

Blackstar Schematic User Guide

Flight control design for modern fighter aircraft is a challenging task. Aircraft are dynamical systems, which naturally contain a variety of constraints and nonlinearities such as, e.g., maximum permissible load factor, angle of attack and control surface deflections. Taking these limitations into account in the design of control systems is becoming increasingly important as the performance and complexity of the aircraft is constantly increasing. The aeronautical industry has traditionally applied feedforward, anti-windup or similar techniques and different ad hoc engineering solutions to handle constraints on the aircraft. However these approaches often rely on engineering experience and insight rather than a theoretical foundation, and can often require a tremendous amount of time to tune. In this thesis we investigate model predictive control as an alternative design tool to handle the constraints that arises in the flight control design. We derive a simple reference tracking MPC algorithm for linear systems that build on the dual mode formulation with guaranteed stability and low complexity suitable for implementation in real time safety critical systems. To reduce the computational burden of nonlinear model predictive control we propose a method to handle the nonlinear constraints, using a set of dynamically generated local inner polytopic approximations. The main benefit of the proposed method is that while computationally cheap it still can guarantee recursive feasibility and convergence. An alternative to deriving MPC algorithms with guaranteed stability properties is to analyze the closed loop stability, post design. Here we focus on deriving

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a tool based on Mixed Integer Linear Programming for analysis of the closed loop stability and robust stability of linear systems controlled with MPC controllers. To test the performance of model predictive control for a real world example we design and implement a standard MPC controller in the development simulator for the JAS 39 Gripen aircraft at Saab Aeronautics. This part of the thesis focuses on practical and tuning aspects of designing MPC controllers for fighter aircraft. Finally we have compared the MPC design with an alternative approach to maneuver limiting using a command governor.

This book presents pioneering work on a critical observational test of the planet formation theory based on the theoretical study of the water snowline, beyond which water takes the form of ice, in the protoplanetary disks – the place where planets are formed. Since the water snowline is thought to divide the regions of rocky and gas-giant planet formation, the location of the snowline is essential for the planet formation process. The book proposes a novel method to locate the snowlines using high-dispersion spectroscopic observations of water vapor lines, which is based on sophisticated chemical modeling and line radiative transfer calculations. The author obtained the water vapor distribution in the disks using the chemical reaction network, which includes photoreactions and gas-grain interactions. The simulated transition lines of water vapor in the disks demonstrate that relatively weak transition lines with moderate excitation energies are the best tracers of water snowline. Furthermore, the author observed submillimeter lines of water vapor in a disk using ALMA (Atacama Large Millimeter/submillimeter Array) to obtain the upper limit of the line fluxes with the highest

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sensitivity to date. These unprecedented findings are important in locating the snowlines in the disks, and the method goes a long way toward achieving a comprehensive understanding of the planet formation processes as well as of the origin of water on rocky planets, including our Earth, based on future observations using ALMA and SPICA (Space Infrared Telescope for Cosmology and Astrophysics).

Authors Terry E. Miller and Andrew Shahriari take students around the world to experience the diversity of musical expression. *World Music: A Global Journey*, now in its third edition, is known for its breadth in surveying the world's major cultures in a systematic study of world music within a strong pedagogical framework. As one prepares for any travel, each chapter starts with background preparation, reviewing the historical, cultural, and musical overview of the region. Visits to multiple "sites" within a region provide in-depth studies of varied musical traditions. Music analysis begins with an experimental "first impression" of the music, followed by an "aural analysis" of the sound and prominent musical elements. Finally, students are invited to consider the cultural connections that give the music its meaning and life. Features of the Third Edition Over 3 hours of diverse musical examples. with a third audio CD of new musical examples Listening Guides analyze the various pieces of music with some presented in an interactive format online Biographical highlights of performers and ethnomusicologists updated and new ones added Numerous pedagogical aids, including "On Your Own Time" and "Explore More" sidebars, and "Questions to Consider" Popular music incorporated with the traditional Dynamic companion web site hosts new Interactive Listening Guides, plus many resources for

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student and instructor. Built to serve online courses. The CD set is available separately (ISBN 978-0-415-89402-9) or with its Value Pack and book (ISBN 978 0415- 80823-1). For eBook users, MP3 files for the accompanying audio files are available only with the Value Pack of eBook & MP3 files (ISBN 978-0-203-15298-0). Please find instructions on how to obtain the audio files in the contents section of the eBook.

