

Contents

Part I: Modeling, Identification, and Estimation

1. Stochastic realization and system identification
2. State-space modeling of dynamic systems
3. Canonical variable analysis in control and signal processing
4. Generalized moving-average models for continuous-time systems
5. Multiresolution approaches for impulse response identification
6. ARMA model order estimation
7. Recursive nonlinear MAP filtering
8. Stochastic properties of robust filters
9. Reduced-order estimation for linear stochastic systems
10. Statistical modeling of complex evolving systems
11. Fuzzy random data and uncertainty modeling

Part II: Signal Processing Applications

12. Cyclostationary processes and applications
13. Stochastic identification using higher-order spectra (polyspectra)
14. Multichannel blind deconvolution
15. Bayesian methods for robust array signal processing
16. Stochastic radar signal processing
17. Robust change detection in dynamic systems
18. Stochastic neural networks for change detection
19. Invariant feature extraction and pattern recognition
20. Gibbs random field models and image processing