

## Foreword

**T**HE 1988 IEEE Microwave and Millimeter-Wave Monolithic Circuits Symposium was held on May 24-25, 1988, in conjunction with the IEEE MTT-S International Microwave Symposium. The Symposium was well attended—over 750 people. Because of the large interest in this area, 14 selected topics were chosen to be published in a TRANSACTIONS Special Issue.

This TRANSACTIONS Special Issue provides a mechanism whereby the authors can give more detailed information than that which was presented in the Symposium Digest. This TRANSACTIONS also gives the authors the opportunity to reach a much broader audience.

This year's Symposium, which consisted of 32 contributed and three invited papers, was presented over two days in nine sessions. On the first day two of the sessions ran in parallel. On the second day, the sessions were jointly sponsored with the IEEE MTT-S International Microwave Symposium.

The Symposium's first paper, an invited presentation by Eliot D. Cohen from DARPA entitled "The MIMIC Program—Key to Affordable MMIC's for DOD Systems," generated a great deal of interesting discussion. The rest of this session dealt with MIMIC type papers. The second session, on fiber-optic communication, began with an invited paper by S. Joseph Campanella and Christoph E. Mahle from COMSAT Laboratories entitled "Satellites and Cables in the Future Marketplace and the Role of MMIC." The afternoon sessions covered nonlinear applications, millimeter-wave oscillators, MMIC receiver components, and millimeter-wave monolithic circuits.

The second day's sessions began with an invited paper by Jerry Gladstone from Hewlett-Packard entitled "Commercial Applications of GaAs ICs," which was an over-

view of the employment of GaAs IC's in commercial equipment and systems. Other papers in the session were on producibility and applications. This was followed in the afternoon by sessions on power amplifiers and low-noise amplifiers.

Overall, this year's Symposium placed a heavy emphasis on applications. The influence of applications will continue to grow, especially with the beginning of the MIMIC programs and the growth of commercial applications. In addition, there will always be a large number of papers which continue the push to achieve higher performance.

For further information on papers other than those expanded upon in this Special Issue, order the Symposium Digest, IEEE Catalog No. 88CH2591-6, from the IEEE Service Center, 445 Hoes Lane, Piscataway, New Jersey 08855-1331.

This outstanding Symposium program could only have come about through the contributions of the authors and the dedicated work of the Technical Program Committee, for whose help I am greatly indebted. The Monolithic Symposium Steering Committee was led by General Chairman Derry Hornbuckle, who did an outstanding job as chairman. The cooperation of the MTT-S Symposium Committee, including Chairman Charles Buntschuh, Technical Chairmen Jesse Taub and James Whelehan, and Local Arrangements Chairman Joseph Calviello, is very much appreciated.

Finally, I would like to thank Russell Gilson for an excellent job in organizing this TRANSACTIONS Special Issue on Monolithic Circuits.

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*Technical Program Chairman*



**Reynold S. Kagiwada** (M'72-SM'79) received the B.S., M.S., and Ph.D. degrees in physics from the University of California, Los Angeles.

From 1967 to 1969 he was an Assistant Professor in Residence at the University of California at Los Angeles. He was also Assistant Professor of Physics at the University of Southern California from 1969 to 1972. He joined TRW in Redondo Beach, CA, in 1972, originally to lead an effort on surface acoustic wave devices. He has handled several functional and project positions at TRW dealing with microelectronics.

Dr. Kagiwada is the General Chairman of the 1989 IEEE Microwave and Millimeter-Wave Monolithic Circuits Symposium, the 1987 and 1989 IEEE International Microwave Technical Program Committee Chairman, and a member MTT-S and UFFC-S AdComs.