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KEY=LESSON - DARIO BETHANY

Introduction to Aircraft Flight Mechanics

Performance, Static Stability, Dynamic Stability, Classical Feedback Control, and State-space Foundations

American Institute of Aeronautics & Astronautics **Suitable for use in undergraduate aeronautical engineering curricula, this title is written for those first encountering the topic by clearly explaining the concepts and derivations of equations involved in aircraft flight mechanics. It also features insights about the A-10 based upon the author's career experience with this aircraft.**

Flow Cytometry and Cell Sorting

Springer Science & Business Media **The analysis and sorting of large numbers of cells with a fluorescence-activated cell sorter (FACS) was first achieved some 30 years ago. Since then, this technology has been rapidly developed and is used today in many laboratories. A Springer Lab Manual Review of the First Edition: "This is a most useful volume which will be a welcome**

addition for personal use and also for laboratories in a wide range of disciplines. Highly recommended." CYTOBIOS

International Convergence of Capital Measurement and Capital Standards

A Revised Framework

Lulu.com

Department of Defense Dictionary of Military and Associated Terms

Molecular Biology of the Cell

Overtourism

Excesses, Discontents and Measures in Travel and Tourism

CABI This book examines the evolution of the phenomenon and explores the genesis of overtourism and the system dynamics underlining it. The 'overtourism' phenomenon is defined as the excessive growth of visitors leading to overcrowding and the consequential suffering of residents, due to temporary and often seasonal tourism peaks, that lead to permanent changes in lifestyles, amenities and well-being. Enormous tensions in overtourism affected destinations have driven the intensification of policy making and scholarly attention toward seeking antidotes to an issue that is considered paradoxical and problematic. Moving beyond the 'top 10 things you can do about overtourism', this book examines the evolution of the phenomenon and explores the genesis of overtourism as well as the system dynamics underpinning it. With a rigorous scientific approach, the book uses systems-thinking and contemporary paradigms around sustainable development, resilience planning and degrowth; while considering global economic, socio-political, environmental discourses. Researchers, analysts, policy makers and industry stakeholders working within tourism as well as those within the private sector, community

groups, civil society groups and NGOs will find this book an essential source of information.

Discrete Choice Methods with Simulation

Cambridge University Press **This book describes the new generation of discrete choice methods, focusing on the many advances that are made possible by simulation. Researchers use these statistical methods to examine the choices that consumers, households, firms, and other agents make. Each of the major models is covered: logit, generalized extreme value, or GEV (including nested and cross-nested logits), probit, and mixed logit, plus a variety of specifications that build on these basics. Simulation-assisted estimation procedures are investigated and compared, including maximum simulated likelihood, method of simulated moments, and method of simulated scores. Procedures for drawing from densities are described, including variance reduction techniques such as antithetics and Halton draws. Recent advances in Bayesian procedures are explored, including the use of the Metropolis-Hastings algorithm and its variant Gibbs sampling. The second edition adds chapters on endogeneity and expectation-maximization (EM) algorithms. No other book incorporates all these fields, which have arisen in the past 25 years. The procedures are applicable in many fields, including energy, transportation, environmental studies, health, labor, and marketing.**

Oil and Gas Production Handbook: An Introduction to Oil and Gas Production

Lulu.com

Moving Ahead with REDD: Issues, Options and Implications

CIFOR

The Principles of Quantum

Mechanics

Lulu Press, Inc "The standard work in the fundamental principles of quantum mechanics, indispensable both to the advanced student and to the mature research worker, who will always find it a fresh source of knowledge and stimulation." --Nature "This is the classic text on quantum mechanics. No graduate student of quantum theory should leave it unread"--W.C Schieve, University of Texas

Graphics Shaders

Theory and Practice

CRC Press Programmable graphics shaders, programs that can be downloaded to a graphics processor (GPU) to carry out operations outside the fixed-function pipeline of earlier standards, have become a key feature of computer graphics. This book is designed to open computer graphics shader programming to the student, whether in a traditional class or on their own. It is intended to complement texts based on fixed-function graphics APIs, specifically OpenGL. It introduces shader programming in general, and specifically the GLSL shader language. It also introduces a flexible, easy-to-use tool, glman, that helps you develop, test, and tune shaders outside an application that would use them.

