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Monthly Catalogue, United States Public Documents - 1993-05

Advances and Innovations in Systems, Computing Sciences and Software Engineering - Khaled Elleithy 2007-08-28
This book includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the areas of Computing Sciences, Software Engineering and Systems. The book presents selected papers from the conference proceedings of the International Conference on Systems, Computing Sciences and Software Engineering (SCSS 2006). All aspects of the conference were managed on-line.
Scientific and Technical Aerospace Reports - 1995

European Control Conference 1993 - 1993-06-28
Proceedings of the European Control Conference 1993, Groningen, Netherlands, June 28 – July 1, 1993
Power Electronics and Motor Drives - Bimal K. Bose 2020-11-13
Power Electronics and Motor Drives: Advances and Trends, Second Edition is the perfect resource to keep the electrical engineer up-to-speed on the latest advancements in technologies, equipment and applications. Carefully structured to include both traditional topics for entry-level and more advanced applications for the experienced engineer, this reference sheds light on the rapidly growing field of power electronic operations. New content covers converters, machine models and new control methods such as fuzzy logic and neural network control. This reference will help engineers further understand recent technologies and gain practical understanding with its inclusion of many industrial applications. Further supported by a glossary per chapter, this book gives engineers and researchers a critical reference to learn from real-world examples and make future decisions on power electronic technology and applications. Provides many practical examples of industrial applications Updates on the newest electronic topics with content added on fuzzy logic and neural networks Presents information from an expert with decades of research and industrial experience
Systems Engineering in Wireless Communications - Heikki Niilo Koivo 2009-11-04
This book provides the reader with a complete coverage of radio resource management for 3G wireless communications Systems Engineering in Wireless Communications focuses on the area of radio resource management in third generation wireless communication systems from a systems engineering perspective. The authors provide an introduction into cellular radio systems as well as a review of radio resource management issues. Additionally, a detailed discussion of power control, handover, admission control, smart antennas, joint optimization of different radio resources , and cognitive radio networksis offered. This book differs from books currently available, with its emphasis on the dynamical issues arising from mobile nodes in the network. Well-known control techniques, such as least squares estimation, PID control, Kalman filers, adaptive control, and fuzzy logic are used throughout the book. Key Features: Covers radio resource management of third generation wireless communication systems at a systems level First book to address wireless communications issues using systems engineering methods Offers the latest research activity in the field of wireless communications, extending to the control engineering community Includes an accompanying website containing MATLABTM/SIMULINKTM exercises Provides illustrations of wireless networks This book will be a valuable reference for graduate and postgraduate students studying wireless communications and control engineering courses, and R&D engineers.
Modelling, State Observation and Diagnosis of Quantised Systems - Jochen Schröder 2002-10-09
Ongoing advances in science and engineering enable mankind to design and operate increasingly sophisticated systems. Both their design and operation require the understanding of the system and its interaction with the envir- ment. This necessitates the formalisation of the knowledge about the system by models. A major issue is what kind of model is best suited for a given task. This book is about the supervision of continuous dynamical systems. Such systems are typically described by di?erential equations. However, this does notautomaticallymeanthatdi?erentialequationsarepropermodelsforso- ing supervision tasks. Instead, this book and recent approaches in literature show that supervision tasks do in general not require the use of such precise modelsasdi?erentialequations.Thisisofinterestbecauseuncertainties,t- ically occurring in supervision, make the use of precise models very di?cult. Alternative approaches therefore use less precise models such as discrete– event descriptions to solve supervision tasks on a higher level of abstraction. Discrete–event descriptions in form of automata are one of the key elements of this book. To reach this higher level of abstraction, uncertainties by qu- tisation are introduced on purpose, taking into account a loss of precision. This is one of the main di?erence to other approaches. When using nume-calmodelsliketransferfunctionsordi?erentialequations,uncertaintiesmake the analysis more di?cult. Not so here, where the system is described on a qualitative level on which uncertainties are naturally incorporated. The book presents a new way to describe systems for supervision. Preparing this book I learned that the key to solve supervision problems is simplicity.
Eurosymposium Computer Aided Process Engineering - ESPUNA 2005-05-17
Eurosymposium Computer Aided Process Engineering
Monthly Catalog of United States Government Publications - 1994

