

# Call for Papers

IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES

## Special Issue

on

### *Process-Oriented Microwave CAD and Modeling*

The Guest Co-editors of this Special Issue believe that only integrated CAD systems which directly link geometry, layout, physical parameter and process parameter descriptions with performance, yield and system specifications address the challenges of microwave IC circuit and design technology in the next decade. Hierarchically structured CAD systems need to integrate field theory, circuit theory and system theory into a computational environment for process-oriented linear, nonlinear and statistical microwave simulation and design. Fast predictable physics-based modeling and simulation of (M)MIC devices and circuits will be important aspects of manufacturable designs.

Papers of original contributions are solicited for a Special Issue of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES on *Process-Oriented Microwave CAD and Modeling*, to be published in July 1992. The purpose of this Special Issue is to identify existing microwave design methodologies and to highlight emerging techniques relevant to the process-oriented approach. Topics of interest include, but are not restricted to, the following areas:

- Survey of "Next Generation" Microwave Simulators
- CAD Related Automated Measurement Techniques
- Deembedding and Process-Oriented Parameter Extraction
- Device and Circuit Diagnosis and Testing
- Field Theoretic Simulation Techniques
- Layout Generation Techniques and Software
- CAD Oriented Computational Methods
- Device and Component Modeling
- Advances in MMIC/CAD Design Technology
- Statistical Modeling and Data Bases
- Yield Optimization and Design Centering Methodologies
- Advances in Linear and Nonlinear Simulation in the Frequency and Time Domains
- Simulation and Modeling of High-Speed Digital Circuits
- Computer-Aided Manufacturing Techniques
- System Simulation and Design
- Advanced MMIC Elements and Circuits
- CAD Solutions to Novel Devices, Circuits and Subsystems

We particularly encourage contributions from industry reporting implementation of the above subjects.

Authors are requested to submit four (4) copies of their manuscripts by August 15, 1991 to either of the Guest Co-editors:

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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.