IBM FileNet Content Manager

Implementation Best Practices and Recommendations

IBM Redbooks IBM® FileNet® Content Manager Version 5.2 provides full content lifecycle and extensive document management capabilities for digital content. IBM FileNet Content Manager is tightly integrated with the family of IBM FileNet products based on the IBM FileNet P8 technical platform. IBM FileNet Content Manager serves as the core content management, security management, and storage management engine for the products. This IBM Redbooks® publication covers the implementation best practices and recommendations for solutions that use IBM FileNet Content Manager. It introduces the functions and features of IBM FileNet Content Manager, common use cases of the product, and a design methodology that provides implementation guidance from requirements analysis through production use of the solution. We address administrative topics of an IBM FileNet Content Manager solution, including deployment, system administration and maintenance, and troubleshooting.

Implementation topics include system architecture design with various options for scaling an IBM FileNet Content Manager system, capacity planning, and design of repository design logical structure, security practices, and application design. An important implementation topic is business continuity. We define business continuity, high availability, and disaster recovery concepts and describe options for those when implementing IBM FileNet Content Manager solutions. Many solutions are essentially a combination of information input (ingestion), storage, information processing, and presentation and delivery. We discuss some solution building blocks that designers can combine to build an IBM FileNet Content Manager solution. This book is intended to be used in conjunction with product manuals and online help to provide guidance to architects and designers about implementing IBM FileNet Content Manager solutions. Many of the features and practices described in the book also apply to previous versions of IBM FileNet Content Manager.

Histopathological Image Analysis

Wiley-Blackwell

Extrusion

The Definitive Processing Guide and Handbook

William Andrew The second edition of Extrusion is designed to aid operators, engineers, and managers in extrusion processing in quickly answering practical day-to-day questions. The first part of the book provides the fundamental principles, for operators and engineers, of polymeric materials extrusion processing in single and twin screw extruders. The next section covers advanced topics including troubleshooting, auxiliary equipment, and coextrusion for operators, engineers, and managers. The final part provides applications case studies in key areas for engineers such as compounding, blown film, extrusion blow molding, coating, foam, and reprocessing. This practical guide to extrusion brings together both equipment and materials processing aspects. It covers basic and advanced topics, for reference and training, in thermoplastics processing in the extruder. Detailed reference data are provided on such important operating conditions as temperatures, start-up procedures, shear rates, pressure drops, and safety. A practical guide to the selection, design and optimization of extrusion processes and equipment Designed to improve production efficiency and product quality Focuses on practical fault analysis and troubleshooting techniques

Management of Acute Pulmonary Embolism

Springer Science & Business Media **This practical volume highlights traditional, novel, and evolving aspects of the diagnosis and treatment of pulmonary embolism (PE). The contributors comprise an international team of experts. Important aspects of diagnosis, risk stratification, and differential treatment of patients with PE are presented in a concise, yet comprehensive manner. Emphasis is placed on specific issues related to PE, including pregnancy, cancer, thrombophilia, and air travel.**

The Car Hacker's Handbook

A Guide for the Penetration Tester

No Starch Press **Modern cars are more computerized than ever. Infotainment and navigation systems, Wi-Fi, automatic software updates, and other innovations aim to make driving more convenient. But vehicle technologies haven't kept pace with today's more hostile security environment, leaving millions vulnerable to attack. The Car Hacker's Handbook will give you a deeper understanding of the computer systems and embedded software in modern vehicles. It begins by examining vulnerabilities and providing detailed explanations of communications over the CAN bus and between devices and systems. Then, once you have an understanding of a vehicle's communication network, you'll learn how to intercept data and perform specific hacks to track vehicles, unlock doors, glitch engines, flood communication, and more. With a focus on low-cost, open source hacking tools such as Metasploit, Wireshark, Kayak, can-utils, and ChipWhisperer, The Car Hacker's Handbook will show you how to:**

