

IEEE RFID 2010 Program Brief – Wednesday, April 14 (Morning)

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

8:30 – 10:00 **OPENING PLENARY** S330 E-F-G-H

<p>Welcome and introduction</p> <p>Opening Remarks</p> <p>Technical Program Overview</p> <p>Presentation of Best Paper Award</p> <p>Introduction of Keynote Speaker</p> <p>Keynote Speaker</p>	<p>Daniel Engels, General Chair, IEEE RFID 2010</p> <p>Christian Floerkemeier, General Vice Chair, IEEE RFID 2010</p> <p>Daniel Deavours, Technical Program Chair, IEEE RFID 2010</p> <p>Bret Kinsella, ODIN Technologies (Best Paper Award Sponsor)</p> <p>Christian Floerkemeier, General Vice Chair, IEEE RFID 2010</p> <p>Vivek Subramanian, Associate Professor, University of California Berkeley</p>
--	---

10:00 – 10:15 **BREAK** S330 E-F-G-H

10:15 – 11:45 **TECHNICAL SESSIONS** S331 B, C

<p>Session 1A S331 B</p> <p>Sensors</p> <p>Integration of Passive Multivariable RFID Sensors into Single-Use Biopharmaceutical Manufacturing Components Radislav Potyrailo¹, David Monk¹, William Morris¹, Staffan Klensmeden², Hanno Ehring², Timothy Wortley¹, Vincent Pizzi¹, Jeffrey Carter¹, Gerard Gach¹ ¹ General Electric, US ² General Electric, SE</p> <p>RFID Tag Antenna Based Temperature Sensing Rahul Bhattacharyya¹, Christian Floerkemeier¹, Sanjay Sarma² ¹ MIT, US ² MIT Auto-ID Center, US</p> <p>Low Power Analog Circuit Design for RFID Sensing Circuits Chenglong Zhang¹, Haibo Wang² ¹ Southern Illinois University, US ² Southern Illinois University Carbondale, US</p> <p>Selective Quantitation of Vapors and their Mixtures Using Individual Passive Multivariable RFID Sensors Radislav Potyrailo, Cheryl Surman, William Morris, Steven Go, Yongjae Lee, James Cella, Kelly Chichak General Electric, US</p> <p>Session Chair: Rich Fletcher, TagSense, Inc., US</p>	<p>Session 1B S331 C</p> <p>Security and Privacy</p> <p>Supply Chain Control Using a RFID Proxy Re-Signature Scheme Trevor Burbridge, Andrea Soppera BT Research, UK</p> <p>Privacy-preserving Clone Detection for RFID-enabled Supply Chains Davide Zanetti, Leo Fellmann, Srdjan Capkun ETH Zurich, CH</p> <p>Cryptographic Puzzles and Distance-bounding Protocols: Practical Tools for RFID Security Pedro Peris-Lopez¹, Julio Hernandez-Castro², Juan Tapiador³, Esther Palomar⁴, Jan vanderLubbe¹ ¹ Delft University, NL ² University of Portsmouth, UK ³ University of York, UK ⁴ University Carlos III of Madrid, ES</p> <p>Privacy Protection for RFID-based Tracking Systems Chiu Tan¹, Lei Xie², Qun Li¹ ¹ College of William and Mary, US ² Nanjing University, CN</p> <p>Session Chair: Daniel Engels, Revere Security, US</p>
---	--

11:45 – 13:30 **SPECIAL SESSION / WORKING LUNCH** S330 E-F-G-H

<p>Real-Time Locating Systems (RTLS)</p> <p>Invited Talks</p> <p>Location Technologies for Passive and Active RFID Rene Martinez, Intermec Technologies, Inc., US</p> <p>RTLS Performance Considerations In SAW Based RFID Systems Paul Hartmann, RF SAW, Inc., US</p> <p>RTLS using Active RFID: Challenges and Emerging Trends Rich Fletcher, TagSense, Inc., US</p> <p>Near Field RTLS with Long Wavelengths Matthew Reynolds, Duke University, US</p> <p>Applications for Bidirectional Electronically Steerable Phased Array (BESPA™) Antenna Systems with Passive UHF RFID Tags Chris Hook, RF Controls, LLC, US</p> <p>Session Chair: Pavel Nikitin, Intermec Technologies, Inc., US</p>

IEEE RFID 2010 Program Brief – Wednesday, April 14 (Afternoon)

