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HIGH SPEED FIBER OPTIC LINKS

Chairman: Paul J. Stabile—David Sarnoff Research Center

Session Abstract: The use of fiber optic links in communication and radar systems continues to expand at a rapid rate. In both digital and analog applications the information rate has increased to require the use of microwave circuit design and evaluation techniques. The papers in this session present examples of the rapid progress in this area.

There are three papers on wideband fiber optic links (FOL) covering most of the microwave spectrum. The first paper compares a 0.83 μm laser based system to one operating at 1.3 μm . The second describes a 6 to 22 GHz Mach-Zehnder electro-optic modulator (EOM) based system. The third paper demonstrates a low noise 0.1–18 GHz EOM system.

The next paper compares fiber optic with conventional coaxial interconnects. The paper also discusses a novel matching technique to substantially improve FOL performance. The subsequent paper summarizes novel applications of fiber optic delay lines to improve capability and performance of radar repeater and phase noise test sets. The final paper of this session is a comprehensive treatment of laser diodes as memoryless nonlinear devices.

2:00 pm–3:30 pm, May 27, 1988
Jacob Javits Convention Center, Hall 1E
Room 1