



AUTOMATIC RF TECHNIQUES GROUP

CONFERENCE NEWSLETTER

FALL 2002**NUMBER 28**

The 60th Conference

Measurement Needs for Emerging Technologies

OVERVIEW



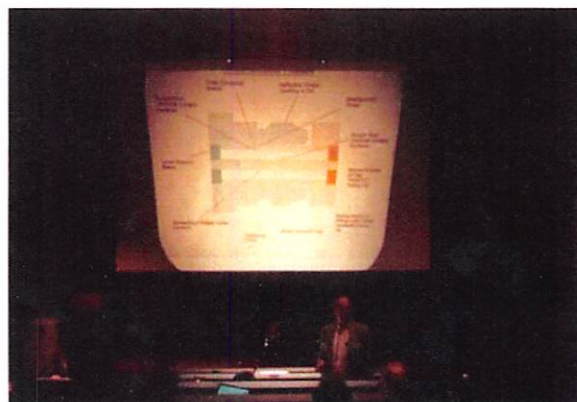
Washington, DC provided a very enjoyable setting for the 60th ARFTG conference, held on December 5th and 6th. This conference offered a two-day technical program. A complete listing of the papers presented is available in the conference digest and also on the ARFTG website at www.arftg.org. Conference Chair Greg Burns and Technical Program Chairs Dominique Schreurs and Harvey Newman put forth considerable effort to ensure an outstanding conference.

SHORT COURSE

The 9th annual NIST/ARFTG Microwave Measurements Short Course was given on December 3rd and 4th at the Monarch Hotel in Washington, DC. This one and a half day course offers an excellent introduction for those new to the field or a review for those who wish to expand their knowledge on a wide variety of topics germane to high frequency measurements. The course material included: microwave measurements overview, circuit theory,

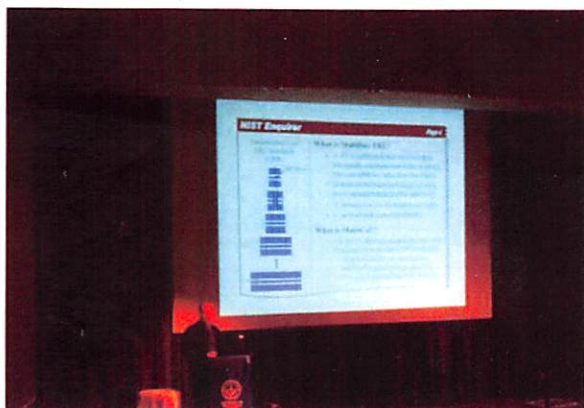
vector network analysis, RF and microwave interconnects, power, noise, digital modulation, time domain, wideband radio link modeling, simulation, and measurement. The course organizers and instructors put forth considerable effort in keeping the presentations fresh and up-to-date. The first day of course focuses on RF and Microwave measurement basics, while the second day is tailored to the conference theme. The author benefited greatly when he took the course several years ago. Additional short course information is available on our website at www.arftg.org or by contacting the ARFTG Short Course Director, David Walker, dwalker@boulder.nist.gov.

NonLinear Measurement Workshop



The 2nd NonLinear Measurement Workshop was also held at the Monarch Hotel on the afternoon of December 4th. The workshop covered recent developments in Load-Pull measurements, nonlinear network analysis, and prediction of system parameters from nonlinear measurements. Workshop organizer Jan Verspecht did a great job and we all are looking forward to attending the next workshop in the Fall of 2003.

TECHNICAL SESSIONS



The technical sessions were held December 5th and 6th at the Monarch Hotel, Washington, DC. These sessions discussed the conference theme as well as a number of other diverse topics of common interest. Technical Program Chairs Harvey Newman and Dominique Schreurs and Conference Chair Greg Burns assembled an interesting program consisting of 20 presented papers. Topics included: Measurement Related Modeling, Nonlinear Measurement, Millimeter and Optical Measurements, and Measurement Accuracy.

Selected by the conference attendees as the Best Technical Paper was "Submillimeter Wave Scattering Parameter Measurements with a Sampled Six Port Reflectometer", presented by Robert M. Weikle II of the University of Virginia, VA. The Best exhibitor was Tektronix.

EXHIBITS

The exhibits area at an ARFTG Conference provides attendees with an opportunity to view newly developed products and to have in depth discussions with suppliers about their test and measurement problems and needs. For additional information please contact Exhibits Chair Leonard Hayden, leonard@cmicro.com.

CD-ROM, DIGESTS & COURSE NOTES

Available for purchase are printed digests and course notes from this and previous conferences. Also the collected ARFTG Digests for 1982-2001 conferences are for sale on CD-ROM. For additional information, visit our website at www.arftg.org or contact Jim Taylor, the ARFTG Executive Secretary, jtaylor@blitz-it.net.

AWARDS BANQUET



The awards banquet was held at the Monarch Hotel, Washington, DC. The evening included sparkling conversation, good food and a picturesque snowfall. President Chip Wilker presented the following awards:

ARFTG Career Award

Bill Oldfield

ARFTG Technology Award

Marc Vanden Bossche, Frans Verbeyst, Jan Verspecht

Best Paper 59th Conference

Ed Godshalk

Best Interactive Session 59th Conference

Bruce Kim

Best Exhibitor 59th Conference

Agilent Technology

Conference Chair 60th Conference

Greg Burns

CHECK YOUR MEMBERSHIP STATUS

Please check the address label attached to this mailing. It indicates your membership status as either "Member in Good Standing", "Expiring", or "Non-member". To maintain your membership in good standing, you must attend at least one conference per year, or send \$25 to renew your membership to:

ARFTG PO Box 228, Rome, NY 13442-0228.

