreza Abhari
Using an Agent-Based Friend Circle Creator Model to Analyze Drivers of Consumer Choice: Network Effects Vs. Value Proposition 37
Farhaan Mirza, Fernando Beltrán
Performance Analysis of Current Data Hiding Algorithms for VoIP 42
Harrison Neal, Hala El Aarag
Secure Scheme Against Data Dropping 49
Thouraya Bouabana-Tebibel, Nidal Tebibel, Selma Zemmouri
Toward Authorization as a Service: A Study of the XACML Standard 55
Romain Laborde, François Barrère, Abdelmalek Benzekri
Hash Chains to Secure Proactive Protocols 62
Thouraya Bouabana-Tebibel, Khadidja Ayad
P2P Grid Technology for Virtual Classrooms and Laboratories 69
Hassan Rajaei, Nada Hakami
Simulation of Mobile Networks using Discrete Event System Specification Theory 79
Mohammad Moallemi, Gabriel Wainer, Shafagh Jafer, Gary Boudreau, Ronald Casselman
DEVS-based Modeling of Coordinated Multipoint Techniques for LTE-Advanced 87
Misagh Tavanpour, Gabriel Wainer, Gary Boudreau, Ronald Casselman
BGSU Grid: An Experimental and Educational Grid Environment 94
Hassan Rajaei, Amber Dhavale, Moheeb Alwarsh, Peter Dillon
A Hybrid Topology Discovery Protocol for Mobile Backhaul 103
Jin Seek Choi
Visions of the Future Aeronautical Data Network 107
M. Ehammer
Putting Logic in Modeling of Biological Neuron – A New Framework 116
Aftab Ahmad, Richard Wells
Author Index