Adaptive Filtering and Change Detection
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DESCRIPTION

Adaptive filtering is a branch of digital signal processing which enables the selective enhancement of desired elements of a signal and the reduction of undesired elements. Change detection is another kind of adaptive filtering for non-stationary signals, and is the basic tool in fault detection and diagnosis.

This text takes the unique approach that change detection is a natural extension of adaptive filtering, and the broad coverage encompasses both the mathematical tools needed for adaptive filtering and change detection and the applications of the technology. Real engineering applications covered include aircraft, automotive, communication systems, signal processing and automatic control problems. The unique integration of both theory and practical applications makes this book a valuable resource combining information otherwise only available in separate sources.

- Comprehensive coverage includes many examples and case studies to illustrate the ideas and show what can be achieved
- Uniquely integrates applications to airborne, automotive and communications systems with the essential mathematical tools
- Accompanying Matlab toolbox available on the web illustrating the main ideas and enabling the reader to do simulations using all the figures and numerical examples featured

This text would prove to be an essential reference for postgraduates and researchers studying digital signal processing as well as practising digital signal processing engineers.
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