



Automatic RF Techniques Group

88th ARFTG Microwave Measurement Conference

Austin, Texas

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^{1,2}, H. Chang¹, F. J. Martinez-Rodriguez^{3,1}, P. Roblin¹, J. C. Nunez Perez², ¹The Ohio State University, Columbus, United States, ²Instituto Politecnico Nacional, IPN-CITEDI, Tijuana, Mexico, ³National 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. Senic¹, K. A. Remley¹, D. F. Williams¹, D. C. Ribeiro², C. Wang¹, C. L. Holloway¹, ¹National Institute of Standards and Technology, Boulder, United States, ²University 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. Korndörfer¹, V. Mühlhaus², ¹IHP GmbH, Frankfurt (Oder), Germany, ²Dr. 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. Sahu¹, V. Devabhaktuni¹, A. Lewandowski², T. M. Wallis³, P. H. Aaen⁴, ¹University of Toledo, Toledo, United States, ²Warsaw University of Technology, Warsaw, Poland, ³National Institute of Standards and Technology, Boulder, United States, ⁴University 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. Hussein¹, K. A. Al shamaileh², V. K. Devabhaktuni¹, P. H. Aaen³, ¹University of Toledo, Toledo, United States, ²Purdue University Northwest, Hammond, United States, ³University of Surrey, Guildford, United Kingdom

1100 to 1200

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- H. Votsi^{1,3}, I. Roch-Jeune², K. Haddadi², C. Li³, G. Dambrine², P. Aaen¹, N. Ridler³, ¹University of Surrey, Guildford,
1120 United Kingdom, ²University of Lille, Lille, France, ³National Physical Laboratory, Teddington, United Kingdom

ThB-2 The Impact of ENR and Coaxial Calibration in Accurate On-Wafer Noise Parameter Testing for Ultra-Low Noise Devices

1120- K. C. Kellogg¹, L. Dunleavy¹, S. Skidmore¹, G. Simpson², ¹Modelithics, Inc., Tampa, United States, ²Maury Microwave
1140 Corporation, Ontario, United States

ThB-3 Fused Silica based RSOL calibration substrate for improved probe-level calibration accuracy

1140- L. Galatro, M. Spirito, Delft University of Technology, Delft, Netherlands
1200

1200 to 1300

Lunch

1300 to 1320

ARFTG Business Meeting Part 1

1320 to 1420

Session C: Frontiers of Microwave Measurements

Session Chair: Mohamed Sayed, MMS

ThC-1 INVITED: (Paper Title is To Be Determined)

1320-1400 P. Aaen, U. of Surrey, Surrey, United Kingdom

ThC-2 Kicking the Tires of the NIST Microwave Uncertainty Framework

1400-1420 R. Ginley, NIST, Boulder, United States

1420 to 1425

ARFTG Business Meeting Part 2

1425 to 1600

Break – Exhibits and Continuation of the Interactive Forum

Session Chair: Ron Ginley, NIST

1600 to 1700

Session D: mm-Wave and Terahertz Measurements

Session Chair: Dave Blackham, Keysight

ThD-1 Power Level Control of mm-Wave Test Benches for Accurate Small and Large-signal DUT Measurements

1600- C. De Martino, Z. Hu, L. Galatro, G. Sarris, M. Spirito, Delft University of Technology, Delft, Netherlands
1620

ThD-2 Spectral Characterization of Linear Isotropic and Anisotropic Dielectric Materials Using Terahertz Measurement Systems

1620- J. M. Seligman^{1,1}, C. C. Green^{2,2}, B. K. Sternberg^{1,1}, C. K. Walker^{1,1}, ¹University of Arizona, Tuscon, United States, ²Rogers
1640 Corporation, Chandler, United States

ThD-3 Performance Evaluations of Dielectric Waveguide for Millimeter-wave On-Wafer Measurements

1640- M. Horibe, R. Sakamaki, Y. Kato, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan
1700

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- Z. Popovic, U. of Colorado, Boulder, United States
0840

FrE-2 Cross-correlation measurement method of Error Vector Magnitude and application to power amplifier non-linearity performances

0840- J. Sombrin^{1,2}, ¹TESA Laboratory, Toulouse, France, ²Labex Sigma-Lim, Limoges, France
0900

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- A. A. Savin^{1,2}, V. G. Guba², O. N. Bykova², A. Rumiantsev³, ¹Tomsk State University of Control Systems and
1100 Radioelectronics, Tomsk, Russian Federation, ²NPK Tair, Tomsk, Russian Federation, ³MPI 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- R. Kishikawa^{1,2}, M. Horibe¹, S. Kawasaki^{3,2}, ¹National Institute of Advanced Industrial Science and Technology, Tsukuba,
1120 Japan, ²The Graduate University for Advanced Studies, Sagamihara, Japan, ³Japan Aerospace Exploration Agency,
Sagamihara, Japan

FrF-3 Linearity characterization of RF circuits through an Unequally Spaced Multi Tone signal

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

1200 to 1300 **Lunch**



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