

论文与报告

不确定奇异时滞系统时滞依赖鲁棒镇定

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摘要

This paper considers the problem of delay-dependent robust stabilization for uncertain singular delay systems. In terms of linear matrix inequality (LMI) approach, a delay-dependent stability criterion is given to ensure that the nominal system is regular, impulse free, and stable. Based on the criterion, the problem is solved via state feedback controller, which guarantees that the resultant closed-loop system is regular, impulse free, and stable for all admissible uncertainties. An explicit expression for the desired controller is also given. Some numerical examples are provided to illustrate the validity of the proposed methods.

关键词 [Singular time-delay system](#) [delay-dependent](#) [robust stabilization](#) [linear matrix inequality](#)

分类号

Delay-dependent Robust Stabilization for Uncertain Singular Systems with State Delay

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Abstract

This paper considers the problem of delay-dependent robust stabilization for uncertain singular delay systems. In terms of linear matrix inequality (LMI) approach, a delay-dependent stability criterion is given to ensure that the nominal system is regular, impulse free, and stable. Based on the criterion, the problem is solved via state feedback controller, which guarantees that the resultant closed-loop system is regular, impulse free, and stable for all admissible uncertainties. An explicit expression for the desired controller is also given. Some numerical examples are provided to illustrate the validity of the proposed methods.

Key words [Singular time-delay system](#) [delay-dependent](#) [robust stabilization](#) [linear matrix inequality](#)

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