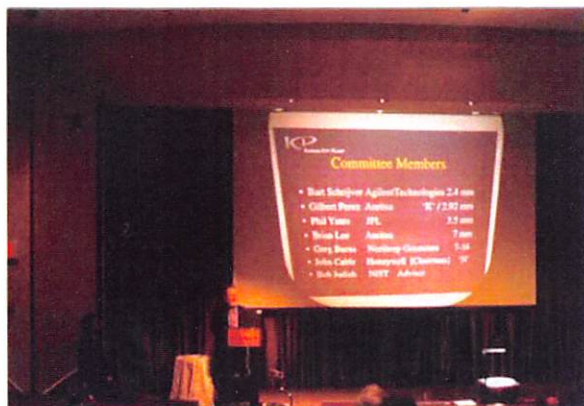
MICROWAVE MEASUREMENT STUDENT FELLOWSHIP

ARFTG has an ongoing Microwave Measurement Student Fellowship Program. The purpose of this fellowship is to recognize and provide financial assistance to graduate students who show promise and interest in pursuing research related to improvement of radio frequency and microwave measurement techniques. One or more \$5000 awards may be granted each year, based on available funding and on the number and quality of applications received.

Applicants must be enrolled as a full-time student at a suitably qualified institution of higher learning. Applicants must be carrying out research as part of the degree program, rather than just taking course work. The proposed research project must clearly involve RF/microwave measurements and be supervised by a full-time faculty member. The faculty advisor or supervisor must be an ARFTG member or the proposal must be sponsored by an ARFTG member.

For more information visit our website at www.arftg.org or contact Jeff Jargon at jargon@boulder.nist.gov.

MEASUREMENT COMPARISON PROGRAM



The ARFTG Measurement Comparison Program allows participating laboratories to compare their measurements on the ARFTG standards kits to those obtained from other laboratories. Given the increasing emphasis on measurement assurance, this program provides a valuable, cost-effective method for validating the participant's measurement capability. This program is not intended to provide an uncertainty analysis but should give the participants more confidence in their measurement capability and assist in

identifying measurement deficiencies. Data obtained from the participating labs are sent to NIST where the results are added to a database and a report is sent to the customer.

The following are a list of available MCP kits and their

Connector	Contact
7/16	Greg Burns, Northrup Grumman
Type N	John Cable, Honeywell
7 mm	Brian Lee, Agilent Technologies
3.5 mm	Phil Yates, JPL
Type K, 2.92 mm	Ron Guzman, Anritsu
2.4 mm	Ken Wong, Agilent Technologies

respective coordinators.

For more information or to obtain a signup sheet visit our website at www.arftg.org or contact John Cable jcable@kcp.com.

ANNUAL BUSINESS MEETING

The annual business meeting, consisting of the membership present, was called to order by President Chip Wilker.

An election was held for four members to serve on the Board of Directors. As currently constituted, the Board of Directors is composed of twelve voting members each elected for a three year term. The candidates were introduced to the membership. Biographies of the candidates were distributed with the conference materials and each member was asked to review them. The ballots were passed out, a vote requested and the ballots were collected. Joe Tauritz, Tom Ruttan, Ken Wong, and Raymond Tucker were each elected to terms expiring in Fall 2005.

John Cable was recognized to report on the ARFTG Measurement Comparison Program. Treasurer Ken Wong reported that the financial report of the organization is excellent and a balance sheet is available upon request. President Wilker adjourned the meeting.

BOARD OF DIRECTORS MEETING

The ARFTG bylaws stipulate that the Board of Directors meet twice a year. The elected officers for the calendar year 2003 are: President Charles Wilker, Vice President Brian Pugh, Secretary J. Gregory Burns and Treasurer Ken Wong. A complete list of the ARFTG Board of Directors members and assignments are included in this newsletter.

FUTURE CONFERENCES

61st ARFTG Conference

The 61st ARFTG Conference will be held on Friday June 13, 2003, in conjunction with the MTT International Microwave Symposium (IMS) at the Convention Center in Philadelphia, Pennsylvania. The main conference theme is "*Measurement Accuracy*". Please contact either the Conference Chair Charles Wilker (charles.wilker@usa.dupont.com or 302-999-3075) or the technical program chair John W. Cable (jcable@kcp.com or 816-997-4361).

10th NIST/ARFTG Short Course

ARFTG in cooperation with NIST will offer its tenth annual Microwave Measurements Short Course in conjunction with the Fall 2003 ARFTG Conference to be held in Boulder, Colorado. This popular two-day course provides both grounding in the fundamentals as well as the latest in measurement techniques taught by the experts. Basic measurement techniques are covered on Day 1, including: microwave measurement overview, circuit theory, vector network analyzers, test fixtures, on-wafer measurements, power, and noise. Additional in-depth topics are covered on Day 2, including: phase noise, load-pull, digital modulation, and time domain techniques. Several tutorials specifically related to the conference theme are also covered on Day 2. For more information, please visit our web site, www.arftg.org, or contact the short course director, Dave Walker, (dwalker@boulder.nist.gov or (303)-497-5490).

62nd ARFTG Conference

The 62nd ARFTG Conference will be held in Boulder, Colorado on 4 & 5 December, 2003. The main conference theme is as yet to be announced. For more information, please contact the Conference Chair, Dylan Williams, (dvaln@boulder.nist.gov or (303)-497-3138).

63rd ARFTG Conference

The 63rd ARFTG Conference will be held in conjunction with the MTT International Microwave Symposium (IMS). The ARFTG Conference will be held on Friday the 11th of June, 2004 in Fort Worth, Texas. For more information, please contact the Conference Chair, John Cable, (jcable@kcp.com or 816-997-4361).

2003 ARFTG Board of Directors

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