Foreword

THE 1986 IEEE Microwave and Millimeter-Wave Monolithic Circuits Symposium was held on June 4–5, 1986, at the Baltimore Convention Center, in conjunction with the IEEE MTT-S International Symposium. With more than 750 attendees, five sessions, and two invited and 21 contributed papers, this fifth Monolithic Symposium continued to enjoy a high level of interest from the scientific community.

The technical program covered a good variety of subjects, for which I thank all the authors and the Technical Program Committee members.

The invited paper in the opening joint session was given by Mr. E. D. Maynard, Jr., of OUSDRE, the Pentagon, on the new MIMIC program and its implications for microwave research and development.

This paper of general interest was followed by the half-day session on microwave amplifiers, where the design and performance of two power amplifiers at *C* and *X* bands and four wide-band distributed amplifiers were discussed. The fact that two-thirds of the session was devoted to distributed or traveling-wave amplifiers is indicative of the industrywide interest in this class of amplifiers in particular and the potential of wide-band amplification in general.

The next day of the Symposium started with the second invited paper; Dr. Huan-wun Yen of Hughes Research Laboratories introduced the fundamental principles of optoelectronics and electrooptic techniques that can be applied to microwaves and gave an overview of the state of the art and system applications. His review paper was followed by two contributed papers describing GaAs chips for optical communication circuits. The rest of the morning was devoted to millimeter-wave integrated circuits and microwave receivers, with papers covering applications and implementations up to 86 GHz.

Thursday afternoon included Session 4, on switching and control circuits, and Session 5, on MMIC technology, with a total of eight papers that covered very interesting subjects ranging from new active and passive circuit and device design and fabrication techniques on GaAs to millimeter-wave circuit technology on silicon substrates.

This Special Issue provides authors of papers presented at the Symposium an opportunity to expand and publish a more detailed description of their work and allows the dissemination of information significantly beyond the number that can attend any symposium. The authors who took advantage of this opportunity to submit their work for review and inclusion in this Special Issue are appreciated. The credit and my special thanks for organizing this Special Issue go to Russell Gilson and Paul Villano.

I would like to thank General Chairman Roger W. Sudbury and other members of the Steering Committee for the hard work that it takes to organize and run a successful symposium. The cooperation of the 1986 MTT-S International Microwave Symposium Committee, especially from Ed Niehenke, General Chairman, and Marvin Cohn, Technical Program Chairman, is also greatly appreciated.

YALCIN AYASLI
Technical Program Chairman

Yalcin Ayasli (M'79–SM'84) received the B.S. degree in electrical engineering in 1968 from the Middle East Technical University, Ankara, Turkey. He received the M.S. degree in 1970 and the Sc.D. degree in electrical engineering in 1973 from the Massachusetts Institute of Technology.

He was a member of the Faculty of Engineering at the Middle East Technical University from 1973 to 1979. While there, he also served as Assistant Chairman of the Electrical Engineering Department. From 1979 to 1985, Dr. Ayasli worked at the Research Division of the Raytheon Company, leading a design, measurement, and wafer-fabrication group for development of GaAs microwave monolithic integrated-circuit (MMIC) technology. In 1985, he founded the Hittite Microwave Corporation, in Woburn, MA, to develop GaAs MMIC components and subsystems.

Dr. Ayasli is the author of a number of technical papers and patents. He is the General Chairman of the 1987 IEEE Microwave and Millimeter-Wave Monolithic Circuits Symposium. He is also corecipient of the 1986 IEEE Microwave Prize.

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