Robust H2 Control of the Nuclear Reactor Systems

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Abstract

Robust control theory aims to analyze and design an accurate control system when the system has significant uncertainties. The goal is to synthesize a control law to maintain the system response and error signals to be within given tolerances despite the effect of the uncertainties on the system and to maintain the stability for all plant models in an expected band of uncertainty [1].

In this paper the design of a robust controller using the linear quadratic Gaussian, H2 optimal control and the robust tracking with disturbance rejection algorithms are represented where the fuel and coolant temperatures feedback are included.

References

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Index Terms

Computer Science
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Keywords

Robust control, kinetic equation, Linear Quadratic Gaussian, H2 optimal control, nuclear reactor.