

APPLICATIONS OF REWRITING CYCLIC NORMAL AUTOMATA IN ADAPTIVE SIGNAL PROCESSING

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ABSTRACT

In Adaptive signal processing designing of filters is challenging task to minimize mean square error (MSE) by adjusting filter coefficients. The finite impulse response (FIR) filters make use of gradient based methods, but infinite impulse response (IIR) filters are not as FIR filters due to multimodal error surfaces. Hence the filter coefficients are optimized using intelligent learning techniques. The Rewriting Cyclic Normal Automata (RCNA) used as a single automaton, cooperative scheme and used along with gradient search method to design IIR filters.

KEYWORDS: RCNA, FIR, IIR, NA, MSE