



AUTOMATIC RF TECHNIQUES GROUP

NEWSLETTER

SUMMER 2012

NUMBER 47

Important deadlines:

Sept. 10, 2012: 80th conference summaries

Sept. 14, 2012: IMS/ARFTG workshop proposals for Spring 2013

Oct. 1, 2012: Student fellowship applications

Feb., 2013: 81st conference summaries (Spring 2013)

79th ARFTG Microwave Measurement Conference: “Nonlinear Measurement Systems”

OVERVIEW



Palais des Congrès de Montréal, site for the 79th ARFTG Microwave Measurement Conference

Over 110 attendees participated in the 79th ARFTG Microwave Measurement Conference that took place at the Palais des Congrès de Montréal on June 22nd, 2012. As is usual for Spring ARFTG conferences, this conference formed part of Microwave Week 2012, which also included the International Microwave Symposium (IMS), the Radio Frequency Integrated Circuits (RFIC) symposium, and many workshops, tutorials and other meetings. As well as its conference, ARFTG also sponsored a meeting of the NVNA Users' Forum and two joint ARFTG/IMS Workshops. Taken together, these activities ran from Monday, June 18th through Friday, June 22nd.

For more information on ARFTG and its activities, including details of conferences past, present and future, visit the ARFTG website at www.arftg.org.

CONFERENCE TECHNICAL SESSIONS

The 79th ARFTG conference began with a welcome and introduction from Nick Ridler, the president of ARFTG, and Dominique Schreurs, the Conference Chair. Technical program chair, Jean-Pierre Teyssier, introduced the program which included two invited talks and a late news session. The overall conference theme was “Nonlinear measurement systems”, and featured four technical sessions and an interactive forum. The main technical sessions consisted of papers given as oral presentations and addressed measurement of nonlinear devices, calibration and uncertainty analysis, and RF measurement systems. The interactive forum featured a total of 16 papers presented as posters during the breaks from the technical sessions.

The best oral paper presentation, as selected by the conference attendees, was “Synchronizing modulated NVNA measurements on a dense spectral grid” by Y. Rolain, M. Schoukens, R. Pintelon, and G. Vandersteen (Vrije Universiteit Brussel, Belgium). The best poster paper was voted to be “What can ABCD parameters tell us about TRL” by J. A. Reynoso-Hernandez¹, M. A. Pulido-Gaytan¹, M. C. Maya-Sanchez¹, and J. R. Loo-

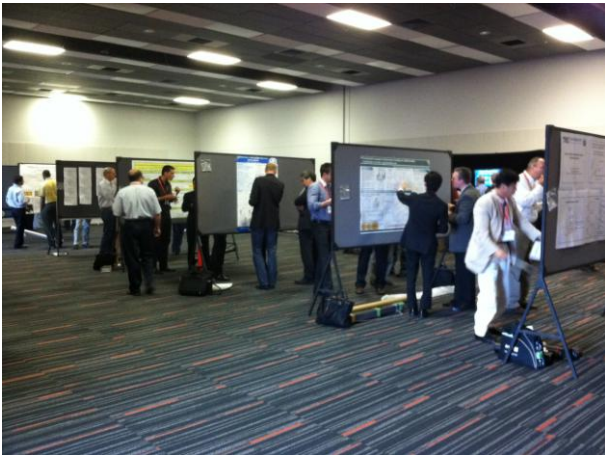
Yau² (¹CICESE, Mexico and ²Centro de Investigacion y Estudios Avanzados del I.P.N., Mexico).

ARFTG is pleased to thank the sponsors of the 79th Microwave Measurement Conference:

Gold sponsors: Anritsu, AWR/National Instruments, Maury Microwave, and RFMD

Silver sponsors: Agilent Technologies, Focus Microwaves, HFE, Mesuro, and Richardson RFPD

For future sponsorship opportunities, contact the Sponsorship Chair, Joe Gering (sponsorship@arftg.org).



Interactive forum papers are presented as posters to encourage technical interactions between presenters and attendees.

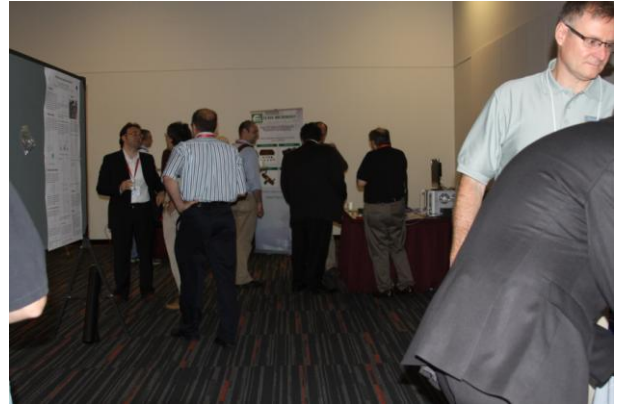
CONFERENCE EXHIBITS

A total of twelve companies chose to exhibit their latest equipment at this conference. These companies were:

- Agilent Technologies
- Anritsu Company
- Cascade Microtech
- Flann Microwave Ltd
- Focus Microwave
- Maury Microwave
- Mesuro
- NMDG
- OML, Inc.
- Rohde & Schwarz
- Tektronix
- Virginia Diodes, Inc.

