

IMS2001—The Microwave Odyssey Accomplished

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I. MICROWAVE WEEK

THE 2001 IEEE Microwave Theory and Techniques Society (IEEE MTT-S) International Microwave Symposium (IMS2001) was held in Phoenix, AZ. It spanned Saturday, 19 May, through Saturday, 26 May. This year, the nominal “week” was expanded into eight days of continuous activities. Conference registrations officially commenced in the afternoon of Saturday, 19 May, and the last social function was concluded late on Saturday, 26 May. In between, the Microwave Odyssey was filled with technical workshops, short courses, Radio Frequency Integrated Circuits Symposium (RFIC) presentations, Panel and Rump sessions, IMS presentations, Automatic Radio Frequency Techniques Group (ARFTG) sessions, and numerous social functions.

The Phoenix Team started planning the hosting of this symposium in 1993. In June 1994, the IEEE MTT-S AdCom officially announced that the 2001 IMS would be held in Phoenix. It is hard to believe how quickly these eight years have passed. Nevertheless, it is astonishing to reflect on how much the team volunteers have accomplished. They all worked very diligently and were focused on one goal: delivering the *ideal* symposium. They were realistic in recognizing that the ideal symposium is not achievable in the absolute sense. Each city has unique features that make it attractive to visitors. Hence, they defined the ideal IMS2001 symposium as the one which focuses on attendees convenience, planning with attention to detail, and presenting the best-kept secrets of Phoenix and Arizona. Their goal was making this year’s event a memorable one. From the feedback received during and after the IMS, this mission has been successfully accomplished.

II. GROWTH SUSTAINED

When organizing a technical conference, one must consider two main aspects: the technical program and the social and economical facets. While the quality of technical presentations in a conference is not an immediate function of the overall state of the economy at the time of the event, the number of technical presentations, conference attendees, and participants in various activities is. With this in mind, the concern about the impact of the economical slowdown in many parts of the world on the IMS2001 attendance is expected and understood. It is a pleasure indeed to report that the IMS2001 was an astonishing success in that regard. The growth experienced in the IMS2000 in Boston, MA, was sustained in Phoenix, AZ, with several all-time-high records. In 1993, when the Phoenix team started planning for hosting this symposium, it was projected that less than one-half



General Chairman S. El-Ghazaly welcomes attendees at the Plenary Session.



AdCom members attentively following presentations.



Ice sculpture of IMS2001 logo.

of the Civic Plaza would be enough to accommodate it. By May 2001, it expanded to fill the entire plaza, and would even fill



People in charge: (from left) IEEE MTT-S President C. Jackson, IMS2001 General Chairman S. El-Ghazaly, and 2000 IEEE President B. Eisenstein.

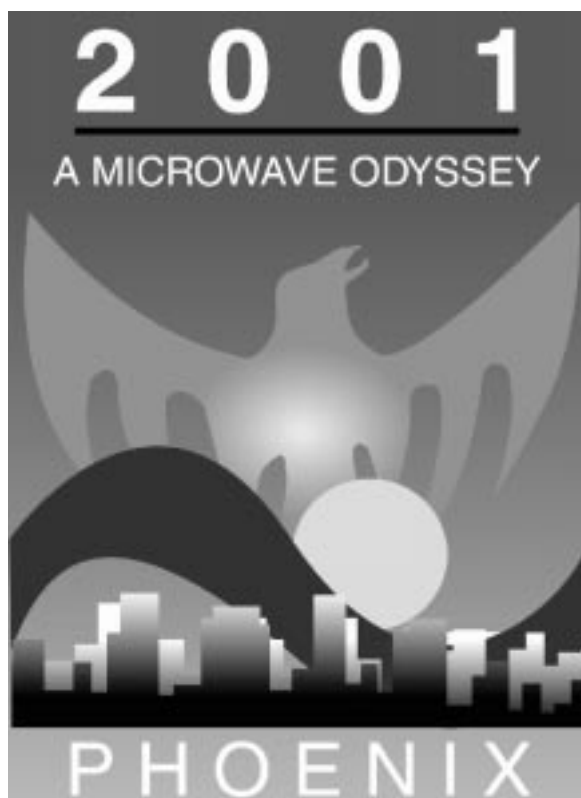
more space if it were available. The Technical Program Committee (TPC) received a record of over 1000 papers. The excellent quality of the submitted papers forced the committee to accept over 500 papers, and to expand the symposium into six parallel sessions, which are new records. The student paper competition is more popular than ever, with 242 papers submitted. The state of the IMS2001 is reflected in the following representative numbers.

Total Attendance	11,075
IMS	3756
RFIC	1256
ARFTG	220
Workshops	2923
Awards Banquet	509
Guests	662
Booths in the Exhibition	903

The quality of the conference is the most important. On the other hand, attendance numbers are reflections of the growing interest in RF microwave technologies and applications.

