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**SPECIAL ISSUE ON**  
**Advanced Industrial Networks with IoT and Big Data**

**Overview:**

Internet of Thing (IoT) has the potential to deliver exciting things across many sectors, from industry to social media and home. These networks of things are designed to measure real-world events and expected to control more than two billion connected devices to the internet by 2020. Due to the advantage of low-cost, easy to deploy, energy efficiency and mobility compared to the traditional applied field bus, industrial wireless sensor network has become a promising approach for manufactures as well as plant designers. With the paradigm of IoT, Industrial Wireless Sensor Networks (IWSNs) are evolving to the global interconnection between managements and factory products in large scale industry. It serves a link between data collected from heterogeneous sources on site and business backend.

Recently, IWSN integrated with IoT and Big data is an attractive choice for industrial processes. The large scale industry consists of dense wireless devices such as RFID tags for machine identification, sensors used for large scale rotational equipment monitoring and fault diagnosis and many more. With the data acquisition across heterogeneous sources and intelligent processing of gathered data, one important aspects is to predict any dangerous situation like leakage of toxic gas in large scale pipeline. Furthermore, the layout design procedure in industry to ensure connectivity and information flow is also a part of IoT paradigm. Thus, the main concerns of IWSN integrated with IoT and Big data are capability, reliability and cost. In this special issue, we are interested in exploring recent emerging technologies and research developments on industrial networks and intelligent systems to advance the step towards the smarter plants integrated with IoT and Big data. We welcome paper submissions from both academic and industrial societies.

**Topics**

Topics of interest include, but are not limited to, the following scope:

<ul style="list-style-type: none"> <li>- Industrial Internet of Things</li> <li>- Software defined networks for industrial networks</li> <li>- IoT and Future Internet Architectures</li> <li>- Cloud Computing For Intelligent Industrial Processing Management</li> <li>- Intelligent Middleware for Industrial Networks and Systems Integration</li> <li>- Intelligent Energy Harvesting Technologies for Industrial Networks</li> <li>- Big Data and Cloud Computing, Large Scale Industrial Plants on the Cloud</li> </ul>	<ul style="list-style-type: none"> <li>- Big Data Analysis on Communications-Surveillance Data, Metadata, and Multimedia</li> <li>- Sensors Data Management, IoT Mining and Analytics</li> <li>- Distributed Sensing and Control, Routing and Control Protocols</li> <li>- Crowd-Sensing, Human Centric Sensing</li> <li>- Smart Grid, Energy Management</li> <li>- Intelligent Energy Harvesting Technologies for Industrial Networks</li> </ul>
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## Important Dates

- **Manuscript submission deadline: 30 March 2017**
- **First Round Notification: 30 May 2017**
- **Final Notification: 30 July 2017**

## Submission Procedure

Authors should follow the MONET Journal manuscript format described at the journal site. Manuscripts should be submitted on-line through <http://www.editorialmanager.com/mone/>.

A copy of the manuscript should also be emailed to the Guest Editors at the following email addresses:

yanzhang@ieee.org; m.mukherjee@ieee.org; clmg@is.uec.ac.jp; zhou.mingtuo@ieee.org

## Guest Editors:

Yan Zhang, Simula Research Laboratory & University of Oslo, Norway

Mithun Mukherjee, Guangdong University of Petrochemical Technology, China

Celimuge Wu, University of Electro-Communications, Japan

Ming-Tuo Zhou, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China



**Yan Zhang** is currently Head of Department, Department of Networks at Simula Research Laboratory, Norway; and an Adjunct Associate Professor at the Department of Informatics, University of Oslo, Norway. He received a PhD degree in School of Electrical & Electronics Engineering, Nanyang Technological University, Singapore. He is an associate editor or on the editorial board of a number of well-established scientific international journals, e.g., Wiley Wireless Communications and Mobile Computing (WCMC). He also serves as the guest editor for IEEE Transactions on Industrial Informatics, IEEE Communications

Magazine, IEEE Wireless Communications, IEEE Transactions on Dependable and Secure Computing, IEEE Internet of Things journal, IEEE Systems Journal, IEEE Intelligent Systems. He is currently serving the Book Series Editor for the book series on "Wireless Networks and Mobile Communications" (Auerbach Publications, CRC Press, Taylor and Francis Group). He serves as chair positions in a number of conferences, including IEEE SmartGridComm 2015, IEEE CloudCom 2015, IFIP NTMS 2014, CHINACOM 2014, IEEE CLOUDCOM 2013, IEEE GREENCOM 2013, IEEE AINA 2011, IWCMC 2010/2009. He serves as TPC member for numerous international conference including IEEE INFOCOM, IEEE ICC, IEEE GLOBECOM, IEEE WCNC, and IEEE

SMARTGRIDCOMM. His current research interest include: wireless networks, and communications solutions for reliable and secure cyber-physical systems (e.g., healthcare, transport, smart grid). In the related topics, he has extensive research experience and publication track record. He publishes regularly in prestigious journals. He has received 5 Best Paper Awards. He is a senior member of IEEE, IEEE ComSoc, and IEEE VT society.



**Mithun Mukerjee** (M'10) received the B.E. degree in electronics and communication engineering from University Institute of Technology, Burdwan University, India in 2007, the M.E. degree in information and communication engineering from Indian Institute of Science and Technology, Shibpur, India in 2009, and the Ph.D. degree in electrical engineering from Indian Institute of Technology Patna, India in 2015.

Currently, he is a Postdoctoral Fellow in the Guangdong Provincial Key Lab of Petrochemical Equipment Fault Diagnosis, Guangdong University of Petrochemical Technology, China. He was an Assistant Professor in the department of electronics and communication engineering, National Institute of Technology Hamirpur, India (2014-2015). His research interests include wireless sensor network, sensor network middleware, multimedia communication, device to device communication, and dynamic spectrum sharing.



**Celimuge Wu** received the M.E. degree from Beijing Institute of Technology, Beijing, China, in 2006, and the PhD degree from the University of Electro- Communications, Tokyo, Japan, in 2010. Since 2010, he has been an assistant professor at the Graduate School of Information Systems, the University of Electro-Communications. He has been serving as an expert member of IEICE Technical Committee on Communication Quality since 2013, and as a technical program committee member for many prestigious conferences including IEEE

GLOBECOM, IEEE ICC, IEEE VTC, IEEE PIMRC etc. He received IPSJ Digital Courier Funai Young Researcher Encouragement Award in 2011. His current research interests include wireless networks, networking architectures and protocols.



**Ming-Tuo Zhou** joined Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences (CAS), in September 2016 and now is the vice-chief engineer of the Key Lab of Wireless Sensor Network and Communication, CAS. He was a senior research scientist at the Smart Wireless Laboratory of National Institute of Information and Communications Technology (NICT) Singapore Representative Office during July 2004 to August

2016, and a research specialist of the Finland Government Program, Asian Institute of Technology during January to June 2004. He was the Technical Co-Editor of IEEE 802.16n and IEEE 802.16.1a, a voting member and technical contributor of the IEEE

802.11, 802.15, and 802.16 Working Groups, and a member of the Test and Certification Working Group of Wi-SUN Alliance. He has served as a Technical Program Committee member, Finance Chair, Local Arrangement Chair, and Session Chair at more than 39 international conferences including ICC, GLOBECOM, and PIMRC. His current research interests include wireless sensor networks, industrial Internet of things, Industry 4.0, cyber-physical systems, and 5G.



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