Editor's Overview

SAN FRANCISCO and the surrounding greater Bay Area is noted for its international character, the excellence of its academic institutions, and a unique environment which encourages the growth of high-technology industries. The 1984 MTT-S International Microwave Symposium was hosted in San Francisco and, in retrospect, was complementary to these traditions. The success of this year's dynamic Symposium reflected the dedication of those who served on the Steering Committee and the Technical Program Committee, but was more fundamentally derived from the vigor of the microwave industry and the Microwave Theory and Techniques Society as a whole.

This Special Symposium Issue of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES begins with two traditional papers—the first being a review of the 1984 MTT-S Symposium by Stephen F. Adam, the Symposium Chairman, and the second covering the MTT Society Awards for 1984 by Don Parker, Chairman of the MTT Awards Committee. A new addition to this issue of the TRANSACTIONS is the Symposium Keynote Address by John A. Young, President and Chief Executive Officer of Hewlett-Packard Company. His paper amplifies the Symposium theme, "Expanding Microwave Horizons," and seeks to broaden the understanding and participation of microwave engineers beyond their traditional technical specialties.

This Special Issue includes thirty technical papers with significantly expanded material on the topics presented at the 1984 MTT-S International Microwave Symposium and the jointly held 1984 Microwave and Millimeter-Wave Monolithic Circuits Symposium. These expanded manuscripts were received in response to calls for papers and were reviewed in accordance with established TRANSACTIONS procedures. Although the number of papers included herein is only fifteen percent of those presented at the Symposia, the variety of topics is representative. Tables of Contents of the Digests of the 1984 MTT-S and Monolithic Circuits Symposia provide a comprehensive listing of all Symposia papers and are reproduced in this issue, following the Keynote Address paper.

The Monolithic Circuits Symposium papers of this issue were independently solicited and reviewed by Walt Gelnovatch and reviewers from that Symposium. Their contributions are gratefully acknowledged.

This issue reflects the active support of the authors, whose timely submissions of manuscripts and revisions were particularly appreciated. The substantial increase in the number of papers, relative to previous years, reflects the authors' support and the revised MTT-S Symposium format which included "short" papers. This also resulted in an increased workload for the reviewers. The review process involved thirty-nine reviewers whose critiques, guidance on paper selection, and dedication to the MTT Society and to the maintenance of standards were exemplary. The particular support and guidance of Ferdo Ivanek, Chairman of the Technical Program Committee, and Tatsuo Itoh, Editor of these TRANSACTIONS was especially appreciated.

It has been both a privilege and an honor to serve as Guest Editor of this Symposium Issue. Execution of this responsibility has involved considerable administrative and fiscal support by Watkins-Johnson Company. I am particularly indebted to W. Keith Kennedy and H. Richard Johnson for their encouragement and generous support.

E. JAMES CRESCENZI, JR.
Guest Editor

E. James Crescenzi, Jr. (S'61–M'62) received the B.S. degree from the University of California in 1961, and the M.S. degree in 1962 and Ph.D. degree in 1969 from the University of Colorado.

From 1962 to 1965, he served as an officer in the USAF assigned to Rome Air Development Center, where he was responsible for specification and development of receiver systems and antennas for reconnaissance applications. After this Air Force duty, his thesis work and post-doctoral investigations at the University of Colorado involved slowly propagating domains in GaAs and hot electron effects in Ge.

Dr. Crescenzi has been employed by Watkins-Johnson Company since 1970. His initial assignment was in the Recon Division and included the development of 18–26.5-GHz and 26–40-GHz receivers and specialized signal-processing circuitry and techniques for reconnaissance systems. He transferred to the Solid State Division in 1972, where he developed thin-film sputter deposition and photolithographic processes for application to microwave integrated circuits. In 1974–1976, as Head of the Components R & D Section, he developed phase-matched mixers,

receiver front-ends, and supervised the development of the first 12–18-GHz GaAs FET amplifier.

Dr. Crescenzi was Manager, Solid State R & D Department from 1976–1982. He continued to be active in circuit design, including various low-noise GaAs FET amplifiers, mixer–filter sets for the ALQ-131 ECM equipment, formulation and direction of the AMRAAM missile prototype RF processor development, and the design of 7–13-GHz and 12–18-GHz monolithic "superFET" amplifiers. He was also responsible for GaAs FET device development and production.

He was Manager, Microwave Amplifier Department, in 1982 and 1983. Since November 1983, he has held the position of Staff Scientist and Head, Special Projects, with responsibility for specialized GaAs FET amplifier development and small quantity manufacturing.

Dr. Crescenzi has published ten papers relating to microwave technology and holds one patent. He served as Chairman of the Santa Clara Chapter of the Microwave Theory and Techniques group, in 1981–1982, and as Vice Chairman of the Technical Program Committee for the 1984 MTT-S Symposium.