论文

输入通道有干扰多变量MRAC系统全局稳定化控制

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摘要：

对具有未建模动态且输入通道存在干扰的动态不确定多输入多输出(MIMO)模型参考自适应控制(MRAC) 系统，仅应用系统的输入输出量测数据给出了一种变结构模型跟踪控制器设计机制.通过辅 助信号和带有记忆功能的正规化信号,并适当选择控制器参数, 所提出的变结构控制 (VSC)能保证闭环系统的全局稳定性,且跟踪误差可调整到任意小.

关键词： 未建模动态;   输入通道干扰 变结构控制;   全局渐近 稳定.
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Global Stabilization Control of Multivariable MRAC Systems with Disturbances in Input Channel

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Abstract:

A design scheme of variable structure model tracking controller using only input and output measurements is presented for a class of multi input and multi output (MIMO) uncertain model reference adaptive control (MRAC) systems with disturbances in input channel. By introducing the auxiliary signals and normalized signals with memory functions and appropr iate choice of controller parameters,the variable structure controller developed guarantees the global stability of the closed loop system, and the tracking error can be arbitrarily small.

Keywords: Unmodeled dynamics   Disturbances in input channel   Variable structure control   Globally asymptotically stable

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