This book introduces readers to the latest exciting advances in human motion sensing and recognition, from the theoretical development of fuzzy approaches to their applications. The topics covered include human motion recognition in 2D and 3D, hand motion analysis with contact sensors, and vision-based view-invariant motion recognition, especially from the perspective of Fuzzy Qualitative techniques. With the rapid development of technologies in microelectronics, computers, networks, and robotics over the last decade, increasing attention has been focused on human motion sensing and recognition in many emerging and active disciplines where human motions need to be automatically tracked, analyzed or understood, such as smart surveillance, intelligent human-computer interaction, robot motion learning, and interactive gaming. Current challenges mainly stem from the dynamic environment, data multi-modality, uncertain sensory information, and real-time issues. These techniques are shown to effectively address the above challenges by bridging the gap between symbolic cognitive functions and numerical sensing & control tasks in intelligent systems. The book not only serves as a valuable reference source for researchers and professionals in the fields of computer vision and robotics, but will also benefit practitioners and graduates/postgraduates seeking advanced

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information on fuzzy techniques and their applications in motion analysis.

The Problem of Space Travel

Deep Carbon

To Life!

Dental Composite Materials for Direct Restorations

Small Arms Survey 2012

Human Motion Sensing and Recognition

Storming the Reality Studio

Combining extensive research with engaging and attractive presentation, this wide-ranging study encompasses consumer titles, the business press, organizational and association publications, public relations magazines, and imprint and custom publishing. Case histories of selected magazines are included, as are insights from publishers and editors and essays from top magazine professionals on specific industry issues, ranging from ad-free magazines to celebrity journalism.

Biologically Inspired Networking and Sensing: Algorithms and Architectures offers current perspectives and trends in biologically inspired networking, exploring various approaches aimed at improving network paradigms. Research contained within this compendium of research papers and surveys introduces researches in the fields of

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communication networks, performance modeling, and distributed computing to new advances in networking.

Highlights emerging trends and concerns regarding armed violence and small arms proliferation as well as related policies and programming. Through revised text, new photos, specialised illustrations, updated charts and additional information sidebars, The Ultimate Sniper once again thoroughly details the three great skill areas of sniping; marksmanship, fieldcraft and tactics.

A Fuzzy Qualitative Approach

Revealing the African Presence in Renaissance Europe

Fighter Aircraft Maneuver Limiting Using MPC: Theory and Application

Atlas of Cardiac Catheterization for Congenital Heart Disease

The Ultimate Sniper

Global Diasporas

Books in Print

This book covers both basic scientific and clinically relevant aspects of dental composite materials with a view to meeting the needs of researchers and practitioners. Following an introduction on their development, the composition of contemporary composites is analyzed. A chapter on polymerization explains the setting reactions and light sources available for light-cured composites.

The quality of monomer-to-polymer conversion is a key factor for material properties. Polymerization shrinkage along with the associated stress remains among the most challenging issues regarding composite restorations. A new classification of dental composites is proposed to offer more clinically relevant ways of differentiating between commercially available materials. A review of specific types of composites provides an insight into their key issues. The potential biological issues of dental composites are reviewed in chapters on elution of leachable substances and cariogenicity of resin monomers. Clinical sections focus on material placement, finishing procedures, and the esthetics and clinical longevity of composite restorations. Bonding to tooth tissues is addressed in a separate chapter, as is the efficiency of various composite repair methods. The final chapter discusses future perspectives on dental composite materials.

Underground Mining Methods: Engineering Fundamentals and International Case Studies presents the latest principles and techniques in use today. Reflecting the international and diverse nature of the industry, a series of mining case studies is presented covering the commodity range from iron ore to diamonds extracted

by operations located in all corners of the world. Industry experts have contributed sections on General Mine Design Considerations; Room-and-Pillar Mining of Hard Rock/Soft Rock; Longwall Mining of Hard Rock; Shrinkage Stopping; Sublevel Stopping; Cut-and-Fill Mining; Sublevel Caving; Panel Caving; Foundations for Design; and Underground Mining Looks to the Future.

