

# **Call for Book Chapters for the Springer-Verlag Handbook:**

## **“Resource management in Mobile Computing Environments”**

### *Editors*

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The need for a reliable management of resources in mobile computing environments, facilitating ubiquitous availability and efficient access to large quantities of distributed resources, has become apparent, as the number of people that communicate and collaborate computationally over the Internet, via different accessing systems and mobile devices, has increased. Mobile Computing paradigm is set to drive technology over the next decade and integrate resources availability through the 3As (Anywhere, Anything, Anytime). Notwithstanding, there are a lot of challenges to meet, in order to have Mobile Computing paradigm applicable in all aspects and in an efficiently utilized manner. In this context, the book aims at presenting state-of-the-art research and future trends on resource management in mobile and heterogeneous networking systems and applications. It will combine mobile communications and resource management field, in a common research ground, in order to present various research concepts that contribute to enable highly efficient management of networking resources. The major subjects of the book will cover resource management methodologies, modeling, analysis and efficient resource management of mobile computing environments, newly introduced technologies, facing the scarceness of resources and model formulation for resources management in wireless networking systems.

Topics of interest include but are not limited to:

- Failure-aware resource management for high-availability computing in mobile and opportunistic systems
- Agent-based approaches for high performance computing systems
- Coordinated control for Mobile high-availability computing

- Resource management and efficient resource manipulation
- Resource availability for high performance and reliability computing
- System resource reliability and dependable computing
- Self-Managing and Reconfigurable Systems
- Context-aware computing for high performance
- Distributed Mobile Opportunistic systems and Networking
- Mobile Urban Sensing and Crowdsensing
- Cloud Computing for high-availability computing
- Performance Evaluation of computing systems
- Resource management in Clusters and Grids
- Opportunistic, Delay-tolerant and Hybrid Networks
- Mobility models for opportunistic networks
- Novel Architectures, supporting Middleware, Prototypes and Testbeds
- Dissemination and Caching in Opportunistic Networks
- Social-aware Opportunistic Networking
- Security, Trust, Privacy and Cooperation in Opportunistic Networks
- Analysis of Opportunistic Protocols
- Any Mobile Opportunistic Networks technology for the provision of reliable applications/ services and high-performance computing
- Systems' Modeling and Simulation for measuring and enabling high-performance Mobile Opportunistic systems
- Large Scale Mobile Opportunistic Systems and schemes for high-performance computing
- Resource management specific versatile systems for content-aware networks
- Resource management through content-driven virtualization of networks
- Middleware(s) for high-performance computing in Mobile Opportunistic systems
- Opportunistic social networking for disaster and emergency situations, Mobile Opportunistic healthcare in remote regions
- Distributed architectures for system reliability and Self-configurable Computing
- Wireless systems simulation based on Performance Analysis
- Radio resource management in cognitive radio networks
- Peer-to-Peer live media streaming techniques to mobile devices

- Peer-to-Peer and adaptive streaming techniques for mobile terminals
- Achieving context-awareness for mobile devices with Peer-to-Peer systems
- Resource management efficiency according to content-aware type of network (based on object, address, type)
- Resource management in ubiquitous content-aware networking environments
- Resource allocation in mobile computing environments based on cognitive radio
- Networking architectures for cognitive radio networks
- Energy-efficient protocols for cognitive radio networks
- Dynamic spectrum access in mobile cognitive radio networks
- Cognitive radio networks in TV White Spaces
- Quality of Service provision in cognitive radio networks
- Resource management in cognitive radio networks

*We strongly welcome other topic suggestions, dealing with resource management in mobile computing environments.*

Sections of the above mentioned topics will be hosted under the following:

**Section I — Introduction and Applications of Mobile Computing**

**Section II — Location-based Management**

**Section III— Mobile and Ad Hoc Wireless Networks**

**Section IV— Spectrum manipulation methodologies**

**Section V— Peer-to-Peer systems for Mobile Computing**

**Section VI— Mobile Cloud resource management**

**Section VII— Resource management in mobile cognitive radio networks**

**Section VIII— Resource management in content aware networks**

**Section IX— Resource and Power management in Mobile Computing Systems**

**Section X— Performance Evaluation of Mobile Computing Systems**

## Tentative schedule/Important Dates

### Schedule & Deadlines

- **25<sup>th</sup> April 2013**  
Notification for intending to contribute with a book chapter to help us in the review process planning of the book (author team, preliminary title and very brief abstract of max. 250 words) submission via e-mail: [cfcspringer2013@gmail.com](mailto:cfcspringer2013@gmail.com)
- **30<sup>th</sup> May 2013**  
1st manuscript version (*also authors who did not notify us, regarding their intension to contribute, are invited to submit*)
- **15<sup>th</sup> Sept. 2013**  
Review comments for 1st manuscript version and notification of acceptance
- **15<sup>th</sup> November 2013** (subject to authors' delays and editorial unforeseen constraints)  
2nd manuscript version, including review comments and final notification of acceptance
- **1<sup>st</sup> December 2013**  
Final manuscript

### Manuscript Preparation

- please follow the manuscript formatting guidelines below and only submit the original version (in Microsoft word) in the submission system
- each final manuscript should be 15-25 pages long (depending on the number of submissions longer manuscripts will also be accepted)
- please prepare your manuscript according to the following guidelines: <http://www.springer.com/authors/book+authors?SGWID=0-154102-12-417900-0>
- download the document (in pdf) for the preparation of your manuscript, according to the following guidelines:
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- submit the proposal of your chapter(s) via e-mail: [cfcspringer2013@gmail.com](mailto:cfcspringer2013@gmail.com)