

# Foreword

**I**T IS EVIDENT to those connected to microwave and millimeter-wave technology that monolithic integrated-circuits technology has become increasingly vital to the development of various systems operating at microwave and millimeter-wave frequencies. A great deal of active effort is currently directed towards integrated-circuits technology and rapid progress is being made.

In response to need and interest, the Microwave and Millimeter-Wave Monolithic Circuits Symposium was initiated last year. This symposium is to be held annually in conjunction with the IEEE MTT-S International Microwave Symposium. This year the symposium was expanded into one and a half days of five sessions covering 1) Signal Processing, 2) Devices and Processing, 3) Millimeter-Wave Circuits, 4) Power Amplifiers, and 5) Monolithic Amplifiers. All together, 23 papers, which had been selected from more than 50 submissions, were presented. Reflecting the international nature of the current interest and development activities in the technology, nearly half of the papers presented were from outside the United States. Also reflecting the high level of interest and activity, this year's attendance increased to 540. I am certain that those who attended the sessions share my enthusiastic view and high expectation toward the outlook of the microwave and millimeter-wave integrated-circuits technology. If the high

attendance and the response of the audience are indications, the technology will soon find key roles in various systems.

The papers included in this Special Issue represent only a small portion of the papers presented at the Symposium. The Special Issue provides the authors an opportunity to make a more comprehensive presentation than could be made in the oral presentation at the symposium or as the Summary in the Symposium Digest. I, therefore, encourage future authors to publish full length papers in the Symposium Issue of this TRANSACTIONS.

I wish to thank each of the Steering Committee and Technical Program Committee members for expertly organizing, preparing, and successfully carrying out the 1983 Symposium. My special appreciation goes to Drs. R. Sudbury and A. Murphy, who superbly managed local arrangements, devoting countless hours and detailed attention that made the Symposium run smoothly; and my sincere thanks to D. Beltran, who skillfully and enthusiastically assisted me in managing the tasks of Chairman of the Steering Committee.

H. J. KUNO  
*Symposium Chairman*



**H. J. Kuno** (S'61-M'63-SM'75-F'77) received the B.S., M.S., and Ph.D. degrees in engineering from the University of California, Los Angeles, in 1961, 1963, and 1966, respectively.

From 1961 to 1966, he was with the NCR, Electronics Division, Hawthorne, CA, where he was engaged in the development of solid-state digital and analog circuits, thin magnetic film memories, and high-speed integrated circuits. From 1964 to 1966, he was a Post-Graduate Research Engineer, under a NASA Research Grant at the University of California investigating microwave and millimeter-wave propagation in solid-state plasmas. From 1966 to 1969, he was at the RCA, David Sarnoff Research Center, Princeton, NJ, where he worked on the development of solid-state microwave devices and high-power semiconductor devices. In 1969, he joined the Hughes Aircraft Company, Torrance, CA, where he has been engaged in the development of solid-state microwave and millimeter-wave devices, circuits, and subsystems. He is currently in

charge of research, engineering, and manufacturing of solid-state microwave and millimeter-wave devices, products, and subsystems.

Dr. Kuno has been a member of the IEEE MTT-S Administration Committee, served as a Guest Editor of special issues of the MTT TRANSACTIONS, and edited the MTT-S Newsletter. He is a member of the American Physical Society, Sigma Xi, and Tau Beta Pi.