Wind Energy Systems - Mario Garcia-Sanz 2012-02-02
Presenting the latest developments in the field, Wind Energy Systems: Control Engineering Design offers a novel take on advanced control engineering design techniques for wind turbine applications. The book introduces concurrent quantitative engineering techniques for the design of highly efficient and reliable controllers, which can be used to solve the most critical problems of multi-megawatt wind energy systems. This book is based on the authors' experience during the last two decades designing commercial multi-megawatt wind turbines and control systems for industry leaders, including NASA and the European Space Agency. This work is their response to the urgent need for a truly reliable concurrent engineering methodology for the design of advanced control systems. Outlining a roadmap for such a coordinated architecture, the authors consider the links between all aspects of a multi-megawatt wind energy project, in which the wind turbine and the control system must be cooperatively designed to achieve an optimized, reliable, and successful system. Look inside for information about the QFT Control Toolbox for Matlab, the software developed by the author to facilitate the QFT robust control design (see also the link at codypower.com). The textbook's big-picture insights can help students and practicing engineers control and optimize a wind energy system, in which large, flexible, aerodynamic structures are connected to a

demanding variable electrical grid and work automatically under very turbulent and unpredictable environmental conditions. The book covers topics including robust QFT control, aerodynamics, mechanical and electrical dynamic modeling, economics, reliability, and efficiency. It also addresses standards, certification, implementation, grid integration, and power quality, as well as environmental and maintenance issues. To reinforce understanding, the authors present real examples of experimentation with commercial multi-megawatt direct-drive wind turbines, as well as on-shore, offshore, floating, and airborne wind turbine applications. They also offer a unique in-depth exploration of the quantitative feedback theory (QFT)—a proven, successful robust control technique for real-world applications—as well as advanced switching control techniques that help engineers exceed classical linear limitations.

Efficient Modeling and Control of Large-Scale Systems - Javad Mohammadpour 2010-06-23

Complexity and dynamic order of controlled engineering systems is constantly increasing. Complex large scale systems (where "large" reflects the system’s order and not necessarily its physical size) appear in many engineering fields, such as micro-electromechanics, manufacturing, aerospace, civil engineering and power engineering. Modeling of these systems often result in very high-order models imposing great challenges to the analysis, design and control problems. "Efficient Modeling and Control of Large-Scale Systems" compiles state-of-the-art contributions on recent analytical and computational methods for addressing model reduction, performance analysis and feedback control design for such systems. Also addressed at length are new theoretical developments, novel computational approaches and illustrative applications to various fields, along with: - An interdisciplinary focus emphasizing methods and approaches that can be commonly applied in various engineering fields -Examinations of applications in various fields including micro-electromechanical systems (MEMS), manufacturing processes, power networks, traffic control "Efficient Modeling and Control of Large-Scale Systems" is an ideal volume for engineers and researchers working in the fields of control and dynamic systems.

Responsive Systems for Active Vibration Control - A. Preumont 2012-12-06

Structural vibrations have become the critical factor limiting the performance of many engineering systems, typical amplitudes ranging from meters to a few nanometers. Many acoustic nuisances in transportation systems and residential and office buildings are also related to structural vibrations. The active control of such vibrations involves nine orders of magnitude of vibration amplitude, which exerts a profound influence on the technology. Active vibration control is highly multidisciplinary, involving structural vibration, acoustics, signal processing, materials science, and actuator and sensor technology. Chapters 1-3 of this book provide a state-of-the-art introduction to active vibration control, active sound control, and active vibroacoustic control, respectively. Chapter 4 discusses actuator/sensor placement, Chapter 5 deals with robust control of vibrating structures, Chapter 6 discusses finite element modelling of piezoelectric continua and Chapter 7 addresses the latest trends in piezoelectric multiple-degree-of-freedom actuators/sensors. Chapters 8-12 deal with example applications, including semi-active joints, active isolation and health monitoring. Chapter 13 addresses MEMS technology, while Chapter 14 discusses the design of power amplifiers for piezoelectric actuators.

