

Panel Sessions

Microwave/Millimeter-Wave Low Noise Amplifiers

Date: Wednesday, May 9, 1990
Time: 11:00 a.m.–1:00 p.m.
Location: Dallas Convention Center East Ballroom
Sponsor: MTT-6 Microwave and Millimeter-Wave Integrated Circuits
MTT-7 Microwave and Millimeter-Wave Devices
Organizers: F. Sullivan, Raytheon
E. Niehenke, Westinghouse Electric Corp.
F. Ali, Pacific Monolithics
Panelists: S. Binari, Naval Research Laboratory
D. Heston, Texas Instruments
A. Podell, Pacific Monolithics
P. Smith, General Electric Co.

Abstract:

This proposed session will focus on the state-of-the-art of low noise MMIC amplifiers, with particular emphasis on simultaneously obtaining low noise figure and high third-order intercept point. This is a major area of importance in many radar systems. Device trade-offs and limitations will be reviewed, with a focus on MESFETs, HEMTs, pseudomorphic HEMTs (both GaAs and InP based), and HBTs; and where each can most appropriately be utilized, covering both microwave and millimeter-wave frequencies. Innovative circuit techniques to improve the intercept point, such as feedforward, will also be addressed. An overall emphasis will be on monolithic circuit realization and any associated fabrication problems.

Panel Sessions

Spread Spectrum Technology in Consumer Electronics

Date: Wednesday, May 9, 1990
Time: 11:00 a.m.–1:00 p.m.
Location: Dallas Convention Center East Ballroom
Sponsor: MTT-16 Microwave Systems
Organizer: S. Bharj, David Sarnoff Research Center
Panelists: A. Pate, PA Consulting Group
R. Simpson, OCI
S. Messenger, Tele-Systems
P. Cripps, Agilis Corp.

Abstract:

Spread spectrum communications technology has been utilized by the military for secure command and control communications. A recent ruling of the Federal Communications Commission (FCC) has made available three bands in the microwave spectrum for unlicensed commercial use. Signals generated in these bands must use spread spectrum technology and not exceed one watt power level. Growth potential is best typified by the observation that growth in the industrial section has doubled in the past year. Some of the experts from this industry will conduct technical presentations to highlight the latest technology applications.

The discussion will cover the basics, present and future applications, manufacturability and the role of GaAs and Silicon monolithic microwave technology. Real time demonstration of the products will be conducted to augment the importance of the technology.

Panel Sessions

U.S. Electronics/Microwave Industry in a Globalized World Market: Impact of Japan, European Economic Community and Perestroika

Date: Wednesday, May 9, 1990
Time: 11:00 a.m.–1:00 p.m.
Location: Dallas Convention Center East Ballroom
Sponsor: MTT-S ADCOM
Organizer: L. N. Medgyesi-Mitschang
Panelists: A. McAdams, Cornell University
C. G. Thornton, U.S. Army
P. Herer, National Science Foundation

Abstract:

The explosive rate of technological innovation world-wide, coupled with a changing geopolitical environment has led to dramatic shifts in world markets. This is particularly true in electronics, telecommunications and microwaves. The panelists represent a cross section of views; academia, the science community and the services.

The panel will discuss the impact of a globalized world market on industry and the engineering profession. Potential topics to be covered include:

- *Impact of Transnationalism
- *Basic Research Trends
- *Technology Transfer/Licensing
- *Strategic Technology Investing
- *Future Prospects

After the speakers' presentations, the panel will be open for questions from the audience.

Panel Sessions

European Session

Date: Thursday, May 10, 1990
Time: 11:45 a.m.–1:15 p.m.
Location: Dallas Convention Center
West Ballroom A, B
Organizers: Andre VanDer Vorst and
Richard Sparks