This textbook provides a global, chronological mapping of significant areas of theatre, sketched from its deepest history in the evolution of our brain's 'inner theatre' to ancient, medieval, modern, and postmodern developments. It considers prehistoric cave art and built temples, African trance dances, ancient Egyptian and Middle-Eastern ritual dramas, Greek and Roman theatres, Asian dance-dramas and puppetry, medieval European performances, global indigenous rituals, early modern to postmodern Euro-American developments, worldwide postcolonial theatres, and the hyper-theatricality of today's mass and social media. Timelines and numbered paragraphs form an overall outline with distilled details of what students can learn, encouraging further explorations online and in the library. Questions suggest how students might reflect on present parallels, making their own maps of global theatre

histories, regarding geo-political theatrics in the media, our performances in everyday life, and the theatres inside our brains. This title documents the burgeoning eco art movement from A to Z, presenting a panorama of artistic responses to environmental concerns, from Ant Farms anti-consumer antics in the 1970s to Marina Zurkows 2007 animation that anticipates the havoc wreaked upon the planet by global warming.

Style Manual

Biologically Inspired Networking and Sensing: Algorithms and Architectures

Instrument Procedures Handbook

Inside a Dynamic Industry

Water Snowline in Protoplanetary Disks

An Advanced Training Manual for Military and Police Snipers

Electronics & Wireless World

This long-anticipated monograph honoring scientist and teacher Fred Sanders includes 16 articles by various authors as well as dozens of unique photographs evoking Fred's character and the vitality of the scientific community he helped develop through his work. Editors Lance

F. Bosart (University at Albany/SUNY) and Howard B. Bluestein (University of Oklahoma at Norman) have brought together contributions from luminary authors-including Kerry Emanuel, Robert Burpee, Edward Kessler, and Louis Uccellini-to honor Fred's work in the fields of forecasting, weather analysis, synoptic meteorology, and climatology. The result is a significant volume of work that represents a lasting record of Fred Sanders' influence on atmospheric science and legacy of teaching.

Grounded in linguistic research and argumentation, THE ENGLISH LANGUAGE: FROM SOUND TO SE01 General/tradeE offers readers who have little or no analytic understanding of English a thorough treatment of the various components of the language. Its goal is to help readers become independent language analysts capable of critically evaluating claims about the language and the people who use it.

Calvin L. Warren intervenes in Afro-pessimism, Heideggerian metaphysics, and black humanist philosophy, illustrating

how blacks embody a metaphysical nothing while showing how this nothingness destabilizes whiteness, makes blacks a target of violence, and explains why humanism has failed to achieve equality for blacks.

This book summarizes the science to be carried out by the upcoming Cherenkov Telescope Array, a major ground-based gamma-ray observatory that will be constructed over the next six to eight years. The major scientific themes, as well as core program of key science projects, have been developed by the CTA Consortium, a collaboration of scientists from many institutions worldwide. CTA will be the major facility in high-energy and very high-energy photon astronomy over the next decade and beyond. CTA will have capabilities well beyond past and present observatories. Thus, CTA's science program is expected to be rich and broad and will complement other major multiwavelength and multimessenger facilities. This book is intended to be the primary resource for the science case for CTA and it thus will be of great interest to the broader physics and

astronomy communities. The electronic version (e-book) is available in open access.

Ontological Terror

Blackness, Nihilism, and Emancipation

Pan-African Embodiment and Erotic Schemes of Empire

The English Language

World Music

Synoptic-Dynamic Meteorology and Weather Analysis and Forecasting

An overview of the geophysical techniques and analysis methods for monitoring subsurface carbon dioxide storage for researchers and industry practitioners.

THE TUBE AMP BOOK WITH AUDIO ONLINE ERRATA SHEET ADDED.

A comprehensive guide to carbon inside Earth - its quantities, movements, forms, origins, changes over time and impact on planetary processes. This title is also available as Open Access on Cambridge Core.

This atlas depicts and describes catheter-based interventions across the entire pediatric age range, from fetal life through to early adulthood, with the aim of providing an illustrated step-by-step guide that will help the reader to master these techniques and apply them in everyday practice. Clear instruction is offered on a wide range of procedures, including vascular access,

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fetal interventions, valve dilatation, angioplasty, stent implantation, defect closure, defect creation, valve implantation, hybrid approaches, and other miscellaneous procedures. The atlas complements the previously published handbook, *Cardiac Catheterization for Congenital Heart Disease*, by presenting a wealth of photographs, images, and drawings selected or designed to facilitate the planning, performance, and evaluation of diagnostic and interventional procedures in the field of congenital heart disease. It will assist in the safe, efficient performance of these procedures, in decision making, and in the recognition and treatment of complications.

