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SPECIAL ISSUE ON
Industrial Internet of Things (I2oT)

Overview:

Industrial Internet of Things (I2oT) consists of a variety of objects (e.g., sensors, RFID tags, actuators, mobile devices, appliances, industrial equipment), which could communicate and cooperate with each other to perform information sensing and automatically control, fulfilling various industrial applications (e.g., intelligent manufacturing, product quality inspection, equipment diagnostics, intelligent logistics). The essence of the I2oT is to provide companies with the opportunity to enhance their computing paraphernalia for use in industry, which in turn will render them more proficient and more profitable. By virtue of transforming embedded computers into intelligent systems, companies can improve the throughput of their processes and workforces, boost their productivity and hence enter new horizons. Numerous world-leading companies have discovered the great potential to benefit from I2oT. The realization of I2oT involves establishing smart connected infrastructures and remotely interconnecting the industrial applications with users by utilizing technologies such as distributed computing, ubiquitous computing and Cloud. However, there are still quite a number of critical issues (e.g., sensor deployment, big data and analysis, information management, information services, query processing, network security, software system) which could strongly influence the successful realization of I2oT. This special issue solicits high-quality original research papers which focus on the design, development, analysis, standardization and application of I2oT. Topics of interest include but are not limited to the following categories

Topics

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

- Big data and analysis in industrial IoT	- Data security and privacy in industrial IoT
- Control and optimization of industrial IoT	- Sensors and actuator networks for industrial IoT
- Network security and privacy in industrial IoT	- Software/middleware in industrial IoT
- Architectures of industrial IoT	- Applications and services of industrial IoT
- Information management for industrial IoT	- Efficiency, availability, reliability, robustness, and fault-tolerance
- Simulation and experiment regarding industrial IoT	- Cloud computing for industrial IoT
- Communication protocols for industrial IoT	- Machine to machine for industrial IoT

Important Dates

Submission deadline for all papers: December 15 2016

Completion of first-round reviews: February 30 2017

Submission deadline for revised papers: April 30 2017

Final acceptance notifications: May 30 2017

Submission Procedure

Paper submissions: Submission to this special issue is by invitation only. Extended versions of selected relevant best papers from 2nd EAI International Conference on Industrial Networks and Intelligent Systems (INISCOM 2016) will be invited for consideration. The guest editors will also invite a few additional papers to complement the topics covered by the contributed papers. The special issue seeks submission of papers that present novel original results and findings on I2oT. 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/>.

Guest Editors:

Guest Editors

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Short Bios

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Leandros Maglaras received the B.Sc. degree from Aristotle University of Thessaloniki, Greece in 1998, M.Sc. in Industrial Production and Management from University of Thessaly in 2004 and M.Sc. and PhD degrees in Electrical & Computer Engineering from University of Volos, in 2008 and 2014 respectively. He is currently a Lecturer in the School of Computer Science and Informatics at the De Montfort University, U.K. During 2014 he was a Research Fellow in the Department of Computer at the University of Surrey, U.K. He has participated in various research programs investigating vehicular and ICT technologies (C4C-project.eu, reduction-project.eu), sustainable development (islepact.eu, Smilegov), cyber security (cockpitci.eu, fastpass-project.eu) and optimization and prediction of the dielectric behavior of air gaps (optithesi.webs.com). He serves on the Editorial Board of several International peer-reviewed journals such as IEEE Access, Wiley Journal on Security & Communication Networks, EAI Transactions on e-Learning and EAI Transactions on Industrial Networks and Intelligent Systems. He is general (co-)Chair of INISCOM 2016, a new, annual, EAI and Springer sponsored conference on industrial networks and intelligent systems. He is an author of more than 45 papers in scientific magazines and conferences and is a senior member of IEEE. His research interests include wireless sensor networks and vehicular ad hoc networks. He is currently invited as visiting professor the Shenzhen University for June of 2016 in order to perform research and give seminar lectures on the Research Institute for Future Media Computing.

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Lei Shu received the Ph.D. degree in Digital Enterprise Research Institute, from National University of Ireland, Galway, Ireland, in 2010. Until March 2012, he was a Specially Assigned Researcher in Department of Multimedia Engineering, Graduate School of Information Science and Technology, Osaka University, Japan. Since October 2012, he joined Guangdong University of Petrochemical Technology, China as a full professor. Meanwhile, he is also working as the vice-director of the Guangdong Provincial Key Laboratory of Petrochemical Equipment Fault Diagnosis, China. Since 2013, he started to serve in 1) Dalian University of Technology as a Ph.D supervisor in the college of Software; 2) Beijing University of Posts and Telecommunications as a Master supervisor in the Information and Communication Engineering; 3) Wuhan Institute of University as a Master supervisor in the college of Computer Science; 4) Guest Professor of Tianjin University of Science and Technology; 5) Guest Researcher of Guangzhou Institute of Advanced Technology, Chinese Academy of Sciences. His research interests include: Wireless Sensor Networks, Multimedia Communication, Middleware, Fault Diagnosis, and Security. He has published over 300 papers in related conferences, journals, and books in the area of sensor networks. Currently, his H-index is 25 in Google Citation. He had been awarded the MASS 2009 IEEE TCs Travel Grant and the Outstanding Leadership Award of EUC 2009 as Publicity Chair, the Globecom 2010, ICC 2013, and ComManTel 2014 Best Paper Award, and Outstanding Service Award of IUCC 2012 and ComcomAP 2014. He also received a few more awards from Chinese Government as: Top Level Talents in "Sailing Plan" of Guangdong Province, China; Outstanding Young Professor of Guangdong Province, China. He has been serving as Editor in Chief for *EAI Endorsed Transactions on Industrial Networks and Intelligent Systems*, and associate editors for *IEEE Systems Journal*, *IEEE Access*, *ACM/Springer Wireless Networks*, *Journal of Network and Computer Applications*, *Transactions on Emerging Telecommunications Technology*, *Security and*

