



航空学报 » 1991, Vol. 12 » Issue (7) :389-394 DOI:

论文

最新目录 | 下期目录 | 过刊浏览 | 高级检索

<< Previous Articles | Next Articles >>

具有期望性能的控制系统设计

梁锋, 陈宗基

北京航空航天大学

CONTROL SYSTEM DESIGN WITH EXPECTED PERFORMANCES

Liang Feng, Chen Zongji

Beijing University of Aeronautics, Astronautics

摘要

参考文献

相关文章

Download: PDF (0KB) HTML 0KB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 本文给出的控制系统设计方案是在设计者已选定系统控制器结构的基础上,利用参数优化计算使所设计的控制系统具有期望的动静性能。它改进了现有控制系统设计方案大多数与系统的期望性能指标无直接关系的缺陷,避免了设计中为满足性能指标而进行的多次试凑。同时该方案在设计中还可包括系统的非线性特性。文中还给出了一种确定系统控制器结构的专家系统方案。最后的算例验证了该方案的实用性。

关键词: 控制系统设计 参数优化 期望性能设计 专家CAD 输出反馈

Abstract: A new control system design scheme is proposed in this paper on the basis of given system controller structure. The scheme can make the designed control systems possess expected dynamic and static performances by using parameter optimization technique. It overcomes the demerit of most known control system design schemes which are not directly related to expected system performances, and avoids making trial and error many times to achieve expected performances. Moreover, the scheme allows system models to contain nonlinear characteristics. An expert system scheme for determining system controller structures is also provided. The given example demonstrates the practicality of the scheme.

Keywords: control system design parameter optimization expected performance design expert CAD output feedback

Received 1989-10-30; published 1991-07-25

引用本文:

梁锋;陈宗基. 具有期望性能的控制系统设计[J]. 航空学报, 1991, 12(7): 389-394.

Liang Feng; Chen Zongji. CONTROL SYSTEM DESIGN WITH EXPECTED PERFORMANCES[J]. Acta Aeronautica et Astronautica Sinica, 1991, 12(7): 389-394.

Service

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ Email Alert
- ▶ RSS

作者相关文章

- ▶ 梁锋
- ▶ 陈宗基