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Robustness of Discrete-Time Control Systems

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Abstract:

Robustness is one of the key properties of control systems, i.e., the designed closed loop should be able to cope with uncertainties that may affect it. Thanks to the rapid development of digital computers with increasing performance and decreasing costs, most of the present control systems work in a discrete-time manner. Thus, it is important to pay attention to the robustness analysis of discrete-time control loops as well as to the design of robust discrete-time controllers with either conventional or more complex structures. The main research aim of the thesis should consists in the development, improvement, or suitable application of the related robust analysis/synthesis method(s).

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