

Model Identification And Data Analysis II

Theory

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Abstract

The course topics are:

- Non-parametric system identification: the subspace-based state-space approach
- Kalman Filter: prediction, virtual-sensing and gray-box system identification
- Analysis and design of closed-loop systems using the minimum-variance approach
- Non-linear system-identification: parametric nonlinear fitting; N-ARMAX models; optimal design of basis functions using Principal-Component-Analysis
- Frequency-domain parametric estimation of models from data
- Recursive system identification: extension of system-identification to time-varying systems

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