

ACM/Springer Mobile Networks & Applications (MONET)

Special issue on

Advanced Industrial Networks with IoT and Big Data

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 Bigdata 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 Bigdata 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 Bigdata. We welcome paper submissions from both academic and industrial societies.

List of interested research topics, but not limited:

- Industrial Internet of Things
- Software defined networks for industrial networks
- IoT and Future Internet Architectures
- Cloud Computing For Intelligent Industrial Processing Management
- Intelligent Middleware for Industrial Networks and Systems Integration
- Intelligent Energy Harvesting Technologies for Industrial Networks
- Big Data and Cloud Computing, Large Scale Industrial Plants on the Cloud
- Big Data Analysis on Communications-Surveillance Data, Metadata, and Multimedia
- Sensors Data Management, IoT Mining and Analytics
- Distributed Sensing and Control, Routing and Control Protocols
- Crowd-Sensing, Human Centric Sensing
- Smart Grid, Energy Management
- Intelligent Energy Harvesting Technologies for Industrial Networks

Submission:

Paper submission to this special issue should follow the author guidance and manuscript requirement of ACM/Springer Mobile Networks and Applications.

Important Dates:

Submission Deadline: 30 March 2017

First Round Notification: 30 May 2017

Final Notification: 30 July 2017

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

Mingtuo Zhou, Shenyang Institute of Automation Guangzhou Branch, 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.

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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.



Mingtuo Zhou joined Shenyang Institute of Automation Guangzhou Branch, Chinese Academy of Sciences in July 2015 and now is a Group Leader. 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 June 2015, and a research specialist of the Finland Government Program, Asian Institute of Technology during January to June 2004. He served as co-editor of book “Wireless Technologies in

Intelligent Transportation Systems” published by Nova Science Publishers in 2010 and “Millimeter-Wave Technology in Wireless PAN, LAN, and WAN” published by CRC Press in 2007. 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, a member of the Test and Certification Working Group of Wi-SUN Alliance, an expert member of Singapore IDA ITSC Sensor Network Task Group, an expert member of Singapore IDA TASC WG2 for home network and smart grid and WG6 for TV White Space, a representative of Dynamic Spectrum Alliance, a management committee member of Singapore White Space Pilot Group, and currently he is the Chair of Wi-SUN Alliance South-East Asia Marketing Sub-committee. He served as technical program committee member, finance chair, local arrangement chair, and session chair of more than 35 international conferences such as ICC, Globecom and PIMRC, and served as technical reviewer of more than 15 international journals such as IEEE TWC, IEEE JSAC, IEEE Communications Magazine. He was the Prize Winner of the Finnish Universities of Technology & Helsinki Consulting Group, and received IEEE-SA Standards Board Acknowledges with Appreciation for contributions to IEEE Std 802.16n, IEEE Std 802.16.1a, and IEEE Std 802.15.4m. His current research interests include industrial control network and system, industrial wireless sensor networks, industrial Internet of Things/Industry 4.0, wireless smart utility networks and smart grid. He is an IEEE senior member.



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