



## **AUTOMATIC RF TECHNIQUES GROUP**

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**NEWSLETTER**

**NUMBER 9**

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### **THE 41st CONFERENCE**

#### **OVERVIEW**

The Automatic RF Techniques Group held its 41st Conference in Atlanta, Georgia on June 18, 1993. Theme of the conference was "Managing Data and Automated Systems". Final count for registration was 92 with those in attendance enjoying a fine technical program along with an exhibit area showing key products. As usual, there were opportunities for stimulating conversations with new and old friends.

Technical Program Chairman Richard Henle was not able to attend so that Conference Chairman Greg Burns did an excellent job in both roles. In addition to introducing the 13 speakers on the main program, he also gave one of the papers. A new feature at this conference was the setup of 4 poster papers in the exhibit area. Attendees selected the paper "A Novel Procedure for Network Analyzer Calibration and Verification" by Vahe' Adamian as the best paper.

Another new feature to improve the conference was the introduction of each exhibitor in the technical program area by Exhibits Chairman James Rautio. Exhibitors included Cascade Microtech, ATN Microwave, Hewlett-Packard, Scientific Atlanta, Marconi Instruments, Karl Suss, Maury Microwave, Lucas Aerospace, and MADE-IT Associates. The exhibit by Marconi Instruments was selected as the best by those in attendance.

At the awards luncheon, a representative of Edward Godshalk of Cascade Microtech accepted the award for the best paper at the 40th Conference.

#### **CONFERENCE PAPERS**

##### **Main Program**

**Full Characterization of Low-Noise HEMPTs Using Only Noise Figure Measurements**  
A. Caddemi, G. Martinez, M. Sanino;  
University of Palermo

##### **A Novel Procedure for Network Analyzer Calibration and Verification**

Vahe' Adamian; ATN Microwave

##### **The Multi-State Two Port: An Alternative Transfer Standard**

G. Engen (Ret.), R. Judish, J. Juroshek; NIST  
**An Automated Non-Linear Transistor Characterization System with a High-Level Language User Interface for Easy Control, Visualization, and Data Management**

F. Ghannouchi, A. Kouki, F. Beaugerard;  
Ecole Polytechnique de Montreal

##### **The Reflection Analyzer - Architecture and Implementation**

G. Hjiipieris, C. Potter; Marconi Instruments  
**Lessons Learned on a LAN**

J. G. Burns; Johns Hopkins APL

##### **Measurement of Dielectrics and Ferrite Materials**

H. Stinehelfer; MADE-IT Associates

##### **Automated Testing and Statistical Process Control From Wafer to Product**

D. Glajchen, B. Goldsand, D. Manoogian,  
V. Du, A. Tsafos; Avantek

##### **A Sapphire Resonator for Microwave**

##### **Characterization of Superconducting Thin Films**

C. Wilker, Z. Shen, V. Nguyen, M. Brenner;  
E. I. du Pont de Nemours

##### **On the Design of New Integrated Microprobes (NIMP) for Non-Linear On-Wafer Device Characterization**

Y. Xu, D. Maurin, K. Wu, R. Bosisio;  
Ecole Polytechnique de Montreal;  
B. Huyart; TELECOM Paris  
D. Klemer; University of Texas

##### **Applications of Multidimensional Large and Small-Signal Impedances and S-Parameters**

Michal Odyneic; Hewlett-Packard

##### **Calibration and Measurement Considerations for Deriving Accurate Temperature Dependent Equivalent Circuits**

J. Pence; Cascade Microtech  
R. Anbolt; Gateway Modeling  
J. Nguyen; Hughes Research Laboratories

**The Acquisition and Analysis of Microwave  
Characterization Data for Process Control and  
the Development of Statistical Design Tools**

E. Shirmann, M. de Baca, M. Miller,  
G. Norris, M. Golio; Motorola SPS

**Using Hypertext to Manage Microwave Data**  
B. Berson; Berson & Associates

**Poster Papers**

**Hybrid Inductor Modeling at L-Band using 1-Port  
Fixture S-Parameter Measurements**

W. Gaiewski, L. Dunleavy, L. Geis;  
University of South Florida

**Design Considerations for Digital Interconnects  
in Lossy Dielectric Medium**

A. Agrawal; IBM

**An Automated W-Band On-Wafer Noise Figure  
Measurement System**

S. Chen; TRW

**The ARFTG Measurement Comparison Program,  
A Status Report**

R. Judish; NIST

**DIGESTS**

This will hopefully be the last conference at which the digests will not be distributed directly to those in attendance; however they will be available soon. If you did not attend the conference and want a digest, contact Henry Burger, ARFTG Executive Secretary, at 602-839-6933.

**FROM THE PRESIDENT**

The 41st Conference, held in conjunction with the International Microwave Symposium in Atlanta, is now history. The conference was quite successful; Conference Chair Greg Burns and Technical Program Chair Richard Henle did a great job of putting together a valuable, informative, and interesting conference program. This conference was also unique for the introduction of some innovative events, which is the topic of this column.

With the close of the 41st Conference in June, ARFTG has now entered its second twenty years of existence. The organization has obviously matured and maturity brings change. Some of the changes are subtle and were initiated without fanfare. One of these was the introduction of poster papers in Atlanta. Greg and Richard simply had too many good, worthwhile papers for the allotted schedule. The poster papers brought four additional, informative presentations to the conference.

Jim Rautio, our Exhibits Chair (who will always be known as Dr. Darth Vader), had the exhibitors introduce themselves, their companies and products during the technical sessions. Besides bringing the

exhibits to the attention of the conference, this afforded each a small moment in the sun which was appreciated. Exhibitors are important to ARFTG. They support the conferences both financially and intellectually and such recognition is one reason for that support.

Another change offers an alternative means to pay for conference registration fees and additional digests. The Executive Committee (EXECOM) has authorized initiation of the process to allow use of Visa and Mastercard. This will not affect alternate conferences held in conjunction with the IMS since fees are paid through the MTTS which already accepts credit cards; however the new method of payment would accommodate registrants for our Fall conferences and those who wish to pay for additional digests by that means. This will be an added convenience for some registrants, particularly business sponsored, and will greatly simplify the payment process for those outside of the U. S. We hope to be ready for registration at the 42nd Conference in San Jose this December but implementation time is unknown so that it is not guaranteed that the new method will be available.

The 41st was the inaugural conference for injecting a material award for technical presentation excellence. ARFTG has always presented a certificate to the authors of the paper voted best by those attending the conference. Starting with the 41st, ARFTG will offer the presenter of that paper a free registration for the immediately following conference only. This offer is made only to the actual presenter/author and is not transferable. It is our purpose to add some material prestige to the award and to show our appreciation to the presenter/author. It also adds some importance to your vote at these conferences.

We feel that these changes are good for ARFTG participants and will add interest and value to our semi-annual conferences. I look forward to seeing you at our 42nd conference in San Jose, CA in December.

Bill Pastori, President  
ARFTG

**FUTURE CONFERENCES**

42nd Conference on December 2 and 3, 1993 in San Jose, CA. Theme is "Automatic RF Testing for Commercial Production:". For more information, contact Conference Chairman Kevin Kerwin at 707-577-4061.

43rd Conference on May 27, 1994 in San Diego, CA. Theme is "Improving Performance and Quality of Automated Microwave Test Systems". Contact P. E. Nolan at 408-756-2144.