

IEEE RFID 2016 Program Brief – Tuesday, May 3, 2016

7:30 - 8:30 **MORNING COFFEE** S331 Foyer

8:00 - 8:30 **SPEAKER BRIEFING** S331-A

8:30 - 10:00 **MORNING TUTORIAL SESSIONS (Part I)**

<p>Tutorial A S331-A Reverse Engineering a Passive UHF RFID Tag (Part I) See Guidebook program for details</p> <p>Organizer: Brian Degnan, Georgia Tech</p>	<p>Workshop A S331-B Writing Better Papers and More Successful Proposals See Guidebook program for details</p> <p>Organizer: Shahriar Mirabbasi, University of British Columbia</p> <p><u>Speakers:</u> Gisele Bennett, <i>Georgia Tech</i> Pavel Nikitin, <i>Honeywell</i> Greg D. Durgin, <i>Georgia Tech</i> Bill Colacchio, <i>IEEE</i> Apostolos Georgiadis, <i>CTTC, Spain</i> Shahriar Mirabbasi, <i>UBC</i></p>
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10:00 - 10:15 **BREAK** S331 Foyer

10:15 - 12:00 **MORNING TUTORIAL SESSIONS (Part II)**

<p>Tutorial A S331-A Reverse Engineering a Passive UHF RFID Tag (Part II)</p>	<p>Workshop A S331-B Writing Better Papers and More Successful Proposals (Part II)</p>
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12:00 - 13:00 **LUNCH** S331 Foyer

13:00 - 14:30 **AFTERNOON WORKSHOP SESSIONS (Part I)**

<p>Tutorial B S331-A Design and Measurement of CMOS RF-DC Energy Harvesting Circuits (Part I) See Guidebook program for details</p> <p>Organizer: Murat Eskiyeerli, Revolution Semiconductor</p>	
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14:30 - 14:45 **BREAK** S331 Foyer

14:45 - 16:30 **AFTERNOON WORKSHOP SESSIONS (Part II)**

<p>Tutorial B S331-A Design and Measurement of CMOS RF-DC Energy Harvesting Circuits (Part II)</p>	
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17:00 – 18:30 **RFID Journal Live! Keynote Session** General Sessions Room

18:30 - 20:15 **RFID Journal Live! Opening Reception** Exhibit Hall

20:15 **IEEE RFID 2016 Reception** S331 Foyer

IEEE RFID 2016 Program Brief – Wednesday, May 4 (Morning)

7:30 - 8:30	MORNING COFFEE	S331 Foyer
8:00 - 8:30	SPEAKER BRIEFING	S331-A
8:30 – 10:00	OPENING PLENARY	S330 EFG

Welcome and Introduction Technical Program Overview Presentation of Best Paper Award Keynote Speaker Poster Session Teaser Talks	Gisele Bennett , General Chair, IEEE RFID 2016 Pavel Nikitin , Technical Program Chair, IEEE RFID 2016 Brett Humphrys , ThingMagic, A Division of Trimble (Best Paper Award Patron) Don C. Malocha , University of Central Florida Stewart Thomas , Poster Session Chair, IEEE RFID 2016, and poster authors
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10:00 - 10:30	BREAK	S331 Foyer
10:30 – 12:00	Hot Topics in RFID (Invited Papers)	S330-EFG

<p>Millimeter Scale Computing Platform for Next Generation of Internet of Things Taekwang Jang, Myungjoon Choi, Yao Shi, Inhee Lee, Dennis Sylvester, David Blaauw University of Michigan, (USA)</p> <p>The Future of Ultra-Wideband Localization in RFID Davide Dardari¹, Nicolò Decarli¹, Anna Guerra², Francesco Guidi³ ¹University of Bologna (Italy) ²CNIT - University of Bologna (Italy) ³CEA LETI (France)</p> <p>High-accuracy Positioning for Indoor Applications: RFID, UWB, 5G, and beyond Klaus Witrissal, Stefan Hinteregger, Josef Kulmer, Erik Leitinger, Paul Meissner Graz University of Technology (Austria)</p> <p>Reliability and Longer Range for Low Power Transmitters with On Demand Network MIMO Mary Ann Weitnauer¹, Qiongjie Lin¹, HuanYu Zhang², Hongxian Tian³, Sean M Nowlan⁴, Gedeon Nyengele¹, Sajith Mohan¹, Jim Stratigos⁴ ¹Georgia Institute of Technology (USA) ²Peking University (P.R. China) ³Beijing Jiaotong University (P.R. China) ⁴Cognosos, Inc. (USA)</p> <p>Session Chair: Daniel Arnitz, University of Washington (USA)</p>
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12:00 - 13:30	LUNCH	Exhibit Hall
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IEEE RFID 2016 Program Brief – Wednesday, May 4 (Afternoon)

