
(WiSNet 2015)

San Diego, California, USA
25-28 January 2015
SESSION LIST

- WE1A : Insight in Sensor Networks and System Design
- WE3A : Six-Port and Multi-Port Technology
- WE3D : Novel Sensors and Sensor Components
- WE2A : Advanced Localization and Sensing Technologies
- WE4A : Sensor Networks for Modern Applications
WE1A : Insight in Sensor Networks and System Design

Chair: Rahul Khanna, Intel — Co-Chair: Andreas Stelzer, Johannes Kepler University, Linz
Venue: Gallery 1, 08:00 – 09:40, Wednesday 28 January 2015

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(L. Roselli, C. Mariotti, Paolo Mezzanotte, F. Alimenti, G. Orecchini, Marco Virili, N.B. Carvalho)

Combined Localization and Data Transmission in Energy-Constrained Wireless Sensor Networks
(Thorsten Nowak, Alexander Koelpin, Falko Dressler, Markus Hartmann, Lucila Patino, Jörn Thielecke)

Wireless Integrated Sensor Nodes for Indoor Monitoring and Localization (Invited Paper)

Low-Weight Wireless Sensor Network for Encounter Detection of Bats
(Martin Hierold, Simon Ripperger, Darija Josic, Frieder Mayer, Robert Weigel, Alexander Koelpin)

Ad-Hoc MultiLevel Wireless Sensor Networks for Distributed Microclimatic Diffused Monitoring in Precision Agriculture
(Abel Rodriguez de la Concepción, Riccardo Stefanelli, Daniele Trinchero)
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WE3A : Six-Port and Multi-Port Technology

Chair: Fadhel Ghannouci, University of Calgary — Co-Chair: Alexander Koelpin, University of Erlangen
Venue: Gallery 1, 13:30 - 15:10, Wednesday 28 January 2015

WE3A-1
Six-Port Technology for MIMO and Cognitive Radio Receiver Applications (Invited Paper)
(Abul Hasan, Mohamed Helaoui, Noureddine Boulejfen, Fadhel M. Ghannouchi)

WE3A-2
100GHz Reflectometer for Sensitivity Analysis of MEMS Sensors Comprising an Intermediate Frequency Six-Port Receiver
(Sarah Linz, Florian Oesterle, Armin Talai, Stefan Lindner, S. Mann, Francesco Barbon, Robert Weigel, Alexander Koelpin)

WE3A-3
Forward V-Band Vector Network Analyzer Based on a Modified Six-Port Technique
(Kamel Haddadi, Tuami Lasri)

WE3A-4
A New Compact V-Band Six-Port Receiver for High Data-Rate Wireless Applications
(C. Hannachi, S.O. Tatu)

WE3A-5
ADC Depending Limitations for Six-Port Based Distance Measurement Systems
(Stefan Lindner, Francesco Barbon, Sarah Linz, Fabian Lurz, S. Mann, Robert Weigel, Alexander Koelpin)
**WE3D: Novel Sensors and Sensor Components**

*Chair: Nils Pohl, Fraunhofer Institute for High Frequency Physics and Radar Techniques — Co-Chair: Changzhi Li, Texas Tech University*

*Venue: Gallery 2, 13:30 - 15:10, Wednesday 28 January 2015*

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<td>S. Mann, S. Erhardt, Stefan Lindner, Fabian Lurz, Sarah Linz, Francesco Barbon, Robert Weigel, Alexander Koelpin</td>
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WE2A : Advanced Localization and Sensing Technologies

Chair: Luca Roselli, University of Perugia — Co-Chair: Holger Maune, University of Darmstadt

Venue: Gallery 1, 10:10 - 11:50, Wednesday 28 January 2015

WE2A-1
Robust Localization of Passive UHF RFID Tag Arrays Based on Phase-Difference-of-Arrival Evaluation
(Martin Scherhäufl, Markus Pichler, Andreas Stelzer)

WE2A-2
Experimental Evaluation of a Pairwise Broadcast Synchronization in a Low-Power Cyber-Physical System
(Unmesh Ghoshdastider, Reinhard Viga, Michael Kraft)

WE2A-3
DMA-Driven Control Method for Low Power Sensor Node
(Takashi Enami, Kentaro Kawakami, Hiroshi Yamazaki)

WE2A-4
Wireless Sensors for Stratified Soil Microwave Scanning Applied to Precision Quality Agriculture
(Daniele Trinchero, Elisa Pievanelli, Abel Rodríguez de la Concepción, Riccardo Stefanelli)

WE2A-5
(Sven Rademacher, Katrin Schmitt, Martin Mengers, Jürgen Wöllenstein)
WE4A : Sensor Networks for Modern Applications

Chair: Christian Damm, University of Darmstadt — Co-Chair: Dietmar Kissinger, IHP GmbH
Venue: Gallery 1, 15:40 - 17:20, Wednesday 28 January 2015

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WE4A-1  An Ultra-High Resolution Radar-System Operating at 300GHz (Invited Paper)
(Nils Pohl, Stephan Stanko, Michael Caris, Axel Tessmann, Michael Schlechtweg)

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WE4A-2  Millimeter-Wave Radar Distance Measurements in Micro Machining
(Serdal Ayhan, Sven Thomas, Nanxi Kong, Steffen Scherr, Mario Pauli, Timo Jaeschke,
Jens Wulfsberg, Nils Pohl, Thomas Zwick)

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WE4A-3  Structural Health Monitoring of Wind Turbines Using a Low-Cost Portable K-Band
Radar: An ab-initio Field Investigation (Invited Paper)
(Tooraj Nikoubin, José-Maria Muñoz-Ferreras, Roberto Gómez-García, Daan Liang,
Changzhi Li)

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WE4A-4  Underwater Interferometric Radar Sensor for Distance and Vibration Measurement
(Michael Sporer, Fabian Lurz, Eberhard Schluecker, Robert Weigel, Alexander Koelpin)

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WE4A-5  Urban Highway Bridge Structure Health Assessments Using Wireless Sensor Network
(Frank X. Li, A.K.M. Anwarul Islam, Amer S. Jaroo, Hiwa Hamid, Jalal Jalali,
Michael Sammartino)