TECHNICAL AGENDA

Thursday, December 8

0800 to 0810 Welcome
Conference Chair: Jon Martens, Anritsu

0810 to 0930 Session A: Design and Measurement for Wireless Applications
Session Chair: Jon Martens, Anritsu

ThA-1 INVITED: Bringing Envelope Tracking to the Market: A Product and Metrology Development Perspective
0810-0850 P. Draxler, H. Masaracioglu, Qualcomm, San Diego, United States

ThA-2 Measurement of Dynamic Power Dissipation and Estimation of Effective Dynamic Efficiencies in an LTE Chireix PA
0850-0910 J. A. Galaviz-Aguilar\textsuperscript{1,2}, H. Chang\textsuperscript{1}, F. J. Martinez-Rodriguez\textsuperscript{1,3}, P. Roblin\textsuperscript{1}, J. C. Nunez Perez\textsuperscript{2,}\textsuperscript{1}The Ohio State University, Columbus, United States, \textsuperscript{2}Instituto Politecnico Nacional, IPN-CITEDI, Tijuana, Mexico, \textsuperscript{3}National University of Mexico, Ciudad de México, United States

ThA-3 Radiated Power Based on Wave Parameters at Millimeter-wave Frequencies for Integrated Wireless Devices
0910-0930 D. Senic\textsuperscript{1}, K. A. Remley\textsuperscript{1}, D. F. Williams\textsuperscript{1}, D. C. Ribeiro\textsuperscript{2}, C. Wang\textsuperscript{1}, C. L. Holloway\textsuperscript{1,}\textsuperscript{1}National Institute of Standards and Technology, Boulder, United States, \textsuperscript{2}University of Aveiro, Aveiro, Portugal

0930 to 1100 Break – Exhibits and Interactive Forum
Session Chair: Ron Ginley, NIST

ThP-01 Lumped modeling of integrated MIM capacitors for RF applications
F. Korndörfer\textsuperscript{1}, V. Mühlhaus\textsuperscript{2}, \textsuperscript{1}IHP GmbH, Frankfurt (Oder), Germany, \textsuperscript{2}Dr. Mühlhaus Consulting & Software GmbH, Witten, Germany

ThP-02 Design of WR-6 (110GHz ~ 170GHz) Waveguide Microcalorimeter
W. Yuan, C. Ma, X. Cui, Y. Li, National Institute of Metrology, Beijing, China

ThP-03 CAD-Assisted Microwave Characterization of Ink-Jet Printed CPW on PET Substrates
A. Sahu\textsuperscript{1}, V. Devabhaktuni\textsuperscript{1}, A. Lewandowski\textsuperscript{2}, T. M. Wallis\textsuperscript{1}, P. H. Aaen\textsuperscript{4}, \textsuperscript{1}University of Toledo, Toledo, United States, \textsuperscript{2}Warsaw University of Technology, Warsaw, Poland, \textsuperscript{3}National Institute of Standards and Technology, Boulder, United States, \textsuperscript{4}University of Surrey, Surrey, United Kingdom
**ThP-04** Digitally Assisted Analog Predistortion Technique for Power Amplifier  
K. Gumber, P. Jaraut, M. Rawat, Indian Institute of Technology Roorkee, Roorkee, India

**ThP-05** Wideband Impedance-varying N-way Wilkinson Power Divider/Combiner for RF Power Amplifiers  
O. I. Hussein\(^1\), K. A. Al shameleh\(^2\), V. K. Devabhaktuni\(^1\), P. H. Aaen\(^3\), \(^1\)University of Toledo, Toledo, United States, \(^2\)Purdue University Northwest, Hammond, United States, \(^3\)University of Surrey, Guildford, United Kingdom

**Session B: On-wafer Measurements**  
*Session Chair: Jeff Jargon, NIST*

**ThB-1** Development of a Reference Wafer for On-Wafer Testing of Extreme Impedance Devices  
1100-1120  
H. Votsi\(^1\), I. Roch-Jeune\(^2\), K. Haddadi\(^2\), C. Li\(^3\), G. Dambrine\(^2\), P. Aaen\(^1\), N. Ridler\(^3\), \(^1\)University of Surrey, Guildford, \(^2\)University of Lille, Lille, France, \(^3\)National Physical Laboratory, Teddington, United Kingdom