13:30 – 14:15

TECHNICAL SESSIONS

<p>Session 1A S331-A</p> <p>Sensors</p> <p>Chipless Near Field Resistive Element Sensor using Phase Processing Somnath Mukherjee Thin Film Electronics Inc. (USA)</p> <p>Activity Recognition for Medical Teamwork Based on Passive RFID Xinyu Li¹, Dongyang Yao¹, Xuechao Pan¹, Jonathan Johannemann¹, JaeWon Yang², Rachel Webman², Aleksandra Sarcevic³, Ivan Marsic¹, Randall Burd² ¹Rutgers University (USA) ²Children's National Medical Center (USA) ³Drexel University (USA)</p> <p>Session Chair: Alanson Sample, Disney Research Pittsburgh (USA)</p>	<p>Session 1B S331-B</p> <p>Applications & Software</p> <p>Exploring Cloud Elasticity on Developing an EPCGlobal-Compliant Middleware Rodrigo Righi¹, Gustavo Rostirolla¹, Cristiano A Costa¹, Antonio M Alberti², Eduardo Souza¹ ¹Universidade do Vale do Rio dos Sinos (Brazil) ²National Institute of Telecommunications (Brazil)</p> <p>Over-the-Air Reprogramming on Computational RFIDs Die Wu, Muhammad Jawad Hussain, Li Songfan, Li Lu University of Electronic Science and Technology of China & School of Computer Science and Technology (P.R. China)</p> <p>Session Chair: Gisele Bennett, Georgia Tech (US)</p>
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14:15 - 14:30

BREAK

S331 Foyer

14:30 - 16:15

POSTER AND DEMO SESSION

Exhibit Hall

See Guidebook program for a list of poster titles, authors and affiliations, and summaries

Session Chair: Stewart Thomas, Valparaiso University, US

16:15 - 17:30

Student Competition RFID Brain Power Competition

Exhibit Hall

18:00 - 20:30

IEEE RFID 2016 Networking Dinner

Delmonico's
6115 Westwood Blvd, Orlando

IEEE RFID 2016 Program Brief – Thursday, May 5 (Morning)

7:30 - 8:30 **MORNING COFFEE** S331 Foyer

8:00 - 8:30 **SPEAKER BRIEFING** S331-A

8:30 – 10:00 **PLENARY** S330-EFG

<p>Welcome</p> <p>Brain Power Competition Winners</p> <p>CRFID Update</p> <p>Best Poster Award</p> <p>Keynote Speaker</p>	<p>Daniel Arnitz, General Chair, IEEE RFID 2016</p> <p>Daniel Arnitz, General Chair, IEEE RFID 2016</p> <p>Emily Sopensky, Chair, IEEE Council on RFID (CRFID)</p> <p>Stewart Thomas, Poster Session Chair, IEEE RFID 2016</p> <p>Stephen G. Halliday, President of High Tech Aid and RAIN RFID</p>
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10:00 - 10:30 **BREAK** S331 Foyer

10:30 – 12:10 **TECHNICAL SESSIONS**

Session 2A	S331-A	Session 2B	S331-B
<p>Antennas & Propagation</p> <p>Internet of Things & Next-Generation Physical Layer</p> <p>Use of Slits of Defined Width in Metal Layers Within ID-1 Cards, as Reactive Couplers for Near-field Passive RFID at 13.56 MHz Karl Ackland¹, Mustafa Lotya², David Finn², Plamen Stamenov¹ ¹Trinity College Dublin (Ireland) ²AmaTech Group Ltd Unit 7 Baile an tSagairt Spiddal (Ireland)</p> <p>Low Profile Separable RFID Tag Antenna Design for Variable Range Applications Chi-Lun Mak, Jingtian Xi Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (Hong Kong)</p> <p>Evaluation and deployment of an industrial spring-based RFID reader antenna Raúl Parada¹, Joan Melià-Seguí², Rafael Pous¹ ¹Universitat Pompeu Fabra (Spain) ²Universitat Oberta de Catalunya (Spain)</p> <p>Application of Low Scattering Antennas to RFID Networks Shadi Ebrahimi Asl, Mohammad Tayeb Ghasr, Maciej Zawodniok Missouri University of Science and Technology (USA)</p> <p>Towards Unobtrusive Real-time Fluid Intake Monitoring Using Passive UHF RFID Asangi Jayatilaka, Damith C. Ranasinghe The University of Adelaide (Australia)</p> <p>Session Chair: Pavel Nikitin, Honeywell (USA)</p>		<p>Circuits, Devices & Readers</p> <p>BLISP: Enhancing Backscatter Radio with Active Radio for Computational RFIDs Ivar in 't Veen¹, Qingzhi Liu¹, Przemyslaw Pawelczak¹, Aaron N Parks², Smith Joshua² ¹Delft University of Technology (The Netherlands) ²University of Washington (USA)</p> <p>UHF RFID Chip measurement Emmanuel Bergeret¹, Dino Michelon^{1,2}, Rita Saba¹, Philippe Seurre³ ¹IM2NP Laboratory - Aix Marseille Université (France) ²STMicroelectronics (France) ³Rhode & Schwarz (France)</p> <p>A Low Cost 10.0-11.1 GHz X-Band Microwave Backscatter Communication Testbed with Integrated Planar Wideband Antennas Xiaojie Fu, Apoorva Sharma, Eleftherios Kampianakis, Andreas Pedross-Engel, Daniel Arnitz, Matthew Reynolds University of Washington (USA)</p> <p>Design of a Rectifier-Free UHF Gen-2 Compatible RFID Tag using RF-Only Logic Wenxu Zhao, Kirti Bhanushali, Paul Franzon North Carolina State University (USA)</p> <p>EM-ID: Tag-less Identification of Electrical Devices via Electromagnetic Emissions Chouchang Yang¹, Alanson Sample² ¹Disney Research (USA) ²Disney Research Pittsburgh (USA)</p> <p>Session Chair: Stewart Thomas, Valparaiso University, (USA)</p>	

