68th ARFTG Conference Schedule

Thursday, Nov. 30, 2006

7:30-8:30 **Breakfast**

8:30-8:45 **Welcome and opening remarks**

Session 1 Modeling and Measurement Techniques
John Wood, Session Chair

8:45-9:15 **Which EM Model to Use?**
Jim Rautio, Sonnet

9:15-9:40 **Terminology for High-Speed Sampling Oscilloscope Calibration**
Dylan F. Williams, Tracy S. Clement, Paul D. Hale and Andrew Dienstfrey; NIST, Boulder, CO USA

9:40-10:05 **Traceability to National Standards for S-Parameter Measurements of Device Fitted with Precision 1.85mm Coaxial Connectors**
Nick M. Ridler, NPL, Teddington, UK

10:05-10:45 **Exhibitor Introduction and Break**

Session 2 Non-Linear and other Measurement Techniques
Dylan Williams, Session Chair

10:45-11:10 **RF Vector Measurement Test-Bench for Evaluation of Behavioral Model Accuracy Under Realistic Excitation**
Maciej Myslinski (1), Kate A. Remley (2), Dominique Schreurs (1) and Bart Nauwelaers (1); (1) ESAT-TELEMIC, Leuven, Belgium, (2) NIST, Boulder, CO USA

11:10-11:35 **A Behavioral Power Amplifier Model that Includes the Average Power Level**
David Wisell1,2,3, Niclas Keskitalo1,3, 1) University of Gävle, Dept. of Electronics, Gävle, Sweden, 2) Royal Institute of Technology, Signal Processing Lab, Stockholm, Sweden, 3) Ericsson AB, Gävle, Sweden

11:35-12:00 **Real-Time Active Load-Pull of the 2nd and 3rd Harmonics for Interactive Design of Non-Linear Power Amplifiers**
Xian Cui (1), Seok Joo Doo (1), Patrick Roblin (1), Gregg H. Jensen (2), Roberto G. Rojas (1) and Jeffery Strahler (3); (1) Ohio State University, (2) AFRL-WPAFB, (3) Andrew Corp.

12:00-12:25 **Validation of On-Wafer Vector Network Analyzer Systems**
J. Randy Fenton, Cascade Microtech, Inc., Beaverton, OR, USA

12:25-1:30 **Lunch**

Session 3 Nano-Technology and Uncertainty Representations
Pavel Kabos, Session Chair

1:30-1:55 **Scanning Near-Field Microwave Microscopy for Specially Localized Metrology of Nano-Scale Materials and Devices**
Vladimir V. Talanov and Andrew Schwartz, Neocera Inc., Beltsville, MD USA

1:55-2:20 **Design of Scanning Capacitance Microscope**
Hassan Tanbackuchi, Matt Richter and Mike Whitener, Agilent Technologies

2:20-2:45 **In-Phase/Quadrant Covariance-Matrix Representation of the Uncertainty of Vectors and Complex Numbers**
Dylan Williams (1), C. M. Wang (1) and Uwe Arz (2); (1) NIST, Boulder, CO USA, (2) PTB, Braunschweig, Germany

2:45-3:20 **Business Meeting and Election of Officers**

3:20-3:45 **Break**

Session 4 – Poster Session
Bill Eisenstadt, Session Chair

3:45-5:15 **Poster Papers**

Poster Papers

A Novel Probe Station for Helium Temperature Measurements
H. Geissler (1), A. Rumiantsev (1), S. Schott (1), P. Sakalas (2) (3) and M. Schroter (2) (4); (1) SUSS MicroTec Test Systems, Sacka, Germany, (2) Dresden University, Dresden Germany, (3) Semiconductor Physics Institute, Vilnius, Lithuania, (4) University of California San Diego, La Jolla, CA USA

Broadband Embedded Substrate Noise Measurement for RF/Microwave ICs
Ming He, William R. Eisenstadt and Robert M. Fox; University of Florida, Gainesville, FL USA

An XML File Format and a Database for Measurement Data Storage
Jean-Pierre Teyssier and Fabien De Groote; University of Limoges, Brive, France

Comparison of Multi-Port VNA Architectures – Measured Results
Thomas Ruttan, Brett Grossman and Evan Fledell; Intel Corp, Hillsboro, OR USA

