

# **Session VIII**

## **Phase Shifter and Logarithmic Amplifier Circuits**

**(Joint with IMS)**

**Co-Chairmen:**

**R. Gold**

Pacific Monolithics

**W. C. Niebaus**

AT&T Bell Labs.

Development of wideband, high performance MMIC control circuits are essential to cost effective T/R modules. In this session there are two papers which review new developments on phase shifter technology. The first paper describes 30% bandwidth phase shifter with low RMS phase and amplitude error. The second paper presents a novel 180° phase shifter circuit topology which has fewer elements and requires a single control voltage. Finally the last two papers describe logarithmic amplifiers, demonstrating good dynamic range, linearity and pulse response together with an increased level of integration.

**1:30 p.m.–2:50 p.m., Tuesday, June 2, 1992**  
**Kiva Auditorium**