Editors' Overview

THIS TRANSACTIONS' Special Issue is the traditional outlet for the publication of expanded versions of technical papers presented during the "Microwave Week" events, featuring the annual International Microwave Symposium (IMS), the Radio Frequency Integrated Circuits (RFIC) Symposium, and Automatic Radio Frequency Techniques Group (ARFTG) Conference. This year, the RFIC papers were published as a separate Mini-Special Issue of this TRANSACTIONS (vol. 49, no. 9, September 2001).

IMS2001 was held in Phoenix AZ, from 20 May to 25 May, 2001, during which 511 technical papers were presented at the podium and interactive forum settings. From these, 174 papers (34%) were submitted in expanded versions to this Special Issue, with 50 papers (29%) accepted for publication. This unusually low acceptance ratio was driven by the budgetary constraints placed on the total number of papers allocated to this Symposium.

This Special Issue contains a report from the General Chair of the Symposium, as well as the summary from the Technical Program Committee. The Awards form a major means by which the IEEE Microwave Theory and Techniques Society (IEEE MTT-S) can recognize individual achievements. The awards presented during IMS2001 are recognized in this Special Issue. The section headings used in the table of contents of this Special Issue are taken verbatim from the IMS Technical Program.

A quick glance at the table of contents for this Special Issue indicates that the emphasis of papers submitted from this Symposium has been on Electromagnetic Field Analysis (10), Microwave Passive Components and Circuits (12), and Active Components and Integrated Circuits (16). The other papers cover Computer-Aided Design (5), Millimeter Wave and Lightwave Technologies (1), Packaging, Integration, and Test (2), and Applications (4). Included in this Special Issue are two papers from the ARFTG Conference.

IMS2001 continued the trend toward a "paperless" technical program organization by introducing a fully electronic summary submission and review (via a World Wide Web site), paper selection, disposition notification, and digest publication submission process for papers submitted for presentation at the Symposium, but not for this TRANSACTIONS. While 2001 TRANSACTIONS submissions were made via the IMS World Wide Web site, the e-mail-based review process had a number of challenges in the administration of the very large number of reviews to be completed in a short period of time.

Before the start of the review cycle for this Special Issue, this TRANSACTIONS replaced the World Wide Web-based IEEE process with an e-mail-based review process, requiring the guest editors to introduce a similar process to communicate with the reviewers. Guest editors Michael Dydyk and Constantine A. Balanis are grateful to George Heiter (IMS2000 Special Issue editor) for joining the IMS2001 editorial team as well as for guiding the development and implementation of this e-mail process, to Jeff Pond for managing the website database, and to Kathleen Runo for her support, patience, and the attention to details required to complete this process.

The large volume of paper submissions presented a particularly challenging task to the available reviewer pool, the majority of which were drawn from the Technical Program Committee of IMS2001. With very special gratitude, the guest editors acknowledge the conscientious and timely response of many reviewers listed below; it is through their efforts that the IEEE MTT-S is able to continue to maintain the quality and high standards of this TRANSACTIONS.

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Since 1971, he has been with Motorola SSTG, Scottsdale, AZ, where as a Senior Member of Technical Staff, he has pursued research and development dealing with millimeter-wave integrated circuits, microwave monolithic integrated circuits, subsystems, and more recently, high data rates, low-cost, and low prime power radios. In addition, he is involved in developing wireless standards for Bluetooth and IEEE802.15, as well as best practices for their coexistence. He has authored or co-authored numerous papers in national technical journals and holds 43 patents.

Mr. Dydyk is a member of the Motorola Science Advisory Board Associates (SABA). He was the recipient of the Dan Noble Fellowship—the highest scientific recognition at Motorola. He was also the recipient of the Platinum Badge and Silver Quill Awards for patents and publications.

Constantine A. Balanis (S'62–M'65–SM'74–F'86) received the B.S.E.E. degree from the Virginia Polytechnic Institute, Blacksburg, VA, in 1964, the M.E.E. degree from the University of Virginia, Charlottesville, in 1966, and the Ph.D. degree in electrical engineering from The Ohio State University, Columbus, in l969.

From 1964 to 1970, he was with the NASA Langley Research Center, Hampton VA. From 1970 to 1983, he was with the Department of Electrical Engineering, West Virginia University, Morgantown. Since 1983, he has been with the Department of Electrical Engineering, Arizona State University, Tempe, where he is currently a Regents' Professor. His research interests are in low- and high-frequency computational methods for antennas and scattering, smart antennas for wireless communication, and transient analysis and coupling of high-speed high-density integrated circuits and packages. He authored *Antenna Theory: Analysis and Design* (New York: Wiley, 1997, 1982) and *Advanced Engineering Electromagnetics* (New York: Wiley, 1989).