Uncertainty Analysis of Microwave Power Measurement with Monte Carlo Method
Cui Xiao-hai (1) and Liu Xin-meng (1) (2); (1) National Institute of Metrology, China, (2) Harbin Institute of Technology, China

Using a VNA to Find the 'Sweet Spot' When Biasing a MMIC – An Application
John Gregory Burns, Christopher Ward, George Henry and Gregory DeSalvo; Northrup Grumman Corp., Linthicum, Maryland, USA

Microwave System For Drying of Textile: Design, Model and Evaluation
Marika Pourova, Jan Vrba and Ondrej Zak; Czech Technical University, Prague, Czech Republic

A Triple-Frequency CW Radar System for Mutable-Range Distance Measurements
S. Kitmura, T. Araki, T. Nagase, M. Araki and H. Ono; Hirosaki University, Aomori, Japan

An Indirect Non-Invasive Method for Measuring Input Impedance and Connection Effects of an RFID Tag Antenna
Leonid Mats, J. T. Cain and Marlin Mickle; University of Pittsburg, Pittsburg, PA USA

Re-Visiting the Repeatability Issue of the Type-N Connectors
Yeou-Song (Brian) Lee; Anritsu Company, Morgan Hill, CA USA

Verification of Wafer-Level Calibration Accuracy at Cryogenic Temperatures
Andrej Rumiantsev (1), Ralf Doerner (2) and Paulius Sakalas; (1) SUSS MicroTec Test Systems, Sacka, Germany, (2) FBH, Berlin, Germany, (3) Dresden University of Technology, Dresden, Germany, (4) Semiconductor Physics Institute, Vilnius, Lithuania

Thermal Equivalence Error of Microwave Power Measurement
Liu Xin-meng (1) (2), Peng Xi-yuan (1) and Cui Xiao-hai (2); (1) Harbin Institute of Technology, China, (2) National Institute of Metrology, China

Improved Evaluation of Planar Calibration Standards Using TDR Preselection Method
J Vancl, V. Sokol, K. Hoffman and Z. Skvor; Czech Technical University, Prague, Czech Republic

6:00-7:00 **Hosted Piano Bar Reception**

7:00-9:00 **Awards Banquet and Ceremony**

9:00-10:00 **Jim Rautio – The life and times of James Clerk Maxwell**

Friday, Dec. 1st, 2006

7:30-8:30 **Breakfast**

Session 5 Non-Linear Measurement Techniques
Kate Remley, Session Chair

8:30-8:55 **Load-Pull Measurements of Transistor Negative Input Impedance**
Fabien De Groote (1), Jan Verspecht (2), Jean-Pierre Teyssier (1) and Raymond Quere (1); (1) University of Limoges, Brive, France; (2) Jan Verspecht bvba, Steenhuffel, Belgium

8:55-9:20 **A Pulsed Network Analyzer for High Dynamic Range Isothermal Measurements**
M. Marchetti, M. Pelk, K. Buisman, M. Spirito and L.C.N. de Vreede, High Frequency Technology & Components (HiTeC), Delft University of Technology, Delft, The Netherlands,

9:20-9:45 **True Pulse Load-Pull Measurement Setup for High Power Transistor Characterization**
J.M. Coupat (1), L. Tebaldini (1), J. Sirois (1), B. Noori (1) and R. Wallace (2); (1) Freescale Semiconductor, Inc., (2) Maury Microwave

9:45-10:30 **Break**

Session 6 Measurement Techniques
Ken Wong, Session Chair

10:30-10:55 **A New Scalar Microwave Interferometric Measurement System**
Jan Zela, Karel Hoffman and Premysl Hudec, Czech Technical University, Prague, Czech Republic

10:55-11:20 **Coaxial Probe Dielectric Measurements: Practical Dotting "i's" and Crossing "t's"**
H. C. Reader (1) and M. D. Janezic (2); (1) University of Stellenbosch, Cape, South Africa, (2) NIST, Boulder, CO USA

11:20-11:45 **A Hybrid Probe – Tip Calibration for Multiport Vector Network Analyzers**
Leonard Hayden, Cascade Microtech, Beaverton, OR USA

11:45-1:00 **Lunch**

1:00-1:30 **Transport to NIST**

1:30-3:30 **NIST Visit**

3:30-4:00 **Return to Omni**