International Symposium on Wireless Sensor Networks 2014

Tohoku University Tokyo Branch Office, June 27, 2014
Co-sponsored by 2014 RIEC Collaboration Project Research (Unlicensed Band Wireless Communications)
Worcester Polytechnic Institute, Center for TeleInfrastruktur (CTIF)-Japan, Aalborg University

This international Symposium is intended to discuss and share the information on how to develop wireless sensor networks and related technologies that are one of the hot topics with various potential applications. This Symposium will provide an opportunity for researchers / engineers in academia and in industry to learn about most advanced technologies available now and future for various WSN applications

International Symposium on "Wireless Sensor Networks 2014"

- **Location: Tohoku University Tokyo branch office** (http://www.bureau.tohoku.ac.jp/somu/bun/bun.html)
- **Time (date): 09:40 – 17:35 (June 27, 2014)**
- **Working language: English (Questions in Japanese are welcome)**
- **Participation fee: ¥1,000 (for proceedings)**

Agenda

09:40 – 09:45	**Opening, Prof. Shu Kato** (RIEC, Tohoku University, Japan)
09:45 – 10:30	**Keynote speech** **Prof. Kaveh Pahlavan (Worcester Polytechnic Institute, USA)** **"From WLAN to Wi-Fi Localization - Evolution of a Revolutionary Technology"**
10:30 – 12:00	
(1)	**Prof. Hiroshi Harada** (Graduate School of Informatics, Kyoto University, Japan) **"Wi-SUN: An Interoperable International Standards for Wireless Smart Utility Network"**
(2)	**Prof. Shigenobu Sasaki** (Electrical and Electronic Engineering, Niigata University, Japan) **"Overview of IEEE 802.22 for Wireless Sensor Network"**
(3)	**Prof. Yeo Kiat Seng** (School of Electrical & Electronic Engineering Nanyang Technological University, Singapore) **"Wireless Sensor Networks: Technology and Applications"**
12:00 – 13:00	**Lunch break**
13:00 – 15:30	
(4)	**Prof. Albena Mihovska** (CTIF, Aalborg University, Denmark) **"A Novel Approach to Sensor Node Discovery and Communication Link Establishment"**
(5)	**Prof. Jong-Moon Chung** (Yonsei University, Korea) **"Clustering Techniques for Improved Performance in Wireless Sensor Networks"**
(6)	**Mr. Yasutaka Tada** (RIEC, Tohoku University, Japan) **"Wide Area Sensor Networks - Performance of Interference-resistance and Propagation in 920 MHz"**
(7)	**Dr. Yosuke Sato** (RIEC, Tohoku University, Japan) **"Directive Antenna for Wide Area Sensor Networks – Small and Low Side Lobe Beam-forming Antenna"**
(8)	**Dr. Tuncer Baykas** (RIEC, Tohoku University, Japan) **"Spectrum Efficiency of Star Topology Wireless Sensor Networks"**
15:30 – 16:00	**Coffee break**
16:00 – 17:30	
(9)	**Panel "How to Meet Market Demands on WSNs?"** **Moderator: Prof. Shu Kato** (RIEC, Tohoku University, Japan) **Panelists: All speakers and Dr. Lorenz Granrath** (Germany)
17:30 – 17:35	**Closing**

- **Reception 17:40-19:10 Fee: ¥3,000 (¥1,000 for students)**
- **Registration/参加申込: Please email to Ms. Naomi Aizawa at katolab@riec.tohoku.ac.jp (Tel:022-217-5477)**
  (Due to limited hall capacity, advanced registration is suggested: on a first-come-first-served basis)

Keynote Speaker

Prof. Kaveh Pahlavan is a Professor of ECE, a Professor of CS, and Director of the Center for Wireless Information Network Studies, Worcester Polytechnic Institute, Worcester, MA. He is the founder and Editor-in-Chief of the International Journal on Wireless Information Networks and a member of the advisory board of the IEEE Wireless Magazine. He has founded and chaired a number of pioneering international conferences in wireless networking. He has been a Westin Hadden Professor of Electrical and Computer Engineering at WPI, a fellow of the IEEE, a fellow of the Nokia, a Fulbright-Nokia scholar and recipient of the Board of Trustees Award for Outstanding Research and Creative Scholarship at WPI.