- Build an accurate threat model for your vehicle
- Reverse engineer the CAN bus to fake engine signals
- Exploit vulnerabilities in diagnostic and data-logging systems
- Hack the ECU and other firmware and embedded systems
- Feed exploits through infotainment and vehicle-to-vehicle communication systems
- Override factory settings with performance-tuning techniques
- Build physical and virtual test benches to try out exploits safely

If you're curious about automotive security and have the urge to hack a two-ton computer, make The Car Hacker's Handbook your first stop.

IBM Power Systems Performance

Guide: Implementing and Optimizing

IBM Redbooks This IBM® Redbooks® publication addresses performance tuning topics to help leverage the virtualization strengths of the POWER® platform to solve clients' system resource utilization challenges, and maximize system throughput and capacity. We examine the performance monitoring tools, utilities, documentation, and other resources available to help technical teams provide optimized business solutions and support for applications running on IBM POWER systems' virtualized environments. The book offers application performance examples deployed on IBM Power Systems™ utilizing performance monitoring tools to leverage the comprehensive set of POWER virtualization features: Logical Partitions (LPARs), micro-partitioning, active memory sharing, workload partitions, and more. We provide a well-defined and documented performance tuning model in a POWER system virtualized environment to help you plan a foundation for scaling, capacity, and optimization . This book targets technical professionals (technical consultants, technical support staff, IT Architects, and IT Specialists) responsible for providing solutions and support on IBM POWER systems, including performance tuning.

Deliver Modern UI for IBM BPM with the Coach Framework and Other Approaches

IBM Redbooks IBM® Coach Framework is a key component of the IBM Business Process Manager (BPM) platform that enables custom user interfaces to be easily embedded within business process solutions. Developer tools enable process authors to rapidly create a compelling user experience (UI) that can be delivered to desktop and mobile devices. IBM Process Portal, used by business operations to access, execute, and manage tasks, is entirely coach-based and can easily be configured and styled. A corporate look and feel can be defined using a graphical theme editor and applied consistently across all process applications. The process federation capability enables business users to access and execute all their tasks using a single UI without being aware of the implementation or origin. Using Coach Framework, you can embed coach-based UI in other web applications, develop BPM UI using alternative UI technology, and create mobile applications for off-line working. This IBM Redbooks® publication explains how to fully benefit from the power of the Coach Framework. It focuses on the capabilities that Coach Framework delivers

with IBM BPM version 8.5.7. The content of this document, though, is also pertinent to future versions of the application.

Automotive Engineering e-Mega Reference

Butterworth-Heinemann **This one-stop Mega Reference eBook brings together the essential professional reference content from leading international contributors in the automotive field. An expansion the Automotive Engineering print edition, this fully searchable electronic reference book of 2500 pages delivers content to meet all the main information needs of engineers working in vehicle design and development. Material ranges from basic to advanced topics from engines and transmissions to vehicle dynamics and modelling. * A fully searchable Mega Reference Ebook, providing all the essential material needed by Automotive Engineers on a day-to-day basis. * Fundamentals, key techniques, engineering best practice and rules-of-thumb together in one quick-reference. * Over 2,500 pages of reference material, including over 1,500 pages not included in the print edition**

Wound Care

A Collaborative Practice Manual

Lippincott Williams & Wilkins **Designed for health care professionals in multiple disciplines and clinical settings, this comprehensive, evidence-based wound care text provides basic and advanced information on wound healing and therapies and emphasizes clinical decision-making. The text integrates the latest scientific findings with principles of good wound care and provides a complete set of current, evidence-based practices. This edition features a new chapter on wound pain management and a chapter showing how to use negative pressure therapy on many types of hard-to-heal wounds. Technological advances covered include ultrasound for wound debridement, laser treatments, and a single-patient-use disposable device for delivering pulsed radio frequency.**