III. SIGNIFICANCE OF IMS2001 LOGO

This year's logo, the theme of "2001 A Microwave Odyssey," and Phoenix have strong connotations to the history of the microwave industry. The hidden ties may need some explanations. The innovativeness of our profession is demonstrated in the applications of microwave technology to new areas and in reaching new markets. In the past, the microwave community was perceived mostly as a defense-oriented industry. Microwave ovens were the most common use of this technology. With the end of the cold war, this community went through a major transformation, with a new focus on commercial and civilian applications. It rejuvenated and has reasserted itself much stronger than before, very much like the phoenix bird rising from the ashes, younger and mightier. The IMS2001 logo is representative of the past and tying it to the current rebirth, yet the IMS2001 theme is forward looking. It points to the Microwave Odyssey as microwave engineers take humanity to an unexplored land of uncongested spectra, with new applications at higher and higher frequencies.



2001 IMS2001 logo.

IV. HIGHLIGHTS OF IMS2001

The Phoenix Team not only was building on traditions initiated by other cities, but also introduced new initiatives of its own. Electronic Paper submission was a giant step introduced in Boston, MA. The IMS2001 TPC took it to the next level by also making the paper review process fully computerized. This initiative made the TPC meeting, which was held in early January 2001 in Phoenix, AZ, a smooth and flawless process. The paper submission to the *IEEE International Microwave Symposium Digest* was completed, with 100% of the papers accounted for, in record time.

The IMS2001 attendees were aware of the extra steps the Steering Committee has taken to make this event a memorable one. The Plenary Session was held in the Symphony Hall, a unique and well-appointed venue for this session. All Microwave Week registrants and guests were invited to attend this event, which began at 10:10 A.M. on Tuesday, 22 May, in the Phoenix Symphony Hall. Welcoming remarks were given by the IMS2001 Vice-Chair, Stephen Goodnick, IMS2001 General Chairman, Samir El-Ghazaly, Mayor of the City of Phoenix, Skip Rimsza, and by the IEEE MTT-S President, Charlie Jackson, followed by an overview of the technical program by TPC Chairman, Vijay Nair. The Class of 2001 IEEE Fellows was recognized, and 2000 IEEE President Bruce Eisenstein presented the IEEE Electromagnetics Award to Fawwaz T. Ulaby. Dennis A. Roberson, Senior Vice-President and Chief Technical Officer of Motorola Inc., presented the keynote address.

After the session, all symposium attendees were invited to a complimentary lunch, which was served at the terrace of the



F. Hickernell, D. Roberson, and S. Goodnick commenting on the abundance of food. (Did they finish it all?)



IMS2001 Finance Chair R. Diaz demonstrates his professional skills against his daughter at the Corona Ranch. (Is this how he financed the symposium?)



Mayor of city of Phoenix Skip Rimsza welcomes IMS2001 to Phoenix, AZ.



Dance at the Corona Ranch.

V. SOCIAL ACTIVITIES

For the microwave week to be complete, it must go beyond technical discussions and new discoveries. The IMS2001 Steering Committee had prepared a very rich and diverse social program. Attendees had the opportunity to visit historical sites, modern elegant shopping boutiques, hidden valleys of Arizona, and one of the seven natural wonders of the world, The Grand Canyon. The southwestern evening at the Corona Ranch and Rodeo Grounds was a new highlight of the week. The Awards Banquet was another memorable blend of the microwave and Arizona cultures.

The IMS2001 sponsored a unique southwestern event on Tuesday evening, which attracted over 1000 attendees. Participants were transported to Corona Ranch and Rodeo Grounds, located in the shadow of South Mountain. As they exited the bus, they were greeted by mariachis, margaritas, and a reception with a variety of hors d'hourves and libations inside the grounds to celebrate the spirit of the southwest. They had the opportunity to participate in several cowboy events. This special event included a Rodeo show that highlighted the most exciting portions of both Western rodeo and Mexican charreada. After the rodeo, they were treated to a fabulous western dinner.



Ballet Folkorico during IMS2001 Plenary Session.

Civic Plaza, next to the Symphony Hall. This is another new feature introduced this year. Moreover, this lunch was served to all symposium attendees every day of the symposium free of charge. It was a token of appreciation from the IMS2001 to its guests.

