# Abstracts

## A 16 Tap Hybrid Programmable Transversal Filter Using Monolithic GaAs Dual-Gate FET Array

*D.E. Zimmerman and C.M. Panasik. "A 16 Tap Hybrid Programmable Transversal Filter Using Monolithic GaAs Dual-Gate FET Array." 1985 MTT-S International Microwave Symposium Digest 85.1 (1985 [MWSYM]): 251-254.*

A hybrid programmable transversal filter (HPTF) is described that employs a LiNbO/sub 3/ SAW delay line and two monolithic dual-gate GaAs FET arrays to control magnitude and sign of the 16 tap weights. The HPTF is completely programmable and is constrained only by the bandwidth (100 MHz centered at 250 MHz) and the number of taps. Theoretical calculations of tap weight control range and dynamic range are presented, compared with experiment and used to justify the hybrid LiNbO/sub 3/ SAW - GaAs FET combination. A dynamic range of 85 dB and a continuously variable tap weight control range of 70 dB are demonstrated.

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