Root Ecology

Springer Science & Business Media **In the course of evolution, a great variety of root systems have learned to overcome the many physical, biochemical and biological problems brought about by soil. This development has made them a fascinating object of scientific study. This volume gives an overview of how roots have adapted to the soil environment and which roles they play in the soil ecosystem. The text describes the form and function of**

roots, their temporal and spatial distribution, and their turnover rate in various ecosystems. Subsequently, a physiological background is provided for basic functions, such as carbon acquisition, water and solute movement, and for their responses to three major abiotic stresses, i.e. hard soil structure, drought and flooding. The volume concludes with the interactions of roots with other organisms of the complex soil ecosystem, including symbiosis, competition, and the function of roots as a food source.

Building IBM Enterprise Content Management Solutions From End to End

IBM Redbooks **IBM® Enterprise Content Management (ECM) solutions provide efficient and effective ways to capture content, manage the content and business processes, discover insights from the content, and derive actions to improve business processes, products, and services. This IBM Redbooks® publication introduces and highlights some of the IBM ECM products that can be implemented and integrated together to create end-to-end ECM solutions: IBM Case Manager IBM Datacap IBM Content Manager OnDemand IBM Enterprise Records IBM Watson™ Content Analytics IBM Content Classification For each product involved in the ECM solution, this IBM Redbooks publication briefly describes what it is, its functions and capabilities, and provides step-by-step procedures for installing, configuring, and implementing it. In addition, we provide procedures for integrating these products together to create an end-to-end ECM solution to achieve the overall solution objectives. Not all of the products are required to be integrated into an ECM solution. Depending on your business requirements, you can choose a subset of these products to be built into your ECM solutions. This book serves as a hands-on learning guide for information technology (IT) specialists who plan to build ECM solutions from end-to-end, for a proof of concept (PoC) environment, or for a proof of technology environment. For implementing a production-strength ECM solution, also refer to IBM Knowledge Center, IBM Redbooks publications, and IBM Software Services.**

Active Materials

Walter de Gruyter GmbH & Co KG **What are active materials? This book aims to introduce and redefine conceptions of matter by considering materials as entities that ‘sense’ and respond to their environment. By examining the modeling of, the experiments on, and the construction of these materials, and by developing a theory of their structure, their collective activity, and**

their functionality, this volume identifies and develops a novel scientific approach to active materials. Moreover, essays on the history and philosophy of metallurgy, chemistry, biology, and materials science provide these various approaches to active materials with a historical and cultural context. The interviews with experts from the natural sciences included in this volume develop new understandings of 'active matter' and active materials in relation to a range of research objects and from the perspective of different scientific disciplines, including biology, physics, chemistry, and materials science. These insights are complemented by contributions on the activity of matter and materials from the humanities and the design field. Discusses the mechanisms of active materials and their various conceptualizations in materials science. Redefines conceptions of active materials through interviews with experts from the natural sciences. Contextualizes, historicizes, and reflects on different notions of matter/materials and activity through contributions from the humanities. A highly interdisciplinary approach to a cutting-edge research topic, with contributions from both the sciences and the humanities.