13:30 – 15:00

TECHNICAL SESSIONS

S331 B, C

<p>Session 2A Circuits</p> <p>Design of a Passive UHF RFID Transponder Featuring a Variation-Tolerant Baseband Processor Zheng Wang¹, Luhong Mao¹, Liying Chen²; Lei Li¹, Jinfeng Tian¹, Ziqing Wang¹ ¹ Tianjin University, CN ² Nankai University, CN</p> <p>HF RFID Transponder with Phase Demodulator for Very High Bit-Rates up to 13.56 Mbit/s Markus Auer¹, Albert Missoni², Walter Kargl¹ ¹ TU Graz, AT ² Infineon, AT</p> <p>An Ultra-low Power Passive UHF RFID Transponder with Self-calibrated Clock Generator Jinfeng Huang¹, Xin Yang¹, Jinpeng Shen¹, Xiaoxing Feng¹, Xin'an Wang¹, Ru Huang² ¹ Peking University Shenzhen Graduate School, CN ² Peking University, CN</p> <p>A High-Efficiency CMOS Rectifier for Low-Power RFID tags Alireza Sharif Bakhtiar, Mohammad Sadegh Jalali, Shahriar Mirabbasi University of British Columbia, CA</p> <p>Session Chair: Gregory Durgin, Georgia Tech, US</p>	<p>S331 B</p>	<p>Session 2B Localization</p> <p>Accurate Localization of RFID Tags Using Phase Difference Cory Hekimian-Williams, Brandon Grant, Xiuwen Liu, Zhenghao Zhang, Piyush Kumar Florida State University, US</p> <p>Real Time Detection and Tracking of Gauzes by RFID UWB Technique Laura Pierucci¹, Sergio Boncinelli², Paolo Citti¹, Enrico Del Re¹, Gianni Campatelli¹, Leonardo Bocchi¹ ¹ University of Florence, IT ² CESPRO, IT</p> <p>Phase Based Spatial Identification of UHF RFID Tags Pavel Nikitin, Rene Martinez, Shashi Ramamurthy, Hunter Leland, Gary Spiess, Kodukula Rao Intermec Technologies, US</p> <p>Session Chair: Paul Hartmann, RF SAW Inc., US</p>	<p>S331 C</p>
---	---------------	---	---------------

15:00 – 15:30

BREAK

S330 E-F-G-H

15:30 – 17:00

POSTER SESSION

S331 A

See Poster Session Track on pages 24-25 for a list of poster titles, authors and affiliations

17:00 – 17:45

RFID Journal LIVE! Keynote Session

TBA

17:45 – 18:30

RFID Journal LIVE! General Session

TBA

18:30 – 20:30

RFID Journal LIVE! Opening Reception

Exhibit Hall

20:30

IEEE RFID 2010 Reception

S330 E-F-G-H

IEEE RFID 2010 Program Brief – Thursday, April 15 (Morning)

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

8:30 – 10:30 **PLENARY** S330 E-F-G-H

<p>Welcome CRFID Update Featured Speaker Featured Speaker</p>	<p>Daniel Engels, General Chair, IEEE RFID 2010 Paul Hartmann, Chair, IEEE Technical Committee on RFID (CRFID) Ken Traub, Ken Traub Consulting LLC Matt Reynolds, Assistant Professor, Duke University</p>
--	---

10:30 – 11:00 **BREAK** S330 E-F-G-H

11:00 – 12:30 **TECHNICAL SESSIONS** S331 B, C

<p>Session 3A Applications S331 B</p> <p>Passive Gamma-resistant RFID Tags Integrated into Gamma-sterilizable Pharmaceutical Components Radislav Potyrailo¹, Cheryl Surman¹, William Morris¹, Hanno Ehring², Timothy Wortley¹, Vincent Pizzi¹, Jeffrey Carter¹, Gerard Gach¹ ¹ General Electric, US ² General Electric, SE</p> <p>RFID-Based Electronic Voting: What Could Possibly Go Wrong? Yossef Oren, Avishai Wool Tel Aviv University, IL</p> <p>RFID Tag Antenna Based Sensing: Does your Beverage Glass need a Refill? Rahul Bhattacharyya¹, Christian Floerkemeier¹, Sanjay Sarma² ¹ MIT, US ² MIT Auto-ID Center, US</p> <p>RFID Diagnostics of Promotion Execution Patrick Hacker¹, Christian Floerkemeier², Sanjay Sarma³, Guenther Schuh⁴ ¹ RWTH Aachen University, DE ² MIT, US ³ MIT Auto-ID Center, US ⁴ Fraunhofer Institute for Production Technology, DE</p> <p>Session Chair: Rene Martinez, Intermec Technologies, Inc., US</p>	<p>Session 3B Interrogators and Packaging S331 C</p> <p>Carrier Suppression Locked Loop Mechanism for UHF RFID Readers Deogracias Villame, Joel Joseph Jr. Marciano University of the Philippines, PH</p> <p>UHF RFID Transponder with Miniaturized Packaging and Interconnection Laurent Dussopt, Jean Brun, Dominique Vicard, Francois Frassati, Benoit Lépine CEA, LETI, Minatec, FR</p> <p>Embedded Passive UHF RFID Seal Tag for Metallic Returnable Transit Items Matti Ritamäki, Antti Ruhanen Confidex Ltd., FI</p> <p>Interactive Packaging Solutions Based on RFID Technology and Controlled Delamination Material Jie Gao, Zhibo Pang, Qiang Chen, Li-Rong Zheng Royal Institute of Technology (KTH), SE</p> <p>Session Chair: Roger Stewart, Sourland Mountain Associates, US</p>
---	--