Anritsu and Virginia Diodes, Inc. tied for best exhibitor as voted by the attendees.

To exhibit at future conferences, please contact the ARFTG Exhibits Chair, Rusty Myers (exhibits@arftg.org).



Exhibits from twelve companies were available for attendees to visit. The exhibits were co-located with the interactive forum session during two extended breaks.

AWARDS LUNCHEON

ARFTG President, Nick Ridler, presided over the awards luncheon. This began with Certificates of Appreciation being presented to the organizers of the 79th conference: Conference Chair, Dominique Schreurs; Conference Hosts, Zacharia Ouardirhi and Nina Di Maria; Technical Program Chair, Jean-Pierre Teyssier; Exhibits Chair, Rusty Myers; and the Session Chairs Patrick Roblin, Ron Ginley, Jon Martens, Mohamed Sayed, and Rusty Myers.

This was followed by awards being presented for the previous (78th) conference, held in Tempe, Arizona. The award for best oral paper presentation was given to “Interpolation and extrapolation capabilities of non-linear behavioural models” by R. S. Saini¹, J. W. Bell¹, T. Williams², J. Lees¹, J. Benedikt¹, and P. J. Tasker¹ (¹Cardiff University, Cardiff, UK; ²Mesuro Limited, Cardiff, UK). The best exhibitor award went to Southwest Microwave.

Three fellowship award winners were also formally announced at the luncheon: Xi Luo (Lehigh University), Evelyn Benabe (University of South Florida) and Vikas Shilimkar (Oregon State University). As a reminder, the deadline for the next fellowship application period is October 1, 2012.



Paul Tasker is shown here accepting the Best Oral Paper award for the 78th conference from ARFTG President Nick Ridler.

NVNA USERS' FORUM

The meeting of the NVNA Users' Forum was held on Thursday afternoon, June 21st, in the Westin Hotel. The forum was moderated by Patrick Roblin and attended by over 40 people. Continuing from the previous meeting, Dylan Williams discussed the future possibilities for a round robin verification program for nonlinear measurement. Kate Remley discussed the student competition held at IMS this year (organized by MTT-11 including a number of ARFTG members) involving a nonlinear verification element. Among other topics covered were pulsed RF load-pull and mixed signal load-pull measurements. More information can be found at http://www.arftg.org/about_nvna.html.



The NVNA users' forum was held on June 21st.

JOINT ARFTG/IMS WORKSHOPS

Two joint ARFTG/IMS workshops were held on Monday, June 18th at the Palais des Congrès de Montréal. These were entitled "Introduction to advanced dielectric measurement techniques"

(organized by Michael Janezic, NIST, US, Shelly Begley, Agilent, US, and Felipe Penaranda-Foix, Polytechnic University of Valencia, Spain) and "Device model extraction based on vectorial large-signal measurements" (organized by Dominique Schreurs, KU Leuven, Belgium and Ilcho Angelov, Chalmers University, Sweden). Both workshops were well-attended affirming the strong measurements linkage between IMS and ARFTG.

FUTURE EVENTS

NVNA Users' Forum

ARFTG customarily organizes an annual NVNA Users' Forum during European Microwave Week. In 2012, the usual format is replaced by workshop W09 "Why professional LSNA, NVNA, scope and VSA users care about accurate phase information," organized by Yves Rolain (VUB, Belgium) and Frans Verbeyst (NMDG, Belgium) and to be held on October 28th, 2012. For registration and fee information, visit <http://www.eumweek.com>.

Fall 2012 ARFTG Symposium

This year's Fall ARFTG Symposium will comprise the 80th Microwave Measurement Conference, a short course, two workshops and the NVNA Users' Forum. All of these events will be held at Hilton San Diego Bayfront in San Diego, California on November 27th through 30th, 2012. Registration for all events will be possible at www.arftg.org. A preliminary timetable for all of these events is given on the next page. Special events are being planned to commemorate 40 years of ARFTG contributions to high frequency measurements.

Short course and workshops

As has been done at many Fall symposia in the past, a 1 ½ day measurements short course will be conducted. For more information, contact Patrick Roblin (roblin@ece.osu.edu). Two workshops will also be held: one on Wednesday afternoon (organized by Antonio Raffo) entitled "Design for wireless communications: from transistor to system-level characterization" and one on Friday afternoon (organized by Mitch Wallis) entitled "Measurement techniques for RF nanoelectronics."

