

theorem.

4 Conclusion

The robust absolute stability of Lurie control system with time-delay has been studied. By using Lyapunov method, both delay-independent and delay-dependent criteria have been given. The presented results are useful to estimate the robust stability bound and delay bound of uncertain Lurie control system with time-delay.

References

- [1] Grujic L J T and Petkovski D J. On robustness of Lurie system with multiple non-linearities [J]. Automatica, 1987, 23, 327 - 334
- [2] Tesi A and Vicino A. Robust Absolute stability of Lur'e control systems in parameter space [J]. Automatica, 1991, 27(1):147 - 151
- [3] Nian X. Robust stability of Lurie control systems [J]. Control Theory and Application, 1995, 12(5):641 - 645 (in Chinese)

- [4] Nian X. Robust stability for Lurie control systems with several independent stationary components [J]. Control Theory and Application, 1998, 16(1):43 - 47
- [5] Nian X. Robust stability for Lurie control systems with several stationary components [J]. Acta Automatica Sinica, 1998, 24(4):582 - 585 (In Chinese)
- [6] Konishi K and Kokame H. Robust stability of Lur'e systems with time-varying uncertainties: a matrix inequality approach [J]. Int. J. System Science, 1999, 30(1):3 - 9
- [7] Nian X. Delay-dependent conditions for absolute stability of Lurie type control system [J]. Acta Automatica Sinica, 1999, 25(4):564 - 566 (In Chinese)

本文作者简介

年晓红 1965年生,博士,中南大学教授,主要研究方向为非线性系统理论,鲁棒控制和神经网络系统理论。

樊晓平 1961年生,博士,中南大学教授,主要研究方向为机器人控制,智能控制和鲁棒控制。

欢迎订阅《基础自动化》杂志

《基础自动化》(Basic Automation)为国家科委批准,国家教育部主管,东北大学主办,国内外公开发行的国家级技术类刊物,被选为“中国学术期刊综合评价数据库”的来源期刊,由“中国期刊网”及“中国学术期刊(光盘版)”全文收录,连年被原冶金部、辽宁省评为优秀期刊。

读者对象及刊登内容:

《基础自动化》打破行业界线,面向现场实际应用,发表自动化领域最先进的自动化应用理论与技术成果,刊登最新自动化发展信息与产品介绍,是自动化领域的专家、教授、学者及工程技术人员了解和交流自动化领域最新成果的园地。

发行办法:

本刊为双月刊,大16开,通过邮局在全国各地发行,邮发代号8—216。国内定价每期6.00元,全年36.00元。欢迎各地图书馆、大中专院校、工矿企业、科研院所及自动化同仁到当地邮局订阅,如有漏打,请随时与我编辑部联系办理。

通讯地址:

沈阳市和平区文化路3巷11号东北大学310信箱,邮编:110004

电话:23883498 传真:23883498

E-mail: bauto@mail.neu.cims.edu.cn