Table of Contents

Preface .................................................................................................................................................. xix

Acknowledgment .................................................................................................................................. xxiv

Chapter 1
Modelling and Simulation of Game Applications in Ad Hoc Wireless Networks Routing .............. 1
Omar Raoof, Brunel University, UK
Hamed Al-Raweshidy, Brunel University, UK

Chapter 2
Simulating Game Applications in Mobile IPv6 Protocol ................................................................. 22
Omar Raoof, Brunel University, UK
Hamed Al-Raweshidy, Brunel University, UK

Chapter 3
Evaluation Model for Vertical Handoff Algorithms ........................................................................... 41
Alexander Garcia D., Universidad Autonoma de Occidente, Colombia,
Lina Escobar P., Universidad Autonoma de Occidente, Colombia
Andres Navarro C., Universidad ICESI, Colombia
Fabio G. Guerrero, Universidad del Valle, Colombia
Enrique Stevens-Navarro, Universidad Autonoma de San Luis Potosi, Mexico

Chapter 4
Simulation of Vertical Handoff Algorithms for Heterogeneous Wireless Networks ....................... 62
Alexander Garcia D., Universidad Autonoma de Occidente, Colombia
Andres Navarro C., Universidad ICESI, Colombia
Adriana Arteaga A., Universidad ICESI, Colombia
Fabio G. Guerrero, Universidad del Valle, Colombia
Enrique Stevens-Navarro, Universidad Autonoma de San Luis Potosi, Mexico

Chapter 5
Modeling and Simulation of IEEE 802.11 Wireless LANs: A Case Study of a Network Simulator ....... 85
Nurul I. Sarkar, Auckland University of Technology, New Zealand
Roger McHaney, Kansas State University, USA
Chapter 6
OPNET Simulation Setup for QoE Based Network Selection .................................................. 100

Umar Toseef, University of Bremen, Germany
Manzoor Ahmed Khan, Technical University of Berlin, Germany

Chapter 7
Simulation of Multihop Wireless Networks in OMNeT++ ..................................................... 140

Alfonso Ariza, Universidad de Málaga, Spain
Alicia Triviño, Universidad de Málaga, Spain

Chapter 8
Simulation of a Dynamic-Noise-Dependent Probabilistic Algorithm in MANETs .................. 158

Hussein Al-Bahadili, Petra University, Jordan
Alia Sabri, Applied Science University, Jordan

Chapter 9
A Location-Based Power Conservation Scheme for MANETs: A Step towards Green
Communications ...................................................................................................................... 178

Hussein Al-Bahadili, Petra University, Jordan
Azmi Halasa, The Arab Academy for Banking and Financial Sciences, Jordan

Chapter 10
Comparing Various Route Discovery Algorithms in Ad Hoc Wireless Networks ................. 196

Hussein Al-Bahadili, Petra University, Jordan
Abdel Rahman Alzoubaidi, NYIT Amman Campus, Jordan
Ali Al-Khalidi, Yanbu University College, Saudi Arabia

Chapter 11
Simulation in Amateur Packet Radio Networks ...................................................................... 216

Miroslav Škorić, University of Novi Sad, Serbia

Chapter 12
Modeling of TCP Reno with Packet-Loss and Long Delay Cycles ...................................... 257

Hussein Al-Bahadili, Petra University, Jordan
Haitham Y. Adarbah, Gulf College, Oman

Chapter 13
Wireless Identity Management: Multimodal Biometrics and Multilayered IDM .................. 284

Abdullah Rashed, University of Minho, Portugal
Henrique Santos, University of Minho, Portugal

Chapter 14
Security Management and Simulation of Mobile Ad Hoc Networks (MANET) ................. 297

Ali H. Al-Bayatti, De Montfort University, UK
Hilal M. Al-Bayatti, Applied Science University, Bahrain
Chapter 15
Investigating the Performance of the TSS Scheme in Noisy MANETs ........................................... 315
Hussein Al-Bahadili, Petra University, Jordan
Shakir M. Hussain, Petra University, Jordan
Ghassan F. Issa, Petra University, Jordan
Khaled El-Zayyat, Al-Ahliyya Amman University, Jordan

Chapter 16
A Hybrid Port-Knocking Technique for Host Authentication ............................................................ 336
Ali H. Hadi, Philadelphia University, Jordan
Hussein Al-Bahadili, Petra University, Jordan

Chapter 17
The State of the Art and Future Prospective of the Network Security.................................................. 358
Alaa Hussein Al-Hamami, Amman Arab University, Jordan

Chapter 18
Toward Distributed QoS Driven Wireless Messaging Infrastructure ...................................................... 377
Souheil Khaddaj, Kingston University, UK
Bippin Makoond, Cognizant Technology Solutions, UK

Chapter 19
A Simulation Model for Large Scale Distributed Systems ........................................................................ 392
Ciprian Dobre, University POLITEHNICA of Bucharest, Romania

Chapter 20
Future Approach of Next Generation Cellular Mobile Communications .................................................. 427
Muzhir Shaban Al-Ani, Amman Arab University, Jordan

Chapter 21
Evaluation of Simulation Models ........................................................................................................... 442
Sattar J. Aboud, Iraqi Council of Representatives, Iraq

Chapter 22
Analyzing and Evaluating Current Computer Networks Simulation Models ......................................... 459
Jafar Ababneh, World Islamic Sciences and Education University, Jordan
Hussein Abdel-Jaber, World Islamic Sciences and Education University, Jordan
Firas Albalas, University of Jadara, Jordan
Amjad Daoud, World Islamic Sciences and Education University, Jordan

Chapter 23
Network Simulation Tools for Supporting Teaching in Computer Networks............................................. 479
Shao Ying Zhu, University of Derby, UK
Gerald Schaefer, Loughborough University, UK