A REVIEW OF PARAMETER ESTIMATION FOR LINEAR TIME-INVARIANT MULTIVARIABLE SYSTEMS

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Abstract

Estimation of process transfer functions is important for synthesizing suitable tuning rule and control strategies. This article gives a glimpses & recent advances in identification of multivariable system transfer functions. Overviews of the basic techniques of estimation with their advantages and applicability, since 1980s, are discussed here. This will give the readers an understanding of need of identifying necessary number of transfer functions for actual control. The paper gives an outline of methods using step tests, sequential identification and subspace techniques applicable to multi output multi input processes. An overview of the basic techniques of identification of MIMO systems in a unified framework is presented here.

Keywords: System identification, multivariable, sequential identification, subspace. Subject Field: Process Control