From Sound to Sense

Past to Present

FAA-H-8083-16A

Forest Hydrology and Watershed

An Introduction

Solution-Processable Components for Organic Electronic Devices

Their Design and Meaning

Discusses the elements of a sign, and looks at pictograms, alphabets, calligraphy, monograms, text type, numerical signs, symbols, and trademarks

Provides first-hand insights into advanced fabrication techniques for solution processable organic electronics materials and devices The field of printable organic electronics has emerged as a technology

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which plays a major role in materials science research and development. Printable organic electronics soon compete with, and for specific applications can even outpace, conventional semiconductor devices in terms of performance, cost, and versatility. Printing techniques allow for large-scale fabrication of organic electronic components and functional devices for use as wearable electronics, health-care sensors, Internet of Things, monitoring of environment pollution and many others, yet-to-be-conceived applications. The first part of Solution-Processable Components for Organic Electronic Devices covers the synthesis of: soluble conjugated polymers; solution-processable nanoparticles of inorganic semiconductors; high-k nanoparticles by means of controlled radical polymerization; advanced blending techniques yielding novel materials with extraordinary properties. The book also discusses photogeneration of charge carriers in nanostructured bulk heterojunctions and charge carrier transport in multicomponent materials such as composites and nanocomposites as well as photovoltaic devices modelling. The second part of the book is devoted to organic electronic devices, such as field effect transistors, light emitting diodes, photovoltaics, photodiodes and electronic

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memory devices which can be produced by solution-based methods, including printing and roll-to-roll manufacturing. The book provides in-depth knowledge for experienced researchers and for those entering the field. It comprises 12 chapters focused on: ? novel organic electronics components synthesis and solution-based processing techniques ? advanced analysis of mechanisms governing charge carrier generation and transport in organic semiconductors and devices ? fabrication techniques and characterization methods of organic electronic devices Providing coverage of the state of the art of organic electronics, *Solution-Processable Components for Organic Electronic Devices* is an excellent book for materials scientists, applied physicists, engineering scientists, and those working in the electronics industry. *Guide to Ruminant Anatomy Dissection and Clinical Aspects* John Wiley & Sons

Interrogates the language of body politics in the context of neo-colonialist domination

Science With The Cherenkov Telescope Array

Algorithms and Architectures

Geologic Field Guides on the Construction and Destruction of the

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Pacific Northwest

Moving Targets

Mapping Global Theatre Histories

Electric Guitar Amplifier Handbook

From Terranes to Terrains

This book presents novel RIS-Based Smart Radio techniques, targeting at achieving high-quality channel links in cellular communications via design and optimization of the RIS construction. Unlike traditional antenna arrays, three unique characteristics of the RIS will be revealed in this book. First, the built-in programmable configuration of the RIS enables analog beamforming inherently without extra hardware or signal processing. Second, the incident signals can be controlled to partly reflect and partly transmit through the RIS simultaneously, adding more flexibility to signal transmission. Third, the RIS has no digital processing capability to actively send signals nor any radio frequency (RF) components. As such, it is necessary to develop novel channel estimation and communication protocols, design joint digital and RIS-based analog beamforming schemes and perform interference control via mixed reflection and transmission. This book also investigates how to integrate the RIS to legacy communication systems. RIS techniques are further investigated in this book (benefited from its ability to actively shape the propagation environment) to achieve two types of wireless applications, i.e. RF sensing and localization. The influence of the sensing objectives on the wireless signal propagation can be potentially recognized by the receivers, which are then utilized to identify the objectives in RF sensing. Unlike traditional sensing techniques, RIS-aided sensing can

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actively customize the wireless channels and generate a favorable massive number of independent paths interacting with the sensing objectives. It is desirable to design RIS-based sensing algorithms, and optimize RIS configurations. For the second application, i.e., RIS aided localization, an RIS is deployed between the access point (AP) and users. The AP can then analyze reflected signals from users via different RIS configurations to obtain accurate locations of users. However, this is a challenging task due to the dynamic user topology, as well as the mutual influence between multiple users and the RIS. Therefore, the operations of the RIS, the AP, and multiple users need to be carefully coordinated. A new RIS-based localization protocol for device cooperation and an RIS configuration optimization algorithm are also required. This book targets researchers and graduate-level students focusing on communications and networks. Signal processing engineers, computer and information scientists, applied mathematicians and statisticians, who work in RIS research and development will also find this book useful.

