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System Identification for Predictive Control

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Abstract:

Predictive control is one of the control methods which have developed considerably over a few past years. It is mostly based on discrete models of controlled systems. A model of a controlled system is used for computation of predictions of the systems output. An internal model of the real system is then the essential element of the predictive controller. Correspondence of the model with the real system is an important issue in the predictive control. Models used in predictive control must be able to make good predictions of the future behaviour of the controlled system till the upper bound of the prediction horizon.

The aim of the work is design and verification of efficient identification algorithms both for explicit and recursive identification of the controlled system.

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