

论文与报告

鲁棒的逆Nyquist阵列(RINA)设计方法

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摘要

通过大量的数值计算和回归分析找出了矩阵的对角优势度与特征值摄动量的关系,进而提出一种鲁棒的逆Nyquist阵列(RINA)设计方法,该方法既保持了INA方法的优点,又使控制系统具有希望的鲁棒性.并针对伪对角化方法存在的不足之处提出一种“双环优势化”方法.此外,也澄清了Doyle和Stein关于INA方法缺乏鲁棒性的提法.

关键词 [鲁棒性](#) [对角优势](#) [INA设计方法](#)

分类号

The Robust Inverse Nyquist Array (RINA) Design Method

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Abstract

Based on a large amount of numerical calculation and regression analyses, this paper gives the relationship between the degree of diagonal dominance and the deviation of eigenloci of a matrix. Moreover, a design method--the Robust INA (RINA) method is proposed. This method can make the control system have the desired robustness while maintaining the merits of the INA method. The "two-loop diagonalization algorithm" that can overcome the weakness of the pseudo-diagonalization algorithm is proposed in this paper. It is also pointed out that in this paper the criticism raised by Doyle and Stein against the INA design method is not tenable.

Key words [robustness](#) [diagonal dominance](#) [INA design method](#)

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