International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2019)

2019 Summer Simulation Multi-Conference (SummerSim'19)
Simulation Series Volume 51 Number 7

Berlin, Germany 22-24 July 2019

ISBN: 978-1-5108-8479-3

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.

© 2019 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. (2019)

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 11315 Rancho Bernardo Road, Suite 139 San Diego, CA 92127 USA www.scs.org

ISBN: 978-1-5108-8479-3 PRINTED IN THE UNITED STATES

TABLE OF CONTENTS

INFLUENCE OF THE PERCEIVED DATA SECURITY, CREDIBILITY, TRUST AND	
CONFIDENCE ON THE USAGE FREQUENCY OF INTERNET SERVICES AND THE	
PROVISION OF SECURITY MEASURES	1
Erik Massarczyk, Peter Winzer	
PERFORMANCE OF MULTI-PAIR TWO-WAY FULL-DUPLEX MASSIVE MIMO RELAY	
SYSTEMS WITH DIRECT LINK	13
Mahmoud Zaher, Engy Maher, Ahmed El-Mahdy	
JOINT DETECTION AND THE AOA ESTIMATION OF NONCOHERENT SIGNALS IN MULTI-	
ELEMENT ANTENNAS	26
Olesya Bolkhovskaya, Alexander Maltsev, Victor Sergeev	
INFLUENCE OF THE TRACE RESOLUTION AND LENGTH IN THE COST OPTIMIZATION	
PROCESS IN CLOUD COMPUTING	32
Javier Garcia, Joaquín Entrialgo, José Luis Díaz, Manuel García, Daniel Garcia	
PERFORMANCE EVALUATION OF FRAMEWORKS FOR IBEACON-BASED LOCALIZATION	
USING BLUETOOTH LOW ENERGY	45
Paolo Bellavista, Antonio Corradi, Mattia Ferrari, Luca Foschini, Pasquale Carlo Maiorano Picone, Rebecca Montanari	
RESEARCH AND IMPLEMENTATION OF EFFICIENT PARALLEL PROCESSING OF BIG	
DATA AT TELBE USER FACILITY	52
Mohammed Bawatna	
WHICH IS BETTER FOR LEARNING: A WEB-BASED EDUCATIONAL APPLICATION OR AN	
EDUCATIONAL GAME?	58
Konstantina Chrysafiadi, Spyros Papadimitriou, Maria Virvou	
3D CHANNEL MODELING AND CHARACTERIZATION FOR HYPERSURFACE	
EMPOWERED INDOOR ENVIRONMENT AT 60 GHZ MILLIMETER-WAVE BAND	64
Rashi Mehrotra, Rafay Iqbal Ansari, Alexandros Pitilakis, Shuai Nie, Christos Liaskos, Nikolaos Kantartzis, Andreas Pitsillides	
THE EFFECT OF GLOBAL AND LOCAL INFLUENCE MODELS ON THE QUALITY OF	
RECOMMENDATIONS	70
Nikolaos Mantas, Malamati Louta, Iraklis Varlamis, Magdalini Eirinaki	
A NOVEL ENERGY OPTIMIZATION APPROACH FOR ARTIFICIAL INTELLIGENCE-	
ENABLED MASSIVE INTERNET OF THINGS	78
Ali Hassan Sodhro, Mohammad S.Obaidat, Sandeep Pibhulal, Gul Hassan Sodhro, Noman Zahid, Abhimanyu	
Rawat	
Author Index	