MATLAB Machine Learning - Michael Paluszek 2016-12-28

This book is a comprehensive guide to machine learning with worked examples in MATLAB. It starts with an overview of the history of Artificial Intelligence and automatic control and how the field of machine learning grew from these. It provides descriptions of all major areas in machine learning. The book reviews commercially available packages for machine learning and shows how they fit into the field. The book then shows how MATLAB can be used to solve machine learning problems and how MATLAB graphics can enhance the programmer’s understanding of the results and help users of their software grasp the results. Machine Learning can be very mathematical. The mathematics for each area is introduced in a clear and concise form so that even casual readers can understand the math. Readers from all areas of engineering will see connections to what they know and will learn new technology. The book then provides complete solutions in MATLAB for several important problems in machine learning including face identification, autonomous driving, and data classification. Full source code is provided for all of the examples and applications in the book. What you'll learn: An overview of the field of machine learning Commercial and open source packages in MATLAB How to use MATLAB for programming and building machine learning applications MATLAB graphics for machine learning Practical real world examples in MATLAB for major applications of machine learning in big data Who is this book for: The primary audiences are engineers and engineering students wanting a comprehensive and practical introduction to machine learning.

Parallel Processing in Digital Control - D. Fabian Garcia Nocetti 2012-12-06

Parallel Processing in Digital Control is a volume to be published in the new Advances in Industrial Control series, edited by Professor M.J. Grimble and Dr. M.A. Johnson of the Industrial Control Unit, University of Strathclyde. The growing complexity of digital control systems in such areas as robotics, flight control and engine control has created a demand for faster and more reliable systems. This book examines how parallel processing can satisfy these requirements. Following a survey of parallel computer architectures, MIMD (Multiple Instruction Multiple Data) machines are identified as suitable systems for digital control problems, which are characterised by a mixture of regular and irregular algorithmic tasks. An example of a typical MIMD architecture, suitable for real-time control, (the Inmos Transputer) is introduced together with its associated parallel programming language (Occam). The key problem in implementing parallel software is associated with mapping parallel tasks onto physical processors. In this book a variety of schemes are described and assessed to help illustrate potential areas of difficulty for the real-time control software engineer. Solutions are proposed and tested on a flight control case study example. Recognising the widespread acceptance of MATLAB and its derivatives for computer aided control system design, this book demonstrates how mapping strategies can be realised in this environment and integrated with a transputer development system for on-line performance evaluation. A case study example demonstrates the power of this approach and important issues are highlighted. Readers will experience the advantages of parallel processing in digital control while being made aware of the key factors to be considered in the development of an effective solution. Practising control engineers and graduate/post-graduate students will find the book of particular interest and benefit.

Automatic Control 1990 - Ü Jaaksoo 2014-05-23

This volume provides a general overview on the state-of-the-art and future developments in automation and control. The application of systems and control in all areas is covered, from the social and cultural effects of control, to control in mineral and metal processing. This volume will be an invaluable source of information to all those interested in the areas of automation and control.

Computer Aided Control System Design - Mieczys?aw A. Brdy? 1994

This book is about Computer Aided Control System Design (CACSD) of the direct process controller. Various methods and tools, representing an up-to-date level of development, are presented by leading experts. Several articles describe main principles and problems associated with modern direct control and with CACSD. Existing tools are presented, including packages for stability analysis of nonlinear systems, adaptive control design and integrated analysis, and simulation and tuning of controllers. The reader can observe that it is possible to develop CACSD tools by using open general packages such as Matlab or Simulab, or by providing specialised software. He can then compare both approaches and get an improved understanding of their respective advantages and disadvantages. The leading article by the editors presents CACSD Methods and tools in a broader context. There is also detailed material on upper control layers, hierarchical control, and real-time systems.

