



74th ARFTG Microwave Measurement Symposium

System Modeling and Measurement for High Accuracy Verification

Broomfield, Colorado
December 1st to 4th, 2009

- *Common adapter/fixture extraction techniques: sensitivities to calibration anomalies*, J. Martens, Anritsu
- *Additive Phase Noise Measurements of AlGaIn/GaN HEMTs Using an Large Signal Network Analyzer and a Tunable Monochromatic Light Source*, P. Roblin, Ohio State
- *Verifying Transmission Phase Measurements at Millimeter Wavelengths Using Beadless Air Lines*, N. Ridler, NPL
- *S-parameters of Slotted and Slotless Coaxial Connectors*, J. Hoffmann, ETH Zurich
- *Correction for line length and connector interface errors in the coaxial multiline through-reflect-line calibration*, A. Lewandowski, Univ. of Warsaw, NIST
- *Use of Electronic Calibration Units for Vector-Network-Analyzer Verification*, D. Williams, NIST
- *Assessing the performance of uncertainty calculations by simulation*, B. Hall, MSL
- *Generalized Method for Broadband Measurement of Extreme Impedances*, K. Hoffman, Czech U.
- *High Accuracy Broadband Measurement of Anisotropic Dielectric Constant Using a Shielded Planar Dual Mode Resonator*, J Rautio, Sonnet
- *Design and Measurement of a WR-42 Calorimeter*, X. Cui, NIM
- *Stochastic modeling of coaxial-connector repeatability errors*, A. Lewandowski, Univ. of Warsaw, NIST
- *An online tool for transforming between different S parameter formats*, M. Salter, NPL
- *Analysis of an RF Power Amplifier for Envelope Tracking based on Load-pull data*, M. Ubostad, Norwegian U. S&T
- *Improved mathematical model for the investigation of deep traps into semiconductor devices : application to Metamorphic HEMTs*, M. Jaafar, Xlim, Limoge
- *S-functions extracted from narrow-band modulated large-signal network analyzer measurements*, M Myslinski, K.U. Leuven
- *Use of a Step-Response Approximation for Thermal Transient Modeling in Power MOSFETs*, C. Baylis, Baylor
- *Analyses of VNA Noise Floor*, X. Liu, NIM
- *Metrological Definitions of Verification Methods and Techniques in the Microwave Measurements*, Y. B. Lee, Anritsu
- *Duty Cycle Dependent Pulsed IV Simulation and Thermal Time Constant Extraction for LDMOS Transistors*, C. Baylis, Baylor
- *Applying Normalized Error Ratio in the Vector Measurement Quantities*, Y. B. Lee, Anritsu
- *Flanged Coaxial Material Probes: Characterizing Exterior CM Energy*, H. Reader, U. Stellenbosch

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Nonlinear Measurement Workshop:
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74th Conference Technical Agenda
Selections



ARFTG Conference

ARFTG will hold its 74th Microwave Measurement Symposium at the Omni Interlocken Resort in Broomfield, CO. Join us as we explore **System Modeling and Measurement for High Accuracy Verification** and other microwave measurement techniques. The Symposium includes the 74th Microwave Measurement Conference, a short course, a users' forum and a nonlinear measurement workshop. Register Early!



Location

The four-diamond Omni Interlocken Resort welcomes you to a retreat into modern luxury. Nestled against the backdrop of the Rocky Mountains, this year-round Colorado resort near Denver offers a wealth of on-site pleasures and near-by shopping.

Omni Interlocken Resort
500 Interlocken Blvd.
Broomfield (Near Boulder), CO 80021
Phone: +1-303-438-6600, Fax: +1-303-438-7224

All sessions will be at the Omni Interlocken Resort

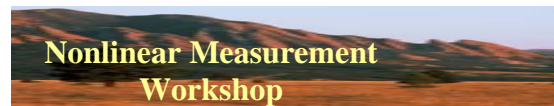
Reserve your hotel room at the Omni by Oct. 30th to guarantee your lodging. Mention ARFTG to qualify for the special conference rate of \$140+tax per night.



NIST/ARFTG Microwave Measurement Short Course

Join us in a practical microwave measurement tutorial, intended for engineers, graduate students, experienced technicians, or technical managers. Day 1 includes topics such as connectorized and on-wafer S-parameter measurement, power and large-signal measurement, thermal noise and phase noise measurement, and oscilloscope measurements. Day 2 will focus more on the conference theme and will include measurement uncertainty and the process of measurement verification. **Space is limited; please register early!**

Scheduled Instructors: Jon Martens – Anritsu, Dominique Schreurs – K. U. Leuven, Nick Ridler – NPL, Blair Hall – IRL, Uwe Arz – PTB, Dylan Williams, Paul Hale, Tom Crowley, David Walker, Craig Nelson, Ronald Ginley - NIST



Nonlinear Measurement Workshop

Many instruments used in nonlinear measurement are based on RF samplers, including oscilloscopes, LSNAs/MTAs, some VNAs and spectrum analyzers. This year's topic will be "NonLinear Measurements for Power Amplifiers Design and Verification." Along with highlights on up-to-date very fast sampling technologies, we will discuss some more exotic techniques with surprising results and impressive capabilities.



Special Awards Banquet Presentation

Come join us for a special evening of entertainment.

Start at the piano bar, enjoy a delicious dinner followed by a special presentation by Craig Zablocki (<http://www.craigzablocki.com/>)



Schedule of Events

NIST/ARFTG Measurement Short Course	Tuesday, Dec. 1 st 8:00 am – 5:00 pm
	Wednesday, Dec. 2 nd 8:00 am – noon
Nonlinear Workshop	Wednesday, Dec. 2 nd 1:00 pm – 5:00 pm
NVNA Users' Forum	Wednesday, Dec. 2 nd 5:00 pm – 7:00 pm
ARFTG Microwave Measurement Conference	Thursday, Dec. 3 rd 8:00 am – 5:00 pm
	Friday, Dec. 4 th 8:00 am – noon
Reception and Awards Banquet	Thursday, Dec. 3 rd Approx. 6pm till 10 pm
Tour at NIST	Friday, Dec. 4 th 1:30 pm – 3:30 pm



Registration

Please see www.arftg.org for **on-line registration**

Registration:	Before Nov. 16 th	After Nov. 16 th
Symposium Package	\$610	\$655
Includes conference, awards banquet, workshop and NVNA user's forum		
Complete Package	\$910	\$970
Symposium package plus short course (all events)		
Short Course only	\$450	\$485
Workshop only	\$150	\$165
Conference only	\$445	\$470
NVNA Users Forum only	\$15	\$20
Guest Meal (per meal)	\$25	\$25
Guest Awards Banquet	\$65	\$65
NIST Tour	\$0	\$0
Student/retiree rates – please see www.arftg.org		