

Abstract

Engineering

[RECONFIGURABLE ADPATIVE FILTERING SYSTEM FOR ULTRASONIC APPLICATIONS](#),

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Adaptive filter has been widely used in interference cancellation, predication, inverse modeling and identifications. In this study, a reconfigurable adaptive filter is designed for ultrasonic nondestructive evaluation (NDE) application. Simulation and experimental results show that backscattered noise from microstructures inside material can be significantly reduced by the reconfigurable filter. Four different architectures of the filter are studied and compared in terms of resource usage, latency, and reconfigurability.