第一图书网, tushu007.com

<<工业蒸发系统、微分几何技术执行>>

图书基本信息

书名：<<工业蒸发系统、微分几何技术执行的鲁棒非线性控制ROBUST NONLINEAR CONTROL OF INDUSTRIAL EVAPORATION SYSTEMS>>

13位ISBN编号：9789810236144

10位ISBN编号：981023614X

出版时间：1999-12

出版时间：东南大学出版社

作者：To, L. C.; Tade, M. O.; Tade, Moses O.

页数：317

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：http://www.tushu007.com

第一图书网, tushu007.com

内容概要

Examines the practical aspects of multivariable nonlinear control techniques. Designed to minimize the use of abstract mathematical language and, in some cases, simplify the language so that nonlinear control theory can be understood by industrial practitioners.

第一图书网, tushu007.com

书籍目录

PrefaceAcknowledgmentsNomenclature,Chapter One Introduction 1.1 Why Nonlinear Control Theory 1.2 Development of Nonlinear Control Theory 1.3 Purpose of this Book 1.4 An Overview of the BookChapter Two Feedback Linearization Theory and Symbolic Computations 2.1 Introduction 2.1.1 Full State Feedback Linearization 2.1.2 Partial State Feedback Linearization 2.2 Notes and References 2.2.1 Input State Linearization (I/S) 2.2.2 Input Output Linearization (I/O) 2.3 Mathematical Preliminaries for Differential Geometry 2.3.1 Vector Fields and Scalar Fields 2.3.2 Lie Derivative 2.3.3 Lie Brackets 2.4 The Nonlinear Control System Representation 2.4.1 Input State Llinearization (I/S) or SHM Transformation 2.4.1.1 Algorithm for Computing Kronecker Indices 2.4.1.2 Criteria for Transformation 2.4.1.3 Transformation of Variables 2.4.1.4 Special Case of the I/S 2.4.1.5 Summary of the I/S Algorithm 2.4.1.5 Example of the Input State Linearization 2.4.1.7 Feedback Control by the Input State Linearization 2.4.2 Input Output Linearization (I/O) 2.4.2.1 MIMO Globally Linearizing Control (GLC) Structure 2.4.2.2 Example of the Input Output Linearization 2.4.2.3 A Special Case of the Input Output Linearization: Generic Model Control 2.4.2.4 Design Procedures of MIMOGLC Structure 2.5 Symbolic Computations 2.5.1 What are Symbolic Computations? 2.5.2 A Brief Introduction to MAPLE 2.5.3 Applications of Symbolic Computations in Process Control 2.6 ConclusionsChapter Three Nonlinear Control of a Simulated Single Evaporator Process 3.1 Liquor Burning Process (LBP) 3.1.1 Process Description 3.1.2 Dynamic Modelling Considerations 3.1.2.1 Assumptions 3.1.2.2 Dynamic Equations 3.1.2.3 Selection of Input and Output Variables 3.2 Simulation Results 3.2.1 Open Loop Simulation Results 3.2.2 Closed Loop Simulation Results 3.2.2.1 Local Linearization 3.2.2.2 Input Output Linearization versus Generic Model Control 3.2.2.3 Input State Linearization 3.3 Discussions 3.3.1 Local Linearization ……Chapter Four Robustness Study of Nonlinear Control TheoriesChapter Five Robust Controller Synthess Using Uncertainty Vector AdjustmentChapter Six Lyapunov Function Analysis of the Uncertainty Vector AdjustmentChapter Seven Simulation and Control of a Triple Effects EvaporatorChapter Eight Use of State Observers in Nonlinear ControlChapter Nine Implementation of Input Output Linearization on an Industrial Evaporator ProcessChapter Ten Final Comment and ConclusionsAppendicesBibliographyIndex

第一图书网, tushu007.com

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:http://www.tushu007.com