Microwave Measurement Conference

The theme for the 80th ARFTG Microwave Measurement Conference is "Advances in wireless communication test & measurements". The deadline for submitting a summary (with supporting data) for consideration by the conference Technical Program

Committee is September 10th, 2012. The paper submission link and instructions will be available at www.arftg.org. As on previous occasions, the conference will offer ample opportunity for participants to interact with leading professionals in related RF and microwave fields. For more information, contact the Conference Chair, Rusty Myers (rmyers@maurymw.com) or the Technical Program Chair, Ali Boudiaf (aboudiaf@maurymw.com).

Fall 2012 ARFTG Symposium – tentative schedule

Tuesday, Nov. 27 8:00 am – 5:00 pm	Short Course
Wednesday, Nov. 28 8:00 am – 12:00 pm	Short Course
Wednesday, Nov. 28 1:00 pm – 5:00 pm	Workshop
Wednesday, Nov. 28 5:00 pm – 7:00 pm	NVNA Users' Forum
Thursday, Nov. 29 8:00 am - 5:00 pm	80 th Microwave Measurement Conference
Thursday, Nov. 29 7:00 pm – 10:00 pm	Awards Banquet
Friday, Nov. 30 8:00 am – 12:00 pm	80 th Microwave Measurement Conference (continued)
Friday, Nov. 30 1:00 pm – 5:00 pm	Workshop

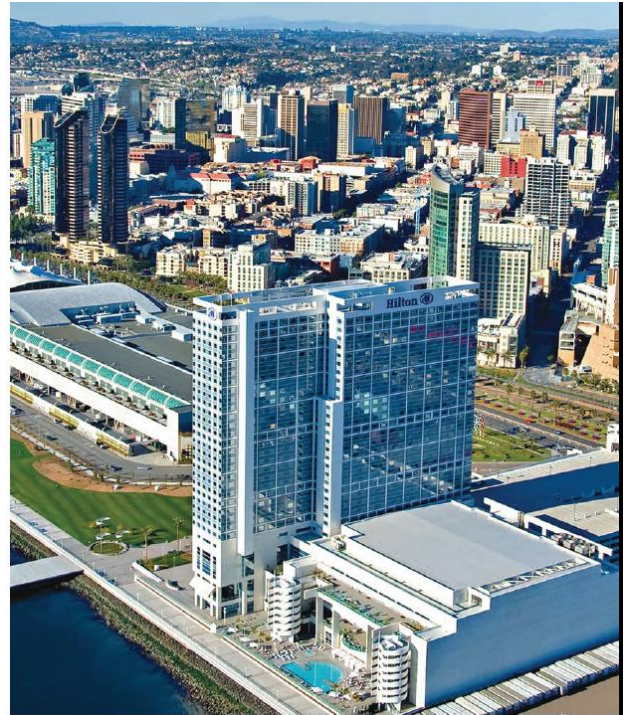
NVNA Users' Forum

This meeting will also take place during the Fall 2012 ARFTG Symposium. The program should be available at www.arftg.org approximately one month prior to the meeting. Suggestions for discussion topics can be sent to Joe Gering (jgering@rfmd.com).

Spring 2013 ARFTG activities

The 81st ARFTG Microwave Measurement Conference will be held on June 7th, 2013 in Seattle, Washington as part of Microwave Week 2013, in conjunction with IMS (www.ims2013.org) and the RFIC symposium. **The deadline date for submission of electronic paper summaries (with supporting data and figures) will be in February, 2013.** For up-to-date information, visit www.arftg.org or contact the Conference Co-Chairs, Leonard Hayden (leonard.hayden@ieee.org) or Brett Grossman (brett.grossman@intel.com) or the Technical Program Chair, Dave Blackham (dave.blackham@agilent.com).

It is also planned to hold a meeting of the NVNA Users' Forum, as part of the Spring 2013 ARFTG activities, and to co-sponsor appropriate workshops that will be taking place during Microwave Week 2013. For those interesting in organizing a workshop, note that the proposal deadline is Sept. 14th, 2012 (contact Antonio Raffo for more information at antonio.raffo@unife.it).



The Hilton San Diego Bayfront, site for the Fall 2012 ARFTG Symposium

STUDENT FELLOWSHIP

The next application deadline for the ARFTG Microwave Measurement Student Fellowship is October 1, 2012. 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 microwave measurement techniques. For more information, visit www.arftg.org or contact the fellowship coordinator, Patrick Roblin (roblin@ece.osu.edu).

ADDENDUM

Every effort has been made to publish correct information in this newsletter. Significant errors should be reported to the ARFTG Executive Committee Secretary, Jon Martens (jmartens@ieee.org), so that corrections can be reported in the next issue.