论文与报告

离散时间系统的变结构控制

高为炳

北京航空航天大学七研

摘要
研究离散时间系统的变结构控制问题. 首先定义准滑动模态, 给出详细的物理解释. 然后讨论已有的到达条件, 给出新的更一般的条件, 即离散趋近律. 对新定义的准滑动模态, 解决了其稳定性并给出了切换函数. 利用趋近律方法, 给出了变结构控制的一般的设计方法, 它既适用于单输入系统, 也适用于多输入系统.
关键词　　变结构控制　滑动模态控制　离散时间系统　准滑动模态
分类号

扩展功能
本文信息
▶ Supporting info
▶ PDF(576KB)
▶ [HTML全文](0KB)
▶ 参考文献[PDF]
▶ 参考文献
服务与反馈
▶ 把本文推荐给朋友
▶ 加入我的书架
▶ 加入引用管理器
▶ 复制索引
▶ Email Alert
▶ 文章反馈
▶ 浏览反馈信息
相关信息
▶ 本刊中 包含"变结构控制"的 相关文章
▶本文作者相关文章
· 高为炳

Variable Structure Control of Discrete-T Me Systems

Gao Weibing

The 7th Research Division,Beijing University of Aeronautics and Astronautics

Abstract
The variable structure control (VSC) of discrete time systems is studied in this paper. First of all, the quasi-sliding mode is defined and a detailed physical explanation to it is 'given. Previously established versions of reaching conditions are briefly reviewed and a new and more general version is given: the discrete reaching law. For this new definition of quasi-sliding mode its stability problem is proved meanwhile the linear switching function is determined. The VSC is obtained straightforward by the reaching law method, which is a general design method applicable both to single input and multiple input cases in a simple way.
Key words　Variable structure control　sliding mode control　discrete time systems　quasi-sliding mode　reaching law method

DOI :

通讯作者
作者个人主页　高为炳