



Call for Book Chapters for the Springer-Verlag Handbook:

“Internet of Things (IoT) in 5G Mobile Technologies”

Editors

Constandinos X. Mavromoustakis, University of Nicosia, Cyprus

George Mastorakis, Technological Educational Institute of Crete, Greece

Jordi Mongay Batalla, National Institute of Telecommunications, Poland

As an increasing number of people communicate and collaborate over the Internet, via different accessing systems and mobile devices, the need for new wireless networks infrastructures, facilitating ubiquitous availability and efficient access to large quantities of distributed resources, has become manifest. The integration of resources availability through the 3As (Anywhere, Anything, Anytime) will become a reality, through the 5G mobile technologies. Notwithstanding, there are a lot of challenges to meet, in order to have the 5G mobile technologies applicable in an efficiently utilized manner. The most complicated and at the same time challenging paradigm is the Internet of Things (IoT) that poses a fertile ground and a hot Research and Development (R&D) area for Pervasive and Ubiquitous computing, being projected as a future growth area in both academia and industry. In this context, this book aims at presenting the current state-of-the-art research and future trends on various aspects of IoT in 5G mobile technologies. It will combine the emerging mobile communications and IoT paradigms, in a common research ground, in order to present various research concepts. The major subjects of the book will cover methodologies, modeling, analysis and newly introduced mobile technologies.

Topics of interest include but are ***not limited*** to:

- Machine-to-Machine (M2M) Data Processing and Controlling Networking at the Edge (Sensing and sensor signal processing, sensor networking protocols, energy harvesting and energy management);
- Middleware (System and network architectures, middleware for heterogeneous sensors, devices & protocols, QoS provisioning, security issues [data confidentiality, integrity, network resilience, etc.]);

- Applications and case studies of M2M communications and IoT ecosystems;
- Analytics and management (Data management and analytics: data-stream, sharing, mining etc, business intelligence from sensor data, social network analysis in IoT)
- M2M Infrastructure (Big Data Storage and processing, management and analysis, back-end (cloud based) infrastructure, distributed processing);
- Related applications (Novel application developments and case studies in energy, healthcare, logistics and transportation, manufacturing etc., test-beds and field trials etc.);
- IoT/M2M/M2M/D2D Management (Device management evolutions, self-coordinated and autonomous management, service harmonization etc.);
- Security in Smart Grids and Smart Spaces for smooth IoT deployment in 5G
- Advanced indexing, naming, and addressing of the IoT in 5G;
- Network-distributed signal processing for security solutions in 5G (joint security and privacy aware protocol design, Test-bed and performance metrics of security solutions in IoT, Deployment and performance evaluation of secure IoT in 5G, Architectures for secure hardware/software IoT systems etc.);
- Network control systems for IoT applications;
- Inter-networking with other technologies and systems (Network Functions Virtualization (NFV) and Cloud Computing as well Mobile Cloud Computing implementation/wearable devices in IoT using 5G etc.);
- Next generation of open platforms and novel hardware for the IoT in 5G access technology, Network middleware and protocols to facilitate Smart environments, Innovative sensing devices and innovative uses of existing sensors (e.g. RFID), use of mobile, wireless, visual, and multi-modal sensor networks in intelligent systems;
- Smart Devices and their inter-communication with other devices/spaces (ie. smart glasses' communication with smart watch and/or smart wearable devices, Grid and Cloud-oriented devices etc.) including open interfaces and close environments;
- Management of smart services (discovery, publishing) in IoT ecosystems (smart shopping, house, factory, etc.);
- Interconnection of IoT with social network environments (Multimedia transmission, Big data transfer);
- Performance and scalability issues of IoT ecosystems.

We strongly welcome other topic suggestions, dealing with IoT in emerging mobile computing environments.

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

Section I — Introduction and Applications of IoT in 5G access technologies

Section II — Architecture of IoT in 5G access technologies

Section III— 5G and related technologies

Section IV— IoT in Smart Ambient Systems within 5G

Section V— IoT-Cloud oriented systems for 5G environments

Section VI— IoT smart resource management in 5G

Section VII— 5G and cognitive radio in Smart environments

Section VIII—Resource and Power management in 5G networks

Section IX— Performance Evaluation of IoT-related systems and applications using 5G technologies

Schedule & Deadlines

- **30th April 2015**
Chapter proposal (max. 2-pages)/Intention to submit a chapter
 - **Notification of proposal acceptance 10 May or earlier**
- **20th June. 2015**
Full chapter submission via e-mail: cfcbooksp@gmail.com and notification of acceptance and via Easychair (<https://easychair.org/conferences/?conf=iot5gmob>)
- **31st July. 2015**
Review comments
- **30th Sept. 2015**
Submission of the revised version
- **30th Oct. 2015**
Final acceptance notification Final manuscript
- **15th Nov. 2015**
Final manuscript

Manuscript Preparation

- Please follow the manuscript formatting guidelines below and submit the original version (in **Microsoft word**) and or **LaTeX** format as per the guidelines (URL: [www.cs.unic.ac.cy/cmavrom/T1-book\(IoT\).zip](http://www.cs.unic.ac.cy/cmavrom/T1-book(IoT).zip)).
- Each final manuscript should be 18-25 pages long (formatted). 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/gp/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324>

- Download the Consent-to-Publish (CTP) form and along with your chapter sign, scan and submit it simultaneously. The form can be found at:
[http://www.cs.unic.ac.cy/cmavrom/CTP_Mavrom_IoT5G\(CTP_put_your_name_here\).pdf](http://www.cs.unic.ac.cy/cmavrom/CTP_Mavrom_IoT5G(CTP_put_your_name_here).pdf)
- Submit the proposal of your chapter(s) via e-mail: cfcbooksp@gmail.com and via ***EasyChair*** (The submission Web site for IoT5GMob is
 - <https://easychair.org/conferences/?conf=iot5gmob>
- Note that both (**email and via EasyChair**) submission methods should be used for cross confirmation.