Caries Management - Science and Clinical Practice

Thieme **Covering the science behind the disease a comprehensive approach to modern caries management This systematic approach to modern caries management combines new, evidence-based treatment techniques with the scientific underpinnings of caries formation providing an in-depth review for both clinicians in daily practice and students advancing in the field. Beginning with patho-anatomic changes in the dental hard tissues, Dental Caries: Science and Clinical Practice goes on to cover non-invasive, minimally invasive, and more aggressive interventions based on each stage of the disease. From microbiology and histology to visual, tactile and radiographic diagnosis, risk assessment, preventive measures, and tooth preservation and treatment strategies, the book is packed with valuable clinical information for all dental practitioners. Key Features: Succinctly covers the science behind the disease, with recommendations for treatments based on assessment starting at the microscopic level Written by a team of leading worldwide authorities on caries treatment and management and utilizing the International Caries Detection and Assessment System (ICDAS) standard throughout Covers the newest treatment techniques, including adhesion technology, fissure sealing and infiltration, caries removal, tooth-colored restorations, and more Demonstrates step-by-step caries procedures in striking, full-color illustrations of adult and pediatric cases Offers the newest thinking on early prevention and behavioral changes in oral health promotion, including the role of diet and nutrition, biofilm management, fluoride use, population-based approaches, and more Shifting to the new paradigm of**

heal and seal rather than the more invasive drill and fill, this beautifully illustrated text puts scientific principles into clinical action for the best results. It is an essential resource for a complete, proactive approach to caries detection, assessment, treatment, management, and prevention in contemporary dental practice.

Energy Project Financing Resources and Strategies for Success

This practical application reference provides a resource for those seeking to utilize the innovative methods now available to finance energy projects. The full scope of current project financing practices are fully examined and assessed, including coverage of energy service performance contracting, rate of return analysis, measurement and verification of energy savings, and more. Readers will receive the facts they need to assess a project's payback in advance, anticipate and avoid potential risks and/or hidden costs, and assure that your energy project is an overall economic success. Other topics covered include financing international projects and ESCO's (Energy Service Company's) financing.

IBM Business Process Manager Version 8.0 Production Topologies

IBM Redbooks This IBM® Redbooks® publication describes how to build production topologies for IBM Business Process Manager V8.0. This book is an update of the existing book IBM Business Process Manager V7.5 Production Topologies, SG24-7976. It is intended for IT Architects and IT Specialists who want to understand and implement these topologies. Use this book to select the appropriate production topologies for an environment, then follow the step-by-step instructions to build those topologies. Part 1 introduces IBM Business Process Manager and provides an overview of basic topology components, and Process Server and Process Center. This part also provides an overview of the production topologies described in this book, including a selection criteria for when to select a topology. IBM Business Process Manager security and the presentation layer are also addressed in this part. Part 2 provides a series of step-by-step instructions for creating production topology environments by using deployment environment patterns. This process includes topologies that incorporate IBM Business Monitor. This part also describes advanced topology topics. Part 3 covers post installation instructions for implementing production topology environments such as configuring IBM

Business Process Manager to use IBM HTTP Server and WebSphere® proxy server.

The Naval Aviation Maintenance Program (NAMP).: Maintenance data systems

Solving PDEs in Python

The FEniCS Tutorial I

Springer **This book offers a concise and gentle introduction to finite element programming in Python based on the popular FEniCS software library. Using a series of examples, including the Poisson equation, the equations of linear elasticity, the incompressible Navier-Stokes equations, and systems of nonlinear advection-diffusion-reaction equations, it guides readers through the essential steps to quickly solving a PDE in FEniCS, such as how to define a finite variational problem, how to set boundary conditions, how to solve linear and nonlinear systems, and how to visualize solutions and structure finite element Python programs. This book is open access under a CC BY license.**

Government Reports

Announcements & Index

Air War on the Edge

A History of the Israeli Air Force and Its Aircraft Since 1947

Midland Pub Limited **Never before has there been a book published on the aircraft, units and exploits of the Israel Air Force in such depth. Interest in the IAF has always been high and seldom are its aircrew and aircraft out of the world's headlines. Previous books have failed to satisfy, either being sensationalist and low on factual content, or lacking in fundamental research. Bill Norton has trawled through thousands of documents, reports, and illustrations to produce a work that is staggering in its depth and knowledge. Those that think they know the IAF will find a wealth of**

new material and countless previously published 'facts' re-evaluated and righted. Detailed type-by-type coverage supported by a barrage of photographs of the IAF from the mixed bag of aircraft of its formative days, through the Suez Campaign, the Six Day War, Yom Kippur and on to be a sophisticated, well-equipped force, arguably the most experienced in the world. Included for the first time are all of the badges and heraldry of the units of the IAF, in full color.