1120-1140  
K. C. Kellogg\(^1\), L. Dunleavy\(^1\), S. Skidmore\(^1\), G. Simpson\(^2\), \(^1\)Modelithics, Inc., Tampa, United States, \(^2\)Maury Microwave Corporation, Ontario, United States

**ThB-3** Fused Silica based RSOL calibration substrate for improved probe-level calibration accuracy  
1140-1200  
L. Galatro, M. Spirito, Delft University of Technology, Delft, Netherlands

**Lunch**  
1200 to 1300

**ARFTG Business Meeting Part 1**  
1300 to 1320

**Session C: Frontiers of Microwave Measurements**  
*Session Chair: Mohamed Sayed, MMS*

**ThC-1** INVITED: Multiphysics Characterization – More Than Just Microwaves  
1320-1400  
P. Aaen and N. Ridler, n3m-labs, University of Surrey, United Kingdom and the National Physical Laboratory, United Kingdom

**ThC-2** Kicking the Tires of the NIST Microwave Uncertainty Framework  
1400-1420  
R. Ginley, NIST, Boulder, United States

**ARFTG Business Meeting Part 2**  
1420 to 1425

**Break – Exhibits and Continuation of the Interactive Forum**  
*Session Chair: Ron Ginley, NIST*  
1425 to 1600
ThD-1  Power Level Control of mm-Wave Test Benches for Accurate Small and Large-signal DUT Measurements
1600-1620 C. De Martino, Z. Hu, L. Galatro, G. Sarris, M. Spirito, Delft University of Technology, Delft, Netherlands

ThD-2  Spectral Characterization of Linear Isotropic and Anisotropic Dielectric Materials Using Terahertz Measurement Systems
1620-1640 J. M. Seligman, C. C. Green, B. K. Sternberg, C. K. Walker, University of Arizona, Tuscon, United States, Rogers Corporation, Chandler, United States

ThD-3  Performance Evaluations of Dielectric Waveguide for Millimeter-wave On-Wafer Measurements
1640-1700 M. Horibe, R. Sakamaki, Y. Kato, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan

Friday, December 9

0800 to 0900  Session E: Power Amplifiers
Session Chair: Peter Aaen, U. of Surrey

FrE-1  INVITED: Supply modulation for power amplifier efficiency enhancement
0800-0840 Z. Popovic, U. of Colorado, Boulder, United States

FrE-2  Cross-correlation measurement method of Error Vector Magnitude and application to power amplifier non-linearity performances
0840-0900 J. Sombrin, TESA Laboratory, Toulouse, France, Labex Sigma-Lim, Limoges, France

0900 to 1040  Break – Exhibits

1040 to 1140  Session F: Transmission Lines and Nonlinear Measurements
Session Chair: Mitch Wallis, NIST

FrF-1  A Simple Method for Transmission Lines Quality Control
1040-1100 A. A. Savin, V. G. Guba, O. N. Bykova, A. Rumiantsev, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russian Federation, NPK Tair, Tomsk, Russian Federation, MPI Corporation, Chu-Pei, Taiwan

FrF-2  Uncertainty of Parameter Estimation in Equivalent Circuit Model of Gallium Nitride Diode for Rectifier Design at 5.8 GHz
1100-1120 R. Kishikawa, M. Horibe, S. Kawasaki, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, The Graduate University for Advanced Studies, Sagamihara, Japan, Japan Aerospace Exploration Agency,
FrF-3  Linearity characterization of RF circuits through an Unequally Spaced Multi Tone signal

1120-1140  S. Laurent¹, J.-P. Teyssier², R. Quéré¹, J. Sombrin³, M. Prigent¹, ¹XLIM, Brive La Gaillarde, France, ²Keysight, Santa Rosa, United States, ³XLIM, Limoges, France

1200 to 1300  Lunch