The term "cyberpunk" entered the literary landscape in 1984 to describe William Gibson's pathbreaking novel *Neuromancer*. Cyberpunks are now among the shock troops of postmodernism, Larry McCaffery argues in *Storming the Reality Studio*, marshalling the resources of a fragmentary culture to create a startling new form. Artificial intelligence, genetic engineering, multinational machinations, frenetic bursts of prose, collisions of style, celebrations of texture: although emerging largely from science fiction, these features of cyberpunk writing are, as this volume makes clear, integrally related to the aims and innovations of the literary avant-garde. By bringing together original fiction by well-known contemporary writers (William Burroughs, Thomas Pynchon, Don DeLillo, Kathy Acker, J. G.

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Ballard, Samuel R. Delany), critical commentary by some of the major theorists of postmodern art and culture (Jacques Derrida, Fredric Jameson, Timothy Leary, Jean-François Lyotard), and work by major practitioners of cyberpunk (William Gibson, Rudy Rucker, John Shirley, Pat Cadigan, Bruce Sterling), *Storming the Reality Studio* reveals a fascinating ongoing dialog in contemporary culture. What emerges most strikingly from the colloquy is a shared preoccupation with the force of technology in shaping modern life. It is precisely this concern, according to McCaffery, that has put science fiction, typically the province of technological art, at the forefront of creative explorations of our unique age. A rich opportunity for reading across genres, this anthology offers a new perspective on the evolution of postmodern culture and ultimately shows how deeply technological developments have influenced our vision and our art. Selected Fiction contributors: Kathy Acker, J. G. Ballard, William S. Burroughs, Pat Cadigan, Samuel R. Delany, Don DeLillo, William Gibson, Harold Jaffe, Richard Kadrey, Marc Laidlaw, Mark Leyner, Joseph McElroy, Misha, Ted Mooney, Thomas Pynchon, Rudy Rucker, Lucius Shepard, Lewis Shiner, John Shirley, Bruce Sterling, William Vollman Selected Non-Fiction contributors: Jean Baudrillard, Jacques Derrida, Joan Gordon, Veronica Hollinger, Fredric Jameson, Arthur Kroker and David Cook, Timothy Leary, Jean-François Lyotard, Larry McCaffery, Brian McHale, Dave Porush, Bruce Sterling, Darko Suvin, Takayuki Tatsumi In a perceptive and arresting analysis, Robin Cohen introduces his distinctive approach to the study of the world's diasporas. This book investigates the changing meanings of the concept and the contemporary diasporic condition, including case studies of Jewish, Armenian, African, Chinese, British, Indian, Lebanese and Caribbean people. The first edition of this book had a major impact on diaspora studies and was the foundational text in an emerging research and

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teaching field. This second edition extends and clarifies Robin Cohen's argument, addresses some critiques and outlines new perspectives for the study of diasporas. It has also been made more student-friendly with illustrations, guided readings and suggested essay questions. A translation from German of a 1929 treatise by the author. Deals with the problem of the space travel. Expresses ideas about rocketry and space travel. Extensive treatment of the engineering aspects of a space station. Extensive bibliography. 100 drawings.

The Sexual Demon of Colonial Power

The Tube Amp Book

An Introduction to Markov State Models and Their Application to Long Timescale Molecular Simulation

Electronics World + Wireless World

Guide to Ruminant Anatomy

Eco Art in Pursuit of a Sustainable Planet

Geophysics and Geosequestration

Hydrological processes in forested watersheds are influenced by environmental, physiological, and biometric factors such as precipitation, radiation, temperature, species type, leaf area, and extent and structure of forest ecosystems. Over the past two centuries, forest coverage and forest structures have been impacted globally by anthropogenic activities, for example, forest harvesting, and conversion of forested landscapes for plantations and urbanization. In addition, since the industrial revolution, climate change has resulted in profound impacts on forest ecosystems due to higher carbon dioxide (CO₂) concentration or CO₂

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fertilization, warmer temperatures, changes in frequency and intensity of extreme weather events and natural disturbances. As a result, hydrological processes in forested watersheds have been altered by these natural and anthropogenic factors and these changes are expected to accelerate due to future changing climatic conditions. Hence, understanding how various environmental, physiological, and physical drivers interactively influence hydrological and biogeochemical processes in forest ecosystems is critical for sustainable water supply in forested watersheds. About 21% of the global population depends on water sources that originate in forested catchments where forest coverage larger than 30%. Furthermore, there are knowledge gaps in our understanding of the mechanism of hydrological and hydrochemical cycles in forested watersheds. This Special Issue addresses these gaps in our knowledge and includes twelve papers in the following three major research themes in forest watershed areas.