Book of Abstracts of the 70th Annual Meeting of the European Federation of Animal Science Ghent, Belgium, 26-30 August 2019

Wageningen Academic Publishers **This Book of Abstracts is the main publication of the 70th Annual Meeting of the European Federation of Animal Science (EAAP). It contains abstracts of the invited papers and contributed presentations of the sessions of EAAP's eleven Commissions: Animal Genetics, Animal Nutrition, Animal Management and Health, Animal Physiology, Cattle Production, Sheep and Goat Production, Pig Production, Horse Production and Livestock Farming Systems, Insects and Precision Livestock Farming.**

Electrochemical Biosensors

CRC Press **Since four decades, rapid detection and monitoring in clinical and food diagnostics and in environmental and biodefense have paved the way for the elaboration of electrochemical biosensors. Thanks to their adaptability, ease of use in relatively complex samples, and their portability, electrochemical biosensors now are one of the mainstays of analytical chemistry. In particular, electrochemistry has played a pivotal role in the development of transduction methods for biological processes and biosensors. In parallel, the explosion of activity in nanoscience and nanotechnology and their huge success have profoundly affected biosensor technology, opening new avenues of research for electrode materials and transduction. This book provides an overview of biosensors based on amperometry, conductimetry, potentiometry, square-wave voltammetry, impedance, and electrochemiluminescence and describes the use of ultramicroelectrodes for the real-time monitoring and understanding of exocytosis. Areas of particular interest are the use of silver and gold nanoparticles for signal amplification, photocurrent transduction, and aptamer design. Moreover, advanced insights in the innovative concept of self-powered biosensors derived from biofuel cells are also discussed.**

Building Financial Models

McGraw Hill Professional **Financial modeling is essential for determining a company's current value and projecting its future performance, yet few books explain how to build models for accurately interpreting financial statements. Building Financial Models is the first book to correct this oversight, unveiling a step-by-step process for creating a core model and then customizing it for companies in virtually any industry. Covering every aspect of building a financial model, it provides a broad understanding of the actual mechanics of models, as well as their foundational accounting and finance concepts.**

Marine Mammals and Noise

Academic Press **Many marine mammals communicate by emitting sounds that pass through water. Such sounds can be received across great distances and can influence the behavior of these undersea creatures. In the past few decades, the oceans have become increasingly noisy, as underwater sounds from propellers, sonars, and other human activities make it difficult for marine mammals to communicate. This book discusses, among many other topics, just how well marine mammals hear, how noisy the oceans have become, and what effects these new sounds have on marine mammals. The baseline of ambient noise, the sounds produced by machines and mammals, the sensitivity of marine mammal hearing, and the reactions of marine mammals are also examined. An essential addition to any marine biologist's library, Marine Mammals and Noise will be especially appealing to marine mammalogists, researchers, policy makers and regulators, and marine biologists and oceanographers using sound in their research.**

Hybrid Electric Vehicles

Energy Management Strategies

Springer **This SpringerBrief deals with the control and optimization problem in hybrid electric vehicles. Given that there are two (or more) energy sources (i.e., battery and fuel) in hybrid vehicles, it shows the reader how to implement an energy-management strategy that decides how much of the vehicle's power is provided by each source instant by instant. Hybrid Electric Vehicles: •introduces methods for modeling energy flow in hybrid electric vehicles; •presents a standard mathematical formulation of the optimal control problem; •discusses different optimization and control strategies for energy management, integrating the most recent research results; and •carries out an overall comparison of the different control strategies presented. Chapter by chapter, a case study is thoroughly**

developed, providing illustrative numerical examples that show the basic principles applied to real-world situations. The brief is intended as a straightforward tool for learning quickly about state-of-the-art energy-management strategies. It is particularly well-suited to the needs of graduate students and engineers already familiar with the basics of hybrid vehicles but who wish to learn more about their control strategies.

