# Adaptive Control Of Nonlinear Hammerstein Model Using NLMS Filter

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## Summary

A novel technique, using the normalized least mean squares (NLMS) adaptive filter is proposed for adaptive control of the plant dynamics of a nonlinear plant. The nonlinear plant considered belongs to the Hammerstein type of nonlinear system. Stable adaptive controller for a stable discrete time nonlinear plant is designed. The nonlinear plant considered may be non-minimum phase. The controller is composed of an adaptive finite impulse response (FIR) filter in the feedback loop. This adaptive FIR filter is designed online as an L-delay approximate inverse system of the given stable nonlinear plant.

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