PFI

Imperial College Press

World Scientific Press

School of Information Studies
SYRACUSE UNIVERSITY

Call for Book Chapters:

Wireless Grid Edgeware

Emerging Trends in Network and Mobile Cloud Theory, Application, Architecture and Security for the 'Internet of Things'

Lee W. McKnight & Tyson T. Brooks
Syracuse University iSchool, Editors

Chapter Submission Deadline: January 15, 2014
Revised Final Chapters Due: March 15, 2014

Introduction

Wireless communication technologies are advancing at a high rate, enabling real-time multimedia and sensor services provided by mobile broadband Internet on various devices creating a grid network of 'Internet of Things' (IoT). The IoT paradigm and machine to machine communication and control are rapidly gaining ground in wireless telecommunications. Wireless grid platforms enable heterogeneous resource discovery and sharing through the formation of wireless grid virtual networks. Wireless grids are dynamic virtual cognitive networks that exist only while they are in use. Users are able to share and manage available and accessible hardware and software resources through 'Edgeware' applications. Edgeware refers to the software capability to deploy network 'edge' devices (aka nodes) as acting servers, hence the 'serverless' or 'infrastructureless' logic of the architecture. Wireless grid platforms and Edgeware components are beginning to build the foundations for IoT architectures. The last few years have experienced a rapid growth in research on Wireless Grids and Edgeware communications and networks, confirming the scalability and extensibility of the core concepts, and high energy, network, and economic efficiency potential of the approach. Researchers and science-practitioners are currently envisioning different properties of wireless grids and Edgeware networks for future IoT architectures. The expectations are increasing about what the current and future generations of wireless grids, Edgeware technology and IoT architectures can do to enable a wide range of novel applications and organizational business models.

Objective of the Book

The objective of the book is to increase the visibility of current research and emergent trends in theory, application, architecture and security in Wireless Grid Edgeware networks and IoT architectures based on theoretical aspects and studies of practical applications. This book will cover fundamental to advanced concepts necessary to grasp Wireless Grids, Edgeware and IoT current issues, challenges and solutions as well as future trends in IoT infrastructures. In addition, the educational value of this book is to aim at serving as a virtual and effective bridge between academic research on theory, and science-practitioners work with Wireless Grids, Edgeware and IoT technology. Furthermore it is anticipated that this work will be a primary source of reading and key textbook for students wishing to become involved in Wireless Grids, Edgeware and IoT research. Additionally, the book is to gather the knowledge and experience of expert researchers who work in the area of wireless networks, clouds, grids, IoT and information systems and elicit their knowledge in a collaboration that leads to an edited book that will be one of the first of its kind. The consecutive chapters of this book will present topics related to the actual Wireless Grids, Edgeware and IoT architectures that work together to carry out coordinated functions. The chapters will also present new theory and applications devoted to the improvement and development of Wireless Grids, Edgeware and IoT networks.

Recommended topics include, but are not limited to, the following:

• Wireless Grid Edgeware networks and architecture designs	• Open Control Architecture Models for IoT
• Edge computing architectures and security issues	• Spread spectrum communication for wireless grid Edgeware platforms
• Security, privacy, and resource management in wireless grid, Edgeware and IoT computing networks	• Emerging Trends in User and Device Behavior in IoT computing networks
• Cloud-designs for IoT	• Trust models for IoT systems
• Mobile Cloud to Cognitive Wireless Edge services	• Channel characterization and modeling for wireless grid Edgeware platforms
• Open specifications and Open APIs for wireless grid edgeware platforms	• Privacy, trust and security architectures for wireless grid Edgeware platforms
• Security and privacy issues in mobile cloud and grid computing	• Information theoretic approaches for wireless grid Edgeware platforms
• Security, privacy, trust and resource Management in Mobile Computing Systems	• Wireless Grids Edgeware in Cognitive (Smart) Service System Platforms
• Security challenges in wireless grid networks	• Security and privacy issues in mobile cloud and grid computing
• Security challenges in IoT architectures and networks	• Security and privacy issues with mobile applications
• Security, privacy, trust and resource allocation in Cognitive Radio Networks	• Trust models for Wireless Grid Edgeware systems
• Security and privacy models for Ambient Intelligence Environments	• Emerging Wireless Grid Edgeware security issues
• Security in Embedded Devices for Wireless Grid Edgeware Applications	• Emerging Trends in Wireless Grids Edgeware architectures
• Information Policy Challenges of Wireless Grids	• Emerging Trends in Wireless Grid Edgeware applications (wiglets and gridlets)
• Learning Wireless Grids	• Modeling Wireless Grids

Target Audience

The target audience of this book will be composed of researchers, professionals and students working in the field of wireless technologies, information system theory, systems engineering, security system designers, university professors and researchers involved in Wireless Grids, Edgeware and IoT related networking. Through a collection of essays, the book will be written for graduate students, researchers, academics, and industry practitioners who want to improve their understanding of the latest developments of Wireless Grids, Edgeware and IoT networks. The book will include a section of chapters on the fundamentals of Wireless Grids, Edgeware and IoT networks so that the general readers can readily grasp the core ideas in this area of research, and increasingly, application.

Submissions

Inquiries and submissions may be forwarded (Word document) to: Lee W. McKnight & Tyson T. Brooks* School of Information Studies, Syracuse University lmcknigh@syr.edu; ttbrooks@syr.edu

Submission Procedure
Researchers and practitioners are invited to submit on or before **December 1, 2013**, a 2-3 page chapter proposal clearly explaining the mission and concerns of his or her proposed chapter. Authors of accepted proposals will be notified by **December 15, 2013** about the status of their proposals and sent chapter guidelines. Full chapters are expected to be submitted by **January 15, 2013**.

Important Dates

December 1, 2013:	Proposal Submission Deadline
December 15, 2013:	Notification of Acceptance
January 15, 2014:	Chapter Submission
February, 15, 2014:	Chapter Edits
March 15, 2014:	Final Chapter Submission
October 15, 2014:	Publication

Publisher

Imperial College Press/World Scientific Press is publishing this volume as part of a five volume book series by Lee W McKnight, including a three volume reference handbook suitable for library use, and a business strategy guide. For additional information regarding the publisher, please visit http://www.icpress.co.uk.

Acknowledgment

Support and engagement with this work by National Science Foundation (NSF) Directorate of Engineering Industrial Innovation and Partnerships (IIP) Partnerships for Innovation Program (PFI) (grant #'s 091793 and 0227879), WGC, VRC, and other Wireless Grid Innovation Testbed (WiGiT) campus, company and community partners led by Syracuse University iSchool is gratefully acknowledged. More information on WiGiT may be found at: http://wigit.ischool.syr.edu

*The views expressed by the editors are not necessarily shared by any institution with which they may be affiliated.