Abstract

In this paper, a new nonlinear wavelet identification structure is proposed for high noise resistive soft sensors. This method uses proposed Polynomial Nonlinear Auto Regressive Exogenous Model, which can be solved with linear Gaussian Least Square Method, alongside the Averaging Wavelet Method (AWM) filter. AWM uses the approximation spaces for analyzing
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the signals and reduce the noise by a mean filtering over sub-resolutions. Conventional wavelet modeling methods use the detail spaces of the decomposed signal for signal modeling. The application results show that this method can be more accurate in high level noisy environments than the conventional wavelet modeling methods can tolerate.

References


Index Terms

Computer Science  Signal Processing

Keywords

Averaging Wavelet Method  NARX  Noise tolerant modeling