Spaceflight Mechanics - 2001

Modeling and Optimization in Space Engineering - Giorgio Fasano 2012-10-23

This volume presents a selection of advanced case studies that address a substantial range of issues and challenges arising in space engineering. The contributing authors are well-recognized researchers and practitioners in space engineering and in applied optimization. The key mathematical modeling and numerical solution aspects of each application case study are presented in sufficient detail. Classic and more recent space engineering problems – including cargo accommodation and object placement, flight control of satellites, integrated design and trajectory optimization, interplanetary transfers with deep space manoeuvres, low energy transfers, magnetic cleanliness modeling, propulsion system design, sensor system placement, systems engineering, space traffic logistics, and trajectory optimization – are discussed. Novel points of view related to computational global optimization and optimal control, and to multidisciplinary

design optimization are also given proper emphasis. A particular attention is paid also to scenarios expected in the context of future interplanetary explorations. Modeling and Optimization in Space Engineering will benefit researchers and practitioners working on space engineering applications. Academics, graduate and post-graduate students in the fields of aerospace and other engineering, applied mathematics, operations research and optimal control will also find the book useful, since it discusses a range of advanced model development and solution techniques and tools in the context of real-world applications and new challenges.

Building Performance Simulation for Design and Operation - Jan L.M. Hensen 2012-09-10

Effective building performance simulation can reduce the environmental impact of the built environment, improve indoor quality and productivity, and facilitate future innovation and technological progress in construction. It draws on many disciplines, including physics, mathematics, material science, biophysics and human behavioural, environmental and computational sciences. The discipline itself is continuously evolving and maturing, and improvements in model robustness and fidelity are constantly being made. This has sparked a new agenda focusing on the effectiveness of simulation in building life-cycle processes. Building Performance Simulation for Design and Operation begins with an introduction to the concepts of performance indicators and targets, followed by a discussion on the role of building simulation in performance-based building design and operation. This sets the ground for in-depth discussion of performance prediction for energy demand, indoor environmental quality (including thermal, visual, indoor air quality and moisture phenomena), HVAC and renewable system performance, urban level modelling, building operational optimization and automation. Produced in cooperation with the International Building Performance Simulation Association (IBPSA), and featuring contributions from fourteen internationally recognised experts in this field, this book provides a unique and comprehensive overview of building performance simulation for the complete building life-cycle from conception to demolition. It is primarily intended for advanced students in building services engineering, and in architectural, environmental or mechanical engineering; and will be useful for building and systems designers and operators.

Nonlinear Analysis and Synthesis Techniques for Aircraft Control - Declan Bates 2007-10-04

This is the first book to focus on the use of nonlinear analysis and synthesis techniques for aircraft control. It is also the first book to address in detail closed-loop control problems for aircraft "on-ground" – i.e. speed and directional control of aircraft before take-off and after touch down. The book will be of interest to engineers, researchers, and students in control engineering, and especially aircraft control.

On-orbit Application of H-infinity to the Middeck Active Controls Experiment: Overview of Results - Jessica A. Woods-Vedeler 1996

Modern Spacecraft Guidance, Navigation, and Control - Vincenzo Pesce 2022-11-13

Modern Spacecraft Guidance, Navigation, and Control: From System Modeling to AI and Innovative Applications provides a comprehensive foundation of theory and applications of spacecraft GNC, from fundamentals to advanced concepts, including modern AI-based architectures with focus on hardware and software practical applications. Divided into four parts, this book begins with an introduction to spacecraft GNC, before discussing the basic tools for GNC applications. These include an overview of the main reference systems and planetary models, a description of the space environment, an introduction to orbital and attitude dynamics, and a survey on spacecraft sensors and actuators, with details of their modeling principles. Part 2 covers guidance, navigation, and control, including both on-board and ground-based methods. It also discusses classical and novel control techniques, failure detection isolation and recovery (FDIR) methodologies, GNC verification, validation, and on-board implementation. The final part 3 discusses AI and modern applications featuring different applicative scenarios, with particular attention on artificial intelligence and the possible benefits when applied to spacecraft GNC. In this part, GNC for small satellites and CubeSats is also discussed. Modern Spacecraft Guidance, Navigation, and Control: From System Modeling to AI and Innovative Applications is a valuable resource for aerospace engineers, GNC/AOCS engineers, avionic developers, and AIV/AIT technicians. Provides an overview of classical and modern GNC techniques, covering practical system modeling aspects and applicative cases Presents the most important artificial intelligence algorithms applied to present and future spacecraft GNC Describes classical and advanced techniques for GNC hardware and software verification and validation and GNC failure detection isolation and recovery (FDIR)