Speakers

Prof. Hiroshi Harada is a professor of Department of Communications and Computer Engineering, Graduate School of Informatics, Kyoto, University and executive director in Social Information & Communication Technology (NICT) research center, NICT. He joined the Communications Research Laboratory, Ministry of Posts and Communications, in 1995 (currently NICT). Since 1995, he has researched Software Defined Radio (SDR), Cognitive Radio, white space and Smart Utility Network (SUN). He has served as the chair of IEEE Dyspan-SC and the vice chair of IEEE P1900.4, IEEE P802.15.4g, TIA TR-51, and IEEE P802.15.4m since 2008, 2009, 2011, and 2011, respectively.

Prof. Shigenobu is a Professor at the Department of Electrical and Electronic Engineering, Niigata University. He has been working on wideband digital communications, cognitive radio technology and green wireless communications since he has been with Niigata University in 1992. Prof. Sasaki has been actively involved the standard development activities in the IEEE 802.15 (WPAN) and 802.22 (WRAN) as a voting member. He received Ph.D. degree from Nagaoka University of Technology, Nagaoka, Japan, in 1993. He is a member of IEEE and Senior member of IEICE.

Prof. Yeo Kiat Seng is Associate Chair (Research) of the School of Electrical & Electronic Engineering at Nanyang Technological University (NTU) and serves as Board of Advisor of the Singapore Semiconductor Industry Association. Professor Yeo was the Founding Director of VIRTUS, a S$50M research centre of excellence jointly set up by NTU and Singapore Economic Development Board. He is in the editorial board of IEEE Transactions on Microwave Theory & Techniques and hold/held key positions in many international conferences as Advisor, General Chair, Co-General Chair and Technical Chair.

Prof. Albena Mihovska has a PhD degree in mobile communications from Aalborg University, Aalborg, Denmark, where she is currently an Associate Professor and Head of Standardization and Head of Teaching at the Center for TeleInfrastruktur (CTIF). Currently, she is involved with research related to innovative research concepts for 5G communication systems, the design and implementation of eHealth services (EU project eWALL) and to optimizing and supporting reliable and high performance intensive data rate communications as required by the Internet of Things.

Prof. Jong-Moon Chung received his B.S. and M.S. degrees from Yonsei University in 1992 and 1994, respectively, and Ph.D. degree from the Pennsylvania State University in 1999. Since 2005, he has been a professor in the School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea (ROK). From 1997 to 1999, he served as an assistant professor and instructor in the Department of Electrical Engineering, Pennsylvania State University. From 2000 to 2005, he was with the School of Electrical and Computer Engineering, Oklahoma State University (OSU) as a tenured associate professor and director of the OCLNB and ACSEL labs. He has served as the General Co-Chair of IEEE MWSCAS 2011, Local Chair and TPC Co-Chair of IEEE VNC 2012, and Local Chair of IEEE WF-IoT 2014. He is also an Editor of the IEEE Transactions on Vehicular Technology and Co-Editor-in-Chief of the KSII Transactions on Internet and Information Systems (TIIS).

Mr. Yasutaka Tada received the Bachelor of Engineering degree in Electrical and Communications Engineering, Tohoku University, Sendai, Japan in 2013, and is currently working toward Master degree in Research Institute of Electrical Communications, Tohoku University.

Dr. Yosuke Sato received the Bachelor and Master of Engineering degrees in Electrical and Communications Engineering, Tohoku University, Sendai, Japan in 2010 and 2011 respectively. He is currently working toward Ph.D degree in Research Institute of Electrical Communications, Tohoku University.

Dr. Tuncer Baykas is a postdoctoral research fellow in Tohoku University, Japan. From 2007 to 2012, he worked as an expert researcher at NICT. Previously, he served as secretary as the chair of IEEE 802.19 Task Group 1. He made contributions to many IEEE standardization projects including 802.15.4k. His research interests include 60 GHz systems and wireless sensor networks.

Prof. Shu Kato graduated with a Ph.D from Tohoku University and joined NTT Laboratory in 1977. In 1995, he established Pacific Communications Research Inc. and became President of Uniden in 1996. He became senior VP of Mitsubishi Wireless, Inc., (USA) in 1998, and established Omni Wireless, Inc., (USA) in 2001. He worked as VP, Teradyne Japan from 2002 to 2005 to learn why American companies are successful. In 2006, he joined National Institute of Information and Communications Technology to help Japanese wireless industry in global competition, and became Professor at RIEC, Tohoku University in 2008. He over 1,000 in Japan for hiring. He has held over 100 patents (including a patent which became DOD (USA) standard in 1998).