Mycorrhizal Symbiosis

Academic Press The roots of most plants are colonized by symbiotic fungi to form mycorrhiza, which play a critical role in the capture of nutrients from the soil and therefore in plant nutrition. Mycorrhizal Symbiosis is recognized as the definitive work in this area. Since the last edition was published there have been major advances in the field, particularly in the area of molecular biology, and the new edition has been fully revised and updated to incorporate these exciting new developments. Over 50% new material Includes expanded color plate section Covers all aspects of mycorrhiza Presents new taxonomy Discusses the impact of proteomics and genomics on research in this area

The New Meaning of Educational Change

Burns & Oates First published in 1982, this work revolutionized the theory and practice of education reform. Now 25 years later, the fourth edition of Fullans groundbreaking book continues to be the definitive compendium to all aspects of the management of educational change--a powerful resource for everyone involved in school reform.

Mechanical Engineers' Handbook

Modern Electric, Hybrid Electric, and Fuel Cell Vehicles

CRC Press "This book is an introduction to automotive technology, with specific reference to battery electric, hybrid electric, and fuel cell electric vehicles. It could serve electrical engineers who need to know more about automobiles or automotive engineers who need to know about electrical propulsion systems. For example, this reviewer, who is a specialist in electric machinery, could use this book to better understand the automobiles for which the reviewer is designing electric drive motors. An automotive engineer, on the other hand, might use it to better understand the nature of motors and electric storage systems for application in

automobiles, trucks or motorcycles. The early chapters of the book are accessible to technically literate people who need to know something about cars. While the first chapter is historical in nature, the second chapter is a good introduction to automobiles, including dynamics of propulsion and braking. The third chapter discusses, in some detail, spark ignition and compression ignition (Diesel) engines. The fourth chapter discusses the nature of transmission systems.” —James Kirtley, Massachusetts Institute of Technology, USA “The third edition covers extensive topics in modern electric, hybrid electric, and fuel cell vehicles, in which the profound knowledge, mathematical modeling, simulations, and control are clearly presented. Featured with design of various vehicle drivetrains, as well as a multi-objective optimization software, it is an estimable work to meet the needs of automotive industry.” —Haiyan Henry Zhang, Purdue University, USA “The extensive combined experience of the authors have produced an extensive volume covering a broad range but detailed topics on the principles, design and architectures of Modern Electric, Hybrid Electric, and Fuel Cell Vehicles in a well-structured, clear and concise manner. The volume offers a complete overview of technologies, their selection, integration & control, as well as an interesting Technical Overview of the Toyota Prius. The technical chapters are complemented with example problems and user guides to assist the reader in practical calculations through the use of common scientific computing packages. It will be of interest mainly to research postgraduates working in this field as well as established academic researchers, industrial R&D engineers and allied professionals.” —Christopher Donaghy-Sparg, Durham University, United Kingdom The book deals with the fundamentals, theoretical bases, and design methodologies of conventional internal combustion engine (ICE) vehicles, electric vehicles (EVs), hybrid electric vehicles (HEVs), and fuel cell vehicles (FCVs). The design methodology is described in mathematical terms, step-by-step, and the topics are approached from the overall drive train system, not just individual components. Furthermore, in explaining the design methodology of each drive train, design examples are presented with simulation results. All the chapters have been updated, and two new chapters on Mild Hybrids and Optimal Sizing and Dimensioning and Control are also included • Chapters updated throughout the text. • New homework problems, solutions, and examples. • Includes two new chapters. • Features accompanying MATLAB™ software.

Optical Fiber Communications

Principles and Practice

Pearson Education This text succeeds in giving a practical introduction to the fundamentals, problems and techniques of the design and utilisation of optical fiber systems. This edition retains all core features, while

incorporating recent improvements and developments in the field.