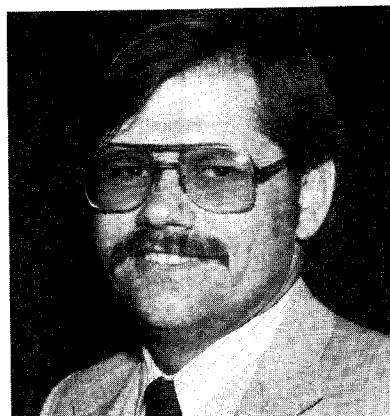


## The Technical Program



Welcome to the 1983 IEEE Microwave and Millimeter Wave Monolithic Circuits Symposium. This year's program covers a wide range of circuits which have been realized monolithically in GaAs as well as a session on new devices and processing approaches. The interest in monolithic GaAs integrated circuits continues to increase and the 23 papers to be presented were chosen from over 50 submissions. Nearly half the papers accepted are by overseas authors.

This year's conference has been subdivided into five sessions. Starting Tuesday morning, May 31, a session on Signal Processing will present details on an X-band mixer, a four quadrant multiplier and a 3.1 GHz counter using current mode logic. This is followed by the Devices and Processing session covering a GaAs/GaAlAs heterojunction transistor, several papers on ion implanted doping profile calculations, annealing techniques and device results and finishing the morning with a description of via hole formation in 0.5-0.7 mm thick GaAs.

Two sessions are scheduled Tuesday afternoon. The latest results in amplifiers, phase shifters, doublers and mixers at 20 GHz to 94 GHz will be presented in the Millimeter Circuits session. This is followed by the Power Amplifiers session discussing design techniques for a 3 Watt amplifier and results ranging from 1.6 W at 9-10 GHz to 250 mW across 2-20 GHz.

Our final session, Wednesday morning, June 1, is a joint session with the opening of the 1983 IEEE MTT-S International Microwave Symposium. Simply called Monolithic Amplifiers, a total of seven papers are scheduled covering broadband, 4-stage and low noise designs. Four broadband amplifiers at 0.05-3 GHz, 0.16-6 GHz, 2-6 GHz and 2-10 GHz will be discussed. Two low noise amplifiers for reception of Direct Broadcast Satellite signals with noise figures of 3.4 dB and 3.8 dB at 12 GHz will be revealed. A 1 GHz IF amplifier and a dielectric resonator oscillator team with one of the LNA's, forming the basis of a complete monolithic DBS system. The program ends with a 6-8 GHz, 4 stage amplifier showing 25 dB gain.

I would like to thank all the members of the Technical Program Committee who worked to choose a program reflecting a broad range of activity in monolithic GaAs circuits. The cooperation of the 1983 IEEE MTT-S International Microwave Symposium committee, especially from Ralph Levy, Technical Program Chairman, and Dick Sparks, Local Arrangements, is greatly appreciated. A final tip of the hat to everyone who submitted papers and to Elaine Young who logged them in and sent them out for me.

I hope you enjoy this year's program. As the field grows and matures, the content of the symposium should always reflect the satisfaction of achieving a difficult design goal as well as reveal a hint of what may be waiting in the wings.

James G. Oakes  
Technical Program Chairman  
1983 IEEE Microwave and Millimeter  
Wave Monolithic Circuits Symposium