Dr. Balanis is a Fellow of the IEEE, Sigma Xi, the Electromagnetics Academy, Tau Beta Pi, Eta Kappa Nu, and Phi Kappa Phi. He has served as associate editor for the IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION (1974–1977) and the IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING (1981–1984), as editor of the *Newsletter for the IEEE Geoscience and Remote Sensing Society* (1982–1983), as second vice-president of the IEEE Geoscience and Remote Sensing Society (1984), chairman of the Distinguished Lecturer Program (1988–1991), and member of the IEEE Antennas and Propagation Society AdCom (1993–1995, 1997–1999). He was the recipient of the 2000 IEEE Third Millennium Medal, the 1996–1997 Arizona State University Outstanding Graduate Mentor Award, the 1992 Special Professionalism Award presented by the IEEE Phoenix Section, the 1989 IEEE Region 6 Individual Achievement Award, and the 1987–1988 Graduate Teaching Excellence Award, School of Engineering, Arizona State University.

George L. Heiter (M'65–SM'83–LS'01) received the Vordiplom degree from the University of Darmstadt, Darmstadt, Germany, in 1957, the Dipl.-Ing. degree from the University of Karlsruhe, Karlsruhe, Germany, in 1959, and the Ph.D. degree in electrical engineering from the W. W. Hansen Laboratories of Applied Physics, Stanford University, Stanford, CA, in 1964.

In 1963, he joined Bell Telephone Laboratories, where he was involved with high-power ferrite materials and phase shifters, acoustic delay-line memories, optical memories, long-distance terrestrial microwave communication systems, and hybrid fiber-coaxial (HFC) communication systems. In 1996, he joined Analog Devices Inc., where he has been involved in the development of multifunction chips for HFC and digital audio broadcasting (DAB) systems, as well as digital subscriber line (DSL) chip-set applications. He has authored and co-authored publications and holds patents in most of these areas.

Dr. Heiter is a member of the IEEE Electron Devices Society, the American Physical Society, and Sigma Xi. Within the IEEE Microwave Theory and Techniques Society (IEEE MTT-S), he has been involved with the IEEE TRANSATIONS ON MICROWAVE THEORY AND TECHNIQUES as a guest editor, as a member of the Editorial Review Board, and has contributed to the introduction of the electronic submission and review process. He has been active in International Microwave Symposia (IMS) as workshop and session organizer and chair and as a member of the Technical Program Committees. On separate Boston IMS Steering Committees, he has served as digest and transactions editor, as well as publications chair. He was the organizer of the WARC92 Workshop and Technical Program (co)-chair for the Symposia on Technologies for Wireless Applications. He has fostered interactions on Technical Committees, (co)-chaired the Technical Committee on Microwave Systems (MTT-16), and is a member of MTT-9 and MTT-20.

Roger D. Pollard (M'77–SM'91–F'97) was born in London, U.K., in 1946. He received the B.Sc. and Ph.D. degrees in electrical and electronic engineering from the University of Leeds, Leeds, U.K.

He currently holds the Agilent Technologies Chair in High Frequency Measurements and is Head of the School of Electronic and Electrical Engineering, The University of Leeds, where he has been a faculty member since 1974. He is an active member of the Institute of Microwaves and Photonics (one of the constituent parts of the School), which has over 40 active researchers, a strong graduate program, and has made contributions to microwave passive and active device research. The activity has significant industrial collaboration, as well as a presence in continuing education. His personal research interests are in microwave network measurements, calibration and error correction, microwave and millimeter-wave circuits, terahertz technology, and large-signal and nonlinear characterization. He has been a consultant to Agilent Technologies (previously the Hewlett-Packard Company), Santa Rosa, CA, since 1981. He has authored or co-authored over 100 technical articles and holds three patents. He is a member of the Editorial Board of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES and has been on the Technical Program Committee for the IEEE Microwave Theory and Techniques Society (IEEE MTT-S) International Microwave Symposium since 1986. He edits the IEEE Press book series on "RF and Microwave Technology."

Dr. Pollard is a Chartered Engineer in the U.K. He is a member of the Institution of Electrical Engineers (IEE). He is an active IEEE volunteer as an elected member of the Administrative Committee and the past president of the IEEE MTT-S (1998). He is currently the chair of the IEEE's Electronic Products Committee.