12:10 - 13:30 **LUNCH** Exhibit Hall

IEEE RFID 2016 Program Brief – Thursday, May 5 (Afternoon)

13:30 – 15:00

TECHNICAL SESSIONS

Session 3A	S331-A	Session 3B	S331-B
<p>Energy Harvesting & Wireless Power 1 (Part I)</p> <p>Theoretical Energy-conversion Efficiency for Multi-Stage RF Energy Harvesters Christopher Valenta¹, Christopher Peterson² ¹Georgia Tech Research Institute & Electro-optical Systems Laboratory (USA) ²Georgia Institute of Technology (USA)</p> <p>High-Q, Over-Coupled Tuning for Near-Field RFID Systems Mohsen Shahmohammadi^{1,2}, Matthew Chabalko¹, Alanson Sample³ ¹Disney Research (USA) ²The Walt Disney Imagineering (USA) ³Disney Research Pittsburgh (USA)</p> <p>uMonitor: In-situ Energy Monitoring with Microwatt Power Consumption Saman Naderiparizi, Aaron N Parks, Farshid Salemi Parizi, Joshua R. Smith University of Washington (USA)</p> <p>RF Energy Harvester with Sub-threshold Step-up Converter Dino Michelon¹, Emmanuel Bergeret¹, Antonio Di Giacomo², Philippe Pannier¹ ¹IM2NP Laboratory - Aix Marseille Université & STMicroelectronics (France) ²STMicroelectronics (France)</p> <p>Session Chairs: Saman Naderiparizi, University of Washington (USA) and Christopher Valenta, Georgia Tech Research Institute (USA)</p>		<p>Protocols & Security (Part I)</p> <p>Multi-Reader RFID Tag Identification using Bit Tracking (MRTI-BT) Abdulrahman Fahim, Tamer ElBatt Nile University (Egypt)</p> <p>An Anonymous RFID Grouping-Proof with Missing Tag Identification Mike Burmester¹, Jorge Munilla² ¹Florida State University (USA) ²University of Malaga (Spain)</p> <p>Improving UHF RFID Read Rates by Juggling Selected Bits Alexander Bothe, Nils Aschenbruck University of Osnabrück (Germany)</p> <p>Provably Two Rounds RFID Grouping-Proof Protocol Sarah Abughazalah, Konstantinos Markantonakis Royal Holloway, University of London & University of London (United Kingdom)</p> <p>Session Chair: Chouchang Yang, Disney Research (USA)</p>	

15:00 – 15:30

BREAK

S331 Foyer

IEEE RFID 2016 Program Brief – Thursday, May 5 (Afternoon)

15:30 – 16:30

TECHNICAL SESSIONS

<p>Session 4A S331-A</p> <p>Protocols & Security (Part II) Energy Harvesting & Wireless Power (Part II)</p> <p>A CDMA-based RFID Inventory System Harold Stern, Ramsey Doany, Cody Lovejoy, Kyle Jones Texas State University (USA)</p> <p>A Flexible Setup to Determine RFID Tag Requirements for Multiple-Response Scenarios Martin Mayer, Blanca Ramos Elbal, Wolfgang Gartner, Robert Langwieser, Jelena Kaitovic Vienna University of Technology (Austria)</p> <p>RF Thermoelectric Generation for Passive RFID Gregory Durgin Georgia Institute of Technology (USA)</p> <p>Session Chairs: Christopher Valenta, Georgia Tech Research Institute (USA) and Chouchang Yang, Disney Research (USA)</p>	<p>Session 4B S331-B</p> <p>Localization</p> <p>3DinSAR: Object 3D Localization for Indoor RFID Applications Lanxin Qiu¹, Niklas Johan Wirstrom², Thiemo Voigt², Zhangqin Huang¹ ¹Beijing University of Technology (P.R. China) ²Swedish Institute of Computer Science & Uppsala University (Sweden)</p> <p>MIMO Gain and Bandwidth Scaling for RFID Positioning in Dense Multipath Channels Stefan Hinteregger, Erik Leitinger, Paul Meissner, Klaus Witrisal Graz University of Technology (Austria)</p> <p>Orientation Sensing Using Backscattered Phase from Multi-Antenna Tag at 5.8 GHz Muhammad Bashir Akbar, Cheng Qi, Mohammad Alhassoun, Gregory Durgin Georgia Institute of Technology (USA)</p> <p>Session Chair: Daniel Arnitz, University of Washington (USA)</p>
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17:00

CONFERENCE ENDS

Student Competition Patron



Best Paper Award Patron



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Gold Patron



Silver Patron



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