TABLE I

Position	Member
General Chair	Samir El-Ghazaly
Vice-Chair	Stephen Goodnick
Secretary	Adolfo Reyes
Technical Program	
Chair	Vijay Nair
Vice-Chair	Chuck Weitzel
Publications Chair & Digest Editor	Bernard Sigmon
Co-Editors	Rudy Emrick Steve Rockwell
CD-ROM Editor	Debabani Choudhury
Co-Editor	Rashaunda Henderson
Panel/Rump Sessions	Peter Blakey
Special Sessions	Mike Golio
Student Paper	John Papapolymerou
Transactions Guest Editors	Navid Yazdi Michael Dydyk Constantine Balanis George Heiter Kathleen Runo
Consultant	Badawy El-Sharawy
Workshops Chair	Tarek Ismail
Vice-Chair	Gamal Fahmy
Workshop Web Master	Mohamed Megahed
Members	Deborah Dendy Bill Agar Ken Buer Peter Okrah Neil Tracht Eric M. Johnson
Interactive Forum Chair	
Members	
Finance	
Chair	Rodolfo Diaz
Vice-Chair	Bruce Kim
Consultant	George Norris
Local Arrangements	
Chair	Howard Patterson
Vice-Chair	Michael Majerus
Consultants	Echo Farrell Mary Young Murray Sirkis
Special Events	Deborah Patterson Monica C. de Baca Marcel Tutt
Transportation	Gary Sadowiczak
Audio/Visual	Polka Lesley
Member	Tom Post
Signs	Ellen Lan
VIP Arrangements & Gifts	Ric Uscola
Daybook	
Publicity	
Chair	Trevor Thornton
Webmaster	Siham El-Ghazaly
Member	Jeff Pond
Registration	
Chair	Sharon Aspden
Vice-Chair	Robert Grondin
Member	Fred Hickernell
Guest Program	
Chair	Siham El-Ghazaly
Co-Chair	Sara Goodnick
Members	Prabha Nair Jane Weitzel Deborah Patterson
Historical Exhibit	
Chair	Bishnu Gogoi
MTT-S Historical Exhibit Liaison	Steve Stitzer
Member	Irving Kaufman
RFIC Liaison & Chair	Dave Lovelace
REFIC Liaison & TPC Chair	Sayf Kiaci
RFIC Liaisons	Joe Staudinger Tina Quach
ARFTG Liaison	Michael Majerus
University Liaison	Gamal Hegazi
Exhibition	
Chair	Harlan Howe
Member	Kristen Dednah
Program Publication	Keith Moore
Member at Large	Howard Ellowitz

The Awards Banquet was held on Wednesday, 23 May, at the Hyatt Regency Hotel. It consisted of an elegant dinner, an IEEE MTT-S awards presentation, and entertainment. The banquet featured Native American dancers and an after-dinner performance by comedian Paula Poundstone. In keeping with Arizona's southwest traditions, the participants were also delighted by the performance of the Native American hoop dancers.

ACKNOWLEDGMENT

This is the first IMS to take place in Phoenix, AZ. This indeed elevates the level of appreciation for the efforts of the dedicated Steering Committee members. This symposium would not have been possible without the hard work and dedication of the IMS2001 volunteers who selflessly spent thousands of hours to deliver the Microwave Week. The IMS2001 Chairman repeatedly emphasized that he was very fortunate to work with such a committed and highly motivated team. It is not possible to list the names of all contributors to this magnificent effort. A partial list of the IMS2001 Steering Committee members is shown in Table I, with a sincere apology to any member whose name may inadvertently have been omitted.



Samir M. El-Ghazaly (S'84-M'86-SM'91-F'01) received the Ph.D. degree in electrical engineering from the University of Texas at Austin, in 1988.

In August 1988, he joined the Arizona State University, Tempe, where he is currently a Professor in the Department of Electrical Engineering. He has visited and worked at several universities and research centers, including Cairo University, Cairo, Egypt, the Centre Hyperfrequences et Semiconducteurs, Université de Lille I, Lille, France, the University of Ottawa, Ottawa, ON, Canada, the

University of Texas at Austin, the NASA Jet Propulsion Laboratory, Pasadena, CA, CST-Motorola Inc., Tempe, AZ, *iemn*, Université de Lille, Lille, France, and the Swiss Federal Research Institute (ETH), Zurich, Switzerland. His research interests include RF and microwave circuits and components, microwave and millimeter-wave semiconductor devices, semiconductor device simulations, ultrashort pulse propagation, microwave-optical interactions, linear and nonlinear modeling of superconductor microwave lines, wave-device interactions, electromagnetics, and numerical techniques applied to monolithic microwave integrated circuits.

Dr. El-Ghazaly is a Fellow of IEEE. He is an elected member of Commissions A and D of URSI, and a member of Tau Beta Pi, Sigma Xi, and Eta Kappa Nu. He was the secretary and vice-chairman and is currently the chairman of Commission A of the U.S. National Committee of URSI. He is a member of the Technical Program Committee for the IEEE IMS since 1991, and is on the Editorial Board of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES. He was the chairman of the IEEE Waves and Devices Group, Phoenix Section. He was the chapter funding coordinator and chairman of the Chapter Activities Committee of the IEEE MTT-S. He is an elected member of the AdCom of the IEEE MTT-S. He is the editor-in-chief for the IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS. He was the general chairman of the IEEE MTT-S 2001 IMS, held in Phoenix, AZ, May 2001.