

Special Issue on **Advances in Mobile Networking for IoT Leading the 4th Industrial Revolution**

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The explosion of connected lightweight devices is starting the era of the Internet-of-Things (IoT) where physical world devices have a digital presence on the Internet. Today, connected embedded devices are being placed everywhere in our everyday life, and tens of billions of these devices are expected to be connected to the Internet by 2020. Technologies for Thing-to-Thing (T2T) communication between these devices, along with machine learning, artificial intelligence, big data, and cellular IoT support technologies, will be one of the key enablers for the truly autonomous and distributed IoT leading the 4th industrial revolution. However, there are still several technical challenges remaining before the next industrial revolution. For example, most IoT devices communicate via wireless links, and many of them are potentially mobile, leading to the inherent disadvantage of unreliable, unstable and intermittent data connection. Moreover, how to efficiently distribute and manage networking resources for more scalable services (possibly with thousands of devices within interference range), as well as how to improve the energy efficiency and bandwidth utilization of the whole system, and how applications can run efficiently on top of such systems, are significant challenges impeding the development and implementation of truly autonomous and distributed applications and services for IoT. Furthermore, we are still in need for novel application-level protocols, frameworks, and solutions that could catalyze the coming of Industry 4.0 and 4th industrial revolution.

This special issue is intended to provide a forum for presenting, exchanging and discussing the most recent advances in mobile and autonomous networking between devices for IoT, including application-level protocols, frameworks and solutions, and contributing these advances to the research community. It will bring together leading researchers, industry professionals, and research students to seek solutions to the key challenges such as those mentioned above, and help industry and academia better understand recent advances and potential research directions in leveraging mobile and T2T networking for IoT.

Potential topics include but are not limited to the following:

- ▶ New networking architectures and implementations for Industry 4.0 and IoT
- ▶ Application-level protocols, frameworks and solutions for IoT
- ▶ Modeling and performance analysis for large-scale T2T networking in IoT
- ▶ Wireless communication and networking for large-scale T2T networking in IoT
- ▶ Resource allocation and energy efficiency for large-scale T2T networking in IoT
- ▶ QoS and QoE provisioning for large-scale T2T networking in IoT
- ▶ Security issues in large-scale T2T networking for IoT
- ▶ Machine learning and artificial intelligence for large-scale T2T networking in IoT
- ▶ Big Data solutions for IoT mobile networking
- ▶ Latest progresses in cellular IoT support (LTE-Narrowband IoT, LTE-M)

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/misy/amni/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Jeongyeup Paek, Chung-Ang University,
Seoul, Republic of Korea
jpaek@cau.ac.kr

Guest Editors

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andrea.gaglione@digicatapult.org.uk

Omprakash Gnawali, University of
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gnawali@cs.uh.edu

Marcos A. Vieira, Universidade Federal
de Minas Gerais, Belo Horizonte-MG,
Brazil
mmvieira@dcc.ufmg.br

Shuai Hao, AT&T Labs Research, New
Jersey, USA
haos@research.att.com

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