
Identification of dynamic characteristics by the method of generating functions

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The fundamental question in this research is that of parametric identification of a wide class of linear time-invariant systems with a mathematical model in the structure of rational transfer functions. We develop the methods of using Hermite generating functions for identification using the information about the input and output signals and offer a strategy of gradual experimental identification of the object. By means of simulation in the MATLAB system we prove theoretical predictions concerning the key issues of using the methods of generating functions, including the separability of stages of filtration and identification.

Keywords: *identification, generating function, filtration, simulation.*

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