Practical MATLAB Deep Learning - Michael Paluszek 2020-02-07

Harness the power of MATLAB for deep-learning challenges. This book provides an introduction to deep learning and using MATLAB's deep-learning toolboxes. You'll see how these toolboxes provide the complete set of functions needed to implement all aspects of deep learning. Along the way, you'll learn to model complex systems, including the stock market, natural language, and angles-only orbit determination. You'll cover dynamics and control, and integrate deep-learning algorithms and approaches using MATLAB. You'll also apply deep learning to aircraft navigation using images. Finally, you'll carry out classification of ballet pirouettes using an inertial measurement unit to experiment with MATLAB's hardware capabilities. What You Will LearnExplore deep learning using MATLAB and compare it to algorithmsWrite a deep learning function in MATLAB and train it with examplesUse MATLAB toolboxes related to deep learningImplement tokamak disruption predictionWho This Book Is For Engineers, data scientists, and students wanting a book rich in examples on deep learning using MATLAB.

Control Systems Design - Vladimir Zakian 2005-12-27

In recent decades, a comprehensive new framework for the theory and design of control systems has emerged. It treats a range of significant and ubiquitous design problems more effectively than the conventional framework. Control Systems Design brings together contributions from the originators of the new framework in which they explain, expand and revise their research work. It is divided into four parts: - basic principles, including those of matching and inequalities with adjustments for robust matching and matching based on H-infinity methods and linear matrix inequalities; - computational methods, including matching conditions for transient inputs and design of a sampled-data control system; - search methods including search with simulated annealing, genetic algorithms and evaluation of the node array method; - case studies, including applications in distillation, benchmarking critical control of magnetic levitation systems and the use of the principle of matching in cruise control.

Coefficient Diagram Method for Control System Design - Shunji Manabe 2021-04-10

This book describes a new control design technique called Coefficient Diagram Method (CDM), whereby practical control engineers without deep control theories and mathematics background can design a good controller for their specific plants. In addition, control experts can solve some complicated design problems. Since the CDM was first introduced in 1998, it reveals from the literature that CDM has provided successful controller designs for a variety of practical control problems. In the last two decades, a great deal of research has been done on CDM, while a growing number of researchers want to learn and utilize the method. However, there has been no textbook to learn it systematically so far. This book is motivated by such a need. It is also suitable as a textbook or reference book for master programs in control engineering.

58th Shock and Vibration Symposium - 1987

Using MATLAB, SIMULINK and Control System Toolbox - Alberto Cavallo 1996

This book is essentially a supplementary manual to MATLAB, Simulink and Control Toolbox and is aimed at both undergraudate and graduate students and to academic and industrial researchers who work with dynamic systems and numerical problems. The distinguishing feature of the volume is its high number of worked examples. These allow the reader to proceed from the basic MATLAB commands up to the more sophisticated Control System Toolbox procedures and to the optimized SIMULINK scheme avoiding a boring and useless list of functions. The material begins assuming no familarity with MATLAB - chapter 1 Explains how to insert data from keyboard and external files. However, advanced techniques are presented throughout the book in highlighted paragraphs.

MATLAB Recipes - Michael Paluszek 2015-11-23

Learn from state-of-the-art examples in robotics, motors, detection filters, chemical processes, aircraft, and spacecraft. This is a practical reference for industry engineers using MATLAB to solve everyday problems. With MATLAB Recipes: A Problem-Solution Approach you will review contemporary MATLAB coding including the latest language features and use MATLAB as a software development environment including code organization, GUI development, and algorithm design and testing. This book provides practical

guidance for using MATLAB to build a body of code you can turn to time and again for solving technical problems in your line of work. Develop algorithms, test them, visualize the results, and pass the code along to others to create a functional code base for your firm.