12:30 – 14:00 **LUNCH** Exhibit Hall

IEEE RFID 2010 Program Brief – Thursday, April 15 (Afternoon)

14:00 – 15:30

TECHNICAL SESSIONS

S331 B, C

<p>Session 4A Antennas and Propagation Part I</p> <p>Helical Antenna for Handheld UHF RFID Reader Pavel Nikitin, Kodukula Rao Intermec Technologies, US</p> <p>Platform-tolerant PIFA-type UHF RFID Tag Antenna Jingtian Xi, Hailong Zhu, Terry Ye Hong Kong R&D Centre for LSCM Enabling Technologies, HK</p> <p>The “Weak Spots” in Stacked UHF RFID Tags in NFC Applications Xiaosheng Chen, Feng Lu, Terry Ye Hong Kong R&D Centre for LSCM Enabling Technologies, HK</p> <p>Improving the Near-Metal Performance of UHF RFID Tags Daniel Deavours, University of Kansas, US</p> <p>Session Chair: Smail Tedjini, Grenoble-INP, FR</p>	<p>S331 B</p>	<p>Session 4B Communications and MAC</p> <p>Survey of Range Improvement of Commercial RFID Tags With Power Optimized Waveforms Matthew Trotter, Gregory Durgin Georgia Institute of Technology, US</p> <p>Very High Data Rate Contactless Air Interface: an Innovative Solution for Card to Reader Link Florian Pebay Peyroula, Jacques Reverdy, Elisabeth Crochon, Thierry Thomas CEA, FR</p> <p>QAM Backscatter for Passive UHF RFID Tags Stewart Thomas, Matthew Reynolds Duke University, US</p> <p>A Data Transmission Technique for Passive Sensor Transponders in Medicine Andreas Hennig, Gerd vom Bögel Fraunhofer IMS, DE</p> <p>Session Chair: Tom Kerr</p>	<p>S331 C</p>
--	---------------	--	---------------

15:30– 16:00

BREAK

S330 E-F-G-H

16:00 – 17:30

TECHNICAL SESSIONS

S331 B, C

<p>Session 5A Antennas and Propagation Part II</p> <p>Towards Design of Robust UHF RFID Tag Chaabane Hamza, Etienne Perret, Smail Tedjini Grenoble-INP, FR</p> <p>Analysis and Synthesis of UHF RFID Antennas using the Embedded T-match Naaser Ahmed Mohammed, Ken Demarest, Daniel Deavours University of Kansas, US</p> <p>Optimum Power Transmission of Wireless Sensors Embedded in Concrete Shan Jiang, Stavros Georgakopoulos Florida International University, US</p> <p>UHF RFID Based Tracking of Logs in the Forest Industry Janne Häkli, Kaarle Jaakkola, Pekka Pursula, Miika Huusko, Kaj Nummila VTT, FI</p> <p>Session Chair: Daniel Deavours, University of Kansas, US</p>	<p>S331 B</p>	<p>Session 5B System Tools and Deployment</p> <p>Chipless RFID SAW Sensor System-Level Simulator John Pavlina, Donald Malocha University of Central Florida, US</p> <p>New Methods to determine the Impedance of UHF RFID Chips Rainer Kronberger, Cologne University of Applied Sciences, DE</p> <p>Non-Thermal Effects of Radio Frequency Exposure on Biologic Pharmaceuticals for RFID Applications Ismail Uysal¹, Price Dehay¹, Erdem Altunbas¹, Jean-Pierre Emond¹, Scott Rasmussen², David Ulrich² ¹ University of Florida, US ² Abbott Laboratories, US</p> <p>Blocking Reader: Design and Implementation of a Low-Cost Passive UHF RFID Blocking Reader Gaurov Narayanaswamy¹, Shesh Kumar Jagannatha¹, Daniel Engels² ¹ University of Texas Arlington, US ² Revere Security, US</p> <p>Session Chair: William Gruver, Intelligent Robotics Corporation, CA</p>	<p>S331 C</p>
--	---------------	--	---------------

18:30 – 20:30

IEEE RFID 2020 Conference Banquet S330 E