Optimisation and Polyoptimisation of Power System Stabilizer Parameters
Resumo de Optimisation and Polyoptimisation of Power System Stabilizer Parameters

The monograph deals with the problem of the possibility of improving the power system (PS) angular stability with use of power system stabilizers having the parameters selected in an optimal and polyoptimal way.

There are presented the models of the elements of PS generating units. The problem of the measurement parameter estimation of the mathematical models of generating unit elements is discussed. Due to wide use of power system stabilizers with two input signals proportional to the active power and angular speed of a generator, the derivation of the general structure of the dual input PSS2A stabilizer is described.

The structure and model of the simple dual input PSS3B stabilizer are presented. The monograph contains the general theoretical fundamentals of the optimisation and polyoptimisation process as well as the calculation results.

In particular, there are given the results of the optimal and polyoptimal selection of the parameters of the PSS2A and PSS3B stabilizers. This book is intended for specialists in power engineering as well as students of faculties of electrical engineering interested in issues of PS transient states.

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