MATLAB Machine Learning Recipes - Michael Paluszek 2019-01-31

Harness the power of MATLAB to resolve a wide range of machine learning challenges. This book provides a series of examples of technologies critical to machine learning. Each example solves a real-world problem. All code in MATLAB Machine Learning Recipes: A Problem-Solution Approach is executable. The toolbox that the code uses provides a complete set of functions needed to implement all aspects of machine learning. Authors Michael Paluszek and Stephanie Thomas show how all of these technologies allow the reader to build sophisticated applications to solve problems with pattern recognition, autonomous driving, expert systems, and much more. What you'll learn:How to write code for machine learning, adaptive control and estimation using MATLAB How these three areas complement each other How these three areas are needed for robust machine learning applications How to use MATLAB graphics and visualization tools for machine learning How to code real world examples in MATLAB for major applications of machine learning in big data Who is this book for: The primary audiences are engineers, data scientists and students wanting a comprehensive and code cookbook rich in examples on machine learning using MATLAB.

Robust Control Engineering - Mario Garcia-Sanz 2017-06-26

This book thoroughly covers the fundamentals of the QFT robust control, as well as practical control solutions, for unstable, time-delay, non-minimum phase or distributed parameter systems, plants with large model uncertainty, high-performance specifications, nonlinear components, multi-input multi-output characteristics or asymmetric topologies. The reader will discover practical applications through a collection of fifty successful, real world case studies and projects, in which the author has been involved during the last twenty-five years, including commercial wind turbines, wastewater treatment plants, power systems, satellites with flexible appendages, spacecraft, large radio telescopes, and industrial manufacturing systems. Furthermore, the book presents problems and projects with the popular QFT Control Toolbox (QFTCT) for MATLAB, which was developed by the author.

Flight Mechanics/Estimation Theory Symposium 1996 - 1996

Third International Symposium on Space Mission Operations and Ground Data Systems, Part 1 - 1994

Further Development and Flight Test of an Autonomous Precision Landing System Using a Parafoil - James E. Murray 1994

Feedback Control in Systems Biology - Carlo Cosentino 2011-10-17

Like engineering systems, biological systems must also operate effectively in the presence of internal and external uncertainty—such as genetic mutations or temperature changes, for example. It is not surprising, then, that evolution has resulted in the widespread use of feedback, and research in systems biology over the past decade has shown that feedback control systems are widely found in biology. As an increasing number of researchers in the life sciences become interested in control-theoretic ideas such as feedback, stability, noise and disturbance attenuation, and robustness, there is a need for a text that explains feedback control as it applies to biological systems. Written by established researchers in both control engineering and systems biology, Feedback Control in Systems Biology explains how feedback control concepts can be applied to systems biology. Filling the need for a text on control theory for systems biologists, it provides an overview of relevant ideas and methods from control engineering and illustrates their application to the analysis of biological systems with case studies in cellular and molecular biology. Control Theory for Systems Biologists The book focuses on the fundamental concepts used to analyze the effects of feedback in biological control systems, rather than the control system design methods that form the core of most control textbooks. In addition, the authors do not assume that readers are familiar with control theory. They focus on "control applications" such as metabolic and gene-regulatory networks rather than aircraft, robots, or engines, and on mathematical models derived from classical reaction kinetics rather than classical mechanics. Another significant feature of the book is that it discusses nonlinear systems, an understanding of which is crucial for systems biologists because of the highly nonlinear nature of biological systems. The authors cover tools and techniques for the analysis of linear and nonlinear systems; negative and positive feedback; robustness analysis methods; techniques for the reverse-engineering of biological interaction networks; and the analysis of stochastic biological control systems. They also identify new research directions for control theory inspired by the dynamic characteristics of biological systems. A valuable reference for researchers, this text offers a sound starting point for scientists entering this fascinating and rapidly developing field.

