

**Call For Papers**  
**IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES**  
**SPECIAL ISSUE**  
**on**  
**MULTIFUNCTION MMICs AND THEIR SYSTEM APPLICATIONS**

There have recently been rapid advances in the manufacturing technology of GaAs and Silicon based ICs operating at microwave frequencies. Since these technologies are becoming available through various foundries, there has been a surge in the design of complex MMICs with more than one function on a single chip. Monolithic ICs have inherent advantages of light weight, small size, increased reliability and low cost in large volume production. MMICs have long offered the promise of fulfilling the requirements of many military and commercial microwave systems. The development and insertion of MMICs in microwave systems is at the threshold of a new era, with new levels of capabilities in design, manufacturing, testing, and packaging .

Papers are solicited for a special issue of the IEEE Transactions on MTT on "Multifunction MMICs and Their System Applications" to be published in September, 1990. The purpose of this special issue is to present recent advances in GaAs MESFET/PIN and Silicon bipolar based multifunction ICs including microwave, analog, digital multifunctions and the combination of these on a single chip. It will address the modeling, design, test and package, process and material issues for such complex and large size MMICs. Topics of particular interest include, but are not limited to, the following areas:

- MMIC designs with several functions on a single chip
- MMIC based systems and their partitioning with MMIC insertion in view
- Techniques & architectures to optimize performance of multifunction MMICs
- Testing and packaging of multifunction MMICs at microwave frequencies
- Integration of microwave and digital functions on a single chip
- Multifunction MMICs based on HBT, HEMT and other advanced structures
- GaAs on Si processing to combine low frequency Si and high frequency GaAs functions
- Material advancements, techniques for process compatibility and yield improvements to support multifunction/large size MMICs

Ravender Goyal of Anadigics Inc. and E. C. Niehenke of Westinghouse will be the guest editors of this special issue. Prospective authors are requested to submit four copies of the manuscript describing original work by Dec. 15th, 1989, to:

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Manuscript requirements for submitted papers are outlined on the outside back cover of the IEEE Transactions on Microwave Theory and Techniques.