

Self-tuning Controllers Based on Orthonormal Functions.

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Abstract: Problems of the system identification using orthonormal functions are discussed and algorithms of computing parameters of the discrete time state-space model of the plant based on the generalized orthonormal functions and the Laguerre functions are derived. The adaptive LQ regulator and the predictive controller based on the Laguerre function model are also presented. The stability and the robustness of the closed loop using the predictive controller are investigated.

Keywords:

AMS Subject Classification: 93C;