This handbook supersedes FAA-H-8261 -16, Instrument Procedures Handbook, dated 2014. It is designed as a technical reference for all pilots who operate under instrument flight rules (IFR) in the National Airspace System (NAS). It expands and updates information contained in the FAA-H-8083-15B, Instrument Flying Handbook, and introduces advanced information for IFR operations. Instrument flight instructors, instrument pilots, and instrument students will also find this handbook a valuable resource since it is used as a reference for the Airline Transport Pilot and Instrument Knowledge Tests and for the Practical Test Standards. It also provides detailed coverage of instrument charts and procedures

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including IFR takeoff, departure, en route, arrival, approach, and landing. Safety information covering relevant subjects such as runway incursion, land and hold short operations, controlled flight into terrain, and human factors issues also are included.

Guide to Ruminant Anatomy: Dissection and Clinical Aspects presents a concise, clinically relevant reference to goat and cattle anatomy, with color schematic illustrations and embalmed arterially injected prosection images for comparison. Offers 244 color images depicting goat and cattle anatomy Provides selected line drawings correlated to dissection images of embalmed arterially injected specimens Takes a practical approach, with material organized by body system within each region Demonstrates the clinical relevance of basic anatomy Poses review questions in each chapter, with answers and videos provided on a companion website

"This publication accompanies the exhibition Revealing the African Presence in Renaissance Europe, held at the Walters Art Museum from October 14, 2012, to January 21, 2013, and at the Princeton University Art Museum from February 16 to June 9, 2013."

Reconfigurable Intelligent Surface-Empowered 6G

Landscapes and Landforms of the Maltese Islands

The Magazine from Cover to Cover

A Tribute to Fred Sanders

A Casebook of Cyberpunk and Postmodern Science Fiction

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AI and Financial Markets

Engineering Fundamentals and International Case Studies

Artificial intelligence (AI) is regarded as the science and technology for producing an intelligent machine, particularly, an intelligent computer program. Machine learning is an approach to realizing AI comprising a collection of statistical algorithms, of which deep learning is one such example. Due to the rapid development of computer technology, AI has been actively explored for a variety of academic and practical purposes in the context of financial markets. This book focuses on the broad topic of “AI and Financial Markets”, and includes novel research associated with this topic. The book includes contributions on the application of machine learning, agent-based artificial market simulation, and other related skills to the analysis of various aspects of financial markets.

This edited volume brings together a collection of works that comprehensively address both the myriad geomorphological landscapes of the Maltese Islands and how their evolution has been shaped over various time-scales by different sets of processes. Additionally, the work highlights how the small geographical setting of the Maltese Islands helped to closely connect these landscapes with Maltese society and as a result, they have evolved from stand-alone examples of geomorphology to important backdrops of Maltese cultural identity. Most of the contributing authors are academics - both local and foreign - with a research focus on the geomorphology of the Maltese Islands. However, the editors have also (and purposefully) chosen other contributors from governmental institutions and research agencies, who complement the geomorphological research with their proactive work in selected case studies on Maltese landscapes.

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The aim of this book volume is to explain the importance of Markov state models to molecular simulation, how they work, and how they can be applied to a range of problems. The Markov state model (MSM) approach aims to address two key challenges of molecular simulation: 1) How to reach long timescales using short simulations of detailed molecular models. 2) How to systematically gain insight from the resulting sea of data. MSMs do this by providing a compact representation of the vast conformational space available to biomolecules by decomposing it into states sets of rapidly interconverting conformations and the rates of transitioning between states. This kinetic definition allows one to easily vary the temporal and spatial resolution of an MSM from high-resolution models capable of quantitative agreement with (or prediction of) experiment to low-resolution models that facilitate understanding. Additionally, MSMs facilitate the calculation of quantities that are difficult to obtain from more direct MD analyses, such as the ensemble of transition pathways. This book introduces the mathematical foundations of Markov models, how they can be used to analyze simulations and drive efficient simulations, and some of the insights these models have yielded in a variety of applications of molecular simulation.

A Global Journey - eBook Only
Dissection and Clinical Aspects
Signs and Symbols
Underground Mining Methods
The Rocket Motor