Communication Networks, Wireless Communications and Mobile Computing, International Journal of Communication Systems, KSII Transaction on Internet and Information Systems, International Journal of Sensor Networks, Ad Hoc & Sensor Wireless Networks, Journal of Internet Technology, Journal of Communications, IET Communications, IET Networks, IET Wireless Sensor Systems, and served as Guest Editors for IEEE Wireless Communication Magazine, IEEE Communication Magazine, IEEE System Journal, IEEE Sensors Journal, ACM/Springer Mobile Applications and Networks, Springer Telecommunication Systems. He is serving as the Vice-Chair for IEEE SIG on Energy Harvesting Communications. He served as more than 50 various Co-Chair for international conferences/workshops, e.g., IWCMC, ICC, ISCC, ICNC, Chinacom, especially *Symposium Co-chair for IWCMC 2012, ICC 2012, General Chair for Chinacom 2014, Steering and TPC Chair for InisCom 2015, General Co-Chair for Qshine 2015*; TPC members of more than 150 conferences, e.g., DCOSS, MASS, ICC, Globecom, ICCCN, WCNC, ISCC. He is a member of IEEE, IEEE IES, IEEE ComSoc, EAI and ACM.

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Athanasios Maglaras was born in Greece in 1948. He received the Electrical and Mechanical Engineering degree from the National Technical University of Athens, in Greece, in 1971, the M.Sc. degree in 1985, and in 2010 his Ph.D. from National Technical University of Athens, in Greece. From 1980 he was a Professor of Technological Education Institute (T.E.I.) of Larissa in Greece. He was Head of the Electrical Engineering Department of the T.E.I. of Larissa for 6 years, and he was the Head of the High Voltage and CAD/CAE Laboratory in the T.E.I. of Larissa since 1990. He was a member of the Technical Chamber of Greece, the IEEE, and the CIGRE. The main research interests are High Voltages, Electromagnetic Field Analysis, CAD/CAE, and Electric Vehicles. He was coordinator or partner in many European research and educational projects. He is author of 5 books concerning High Voltages, Electric Fields, CAD/CAE, and more than 35 papers in international scientific magazines and conferences, and meetings.

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Jianmin Jiang received PhD from the University of Nottingham, UK, in 1994. From 1997 to 2001, he worked as a full professor of Computing at the University of Glamorgan, Wales, UK. In 2002, he joined the University of Bradford, UK, as a Chair Professor of Digital Media, and Director of Digital Media & Systems Research Institute. He worked at the University of Surrey, UK, as a full professor during 2010-2015 and a distinguished professor (1000-plan) at Tianjin University, China, during 2010-2013. He is currently a Distinguished Professor and director of the Research Institute for Future Media Computing at the School of Computer Science & Software Engineering, Shenzhen University, China. He was a chartered engineer, fellow of IEE, fellow of RSA, member of EPSRC College in the UK, and EU FP-6/7 evaluator. His research interests include, image/video processing in compressed domain, digital video coding, stereo image coding, medical imaging, computer graphics, machine learning and AI applications in digital media processing, retrieval and analysis. He has published around 400 refereed research papers.

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Dr. Helge Janicke is heading De Montfort University's Software Technology Research Laboratory and the Cyber Security Centre. He is the Deputy Head of School of Computer Science and Informatics. Dr. Janicke was awarded his PhD in Computer Science in 2007 and worked on Cyber Security with organisations such as QinetiQ, Ministry of Defence and General Dynamics UK as part of the DIF-DTC consortium. His interests are covering formal verification techniques and their application to Cyber Security, SCADA and Industrial Control System Security as well as aspects of Cyber Warfare. He is working closely with Airbus Group and established DMU's Airbus Group Centre of Excellence in SCADA Cyber Security and Forensics Research in 2013. He is a general chair of the International Symposium on SCADA and Industrial Control Systems Cyber Security Research (ICS-CSR) as well as serving on the editorial board and as reviewer of international journals.

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Dimitrios Katsaros obtained his PhD from the Aristotle university of Thessaloniki and he is with the Department of Electrical and Computer Engineering of the University of Thessaly (Greece) since 2009, where he now is an assistant professor. During the spring of 2015 he was on sabbatical leave at the Electrical Engineering department of Yale university and

d also with the Yale Institute for Network Science. His research interests include distributed systems, wireless networks and complex networks.

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Tiago Cruz is Assistant Professor at the University of Coimbra (Portugal), from where he got his PhD in Informatics Engineering, in 2012. He is also a researcher at the Centre for Informatics and Systems of the University of Coimbra. His research interests include (but are not restricted to) Broadband Network Architectures, Systems, Network Management, Security and Embedded Systems Design and Critical Infrastructure Security, with over 40 journal and conference publications in these areas. He has been involved in various European- and industry-funded research projects related with cyber-security, autonomous management, content delivery infrastructures or wireless WAN technologies (CockpitCI FP7, WEIRD FP7, ACROSS COST, CONTENT FP6), as well as several national projects, in partnership with telecommunications operators and research agencies, with both technical and management activities.



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