Modeling and Control for a Blended Wing Body Aircraft - Martin Kozek 2014-10-27

This book demonstrates the potential of the blended wing body (BWB) concept for significant improvement in both fuel efficiency and noise reduction and addresses the considerable challenges raised for control engineers because of characteristics like open-loop instability, large flexible structure, and slow control surfaces. This text describes state-of-the-art and novel modeling and control design approaches for the BWB aircraft under consideration. The expert contributors demonstrate how exceptional robust control performance can be achieved despite such stringent design constraints as guaranteed handling qualities, reduced vibration, and the minimization of the aircraft’s structural loads during maneuvers and caused by turbulence. As a result, this innovative approach allows the building of even lighter aircraft structures, and thus results in considerable efficiency improvements per passenger kilometer. The treatment of this large, complex, parameter-dependent industrial control problem highlights relevant design issues and provides a relevant case study for modeling and control engineers in many adjacent disciplines and applications. Modeling and Control for a Blended Wing Body Aircraft presents research results in numeric modeling and control design for a large, flexible, civil BWB aircraft in the pre-design stage as developed within the EU FP7 research project ACFA 2020. It is a useful resource for aerospace and control engineers as it shows the complete BWB aircraft modeling and control design process, carried out with the most recent tools and techniques available. presents research results in numeric modeling and control design for a large, flexible, civil BWB aircraft in the pre-design stage as developed within the EU FP7 research project ACFA 2020. It is a useful resource for aerospace and control engineers as it shows the complete BWB aircraft modeling and control design process, carried out with the most recent tools and techniques available. Advances in Industrial Control aims to report and encourage the transfer of technology in control engineering. The rapid development of control technology has an impact on all areas of the control discipline. The series offers an opportunity for researchers to present an extended exposition of new work in all aspects of industrial control.

Modern Control System Theory and Design - Stanley M. Shinners 1998-05-06

The definitive guide to control system design Modern Control System Theory and Design, Second Edition offers themost comprehensive treatment of control systems available today.Its unique text/software combination integrates classical andmodern control system theories, while promoting an interactive,computer-based approach to design solutions. The sheer volume ofpractical examples, as well as the hundreds of illustrations ofcontrol systems from all engineering fields, make this volumeaccessible to students and indispensable for professionalengineers. This fully updated Second Edition features a new chapter on moderncontrol system design, including state-space design techniques,Ackermann's formula for pole placement, estimation, robust control,and the H method for control system design. Other notable additionsto this edition are: * Free MATLAB software containing problem solutions, which can beretrieved from The Mathworks, Inc., anonymous FTP server atftp://ftp.mathworks.com/pub/books/shinners * Programs and tutorials on the use of MATLAB incorporated directlyinto the text * A complete set of working digital computer programs * Reviews of commercial software packages for control systemanalysis * An extensive set of new, worked-out, illustrative solutions addedin dedicated sections at the end of chapters * Expanded end-of-chapter problems--one-third with answers tofacilitate self-study * An updated solutions manual containing solutions to the remainingtwo-thirds of the problems Superbly organized and easy-to-use, Modern Control System Theoryand Design, Second Edition is an ideal textbook for introductorycourses in control systems and an excellent professional reference.Its interdisciplinary approach makes it invaluable for practicingengineers in electrical, mechanical, aeronautical, chemical, andnuclear engineering and related areas.

AIAA Guidance Navigation and Control Conference - 1996

PC Mag - 1989-03-14
PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying decisions and get more from technology.
Structured Uncertainty Bound Determination From Data for Control and Performance Validation - Kyong B. Lim 2003

Closed-Loop Control of Blood Glucose - Frederick Chee 2007-10-01
This book presents closed-loop blood glucose control in a simple manner, which includes the hardware and "software" components that make up the control system. It provides examples on how mathematical models are formulated as well as the control algorithms that stem from mathematical exercises. The book also describes the basic physiology of blood glucose regulation during fasting and meal from a functional level.