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Hokkaido Mathematical JournalThe Mechanics' Magazine and Journal of Engineering, Agricultural Machinery, Manufactures and ShipbuildingMichigan School ModeratorTaking Sudoku SeriouslyMechanics magazineInspiring Primary LearnersMechanics MagazineThe Age of STEMThe Statistical Year-book of Canada for Economists in CambridgeC# for Financial MarketsTransactions of the Institution of Naval ArchitectsAfrican Governance Report III 2013Lingua Universalis vs. Calculus Ratiocinator:Probability and StochasticsThe Inland Architect and News RecordPunchThe Consequences of Global DisastersBulletin of Electrical Engineering and InformaticsFree Money For Graduate SchoolAn Introduction to Statistical LearningScience AbstractsNotices of the American Mathematical SocietyLatino AmericaLandau: The Physicist & the ManCanadian Journal of Forest ResearchVIII Hotine-Marussi Symposium on Mathematical GeodesyEducation in Southern AfricaThe EngineerMinority Populations in Canadian Second Language EducationVisualizing Mathematics with 3D PrintingUnleashing the Second American CenturyInformation Theory and Stochastics for Multiscale Nonlinear SystemsThe AthenaeumJournal of Knot Theory and Its RamificationsTechnology and TestingThe Biologist's ImaginationModern Probabilistic Methods for Analysis of Telecommunication NetworksDiscovering Discrete Dynamical SystemsCounterparty Credit Risk, Collateral and Funding

Hokkaido Mathematical Journal

A practice-oriented guide to using C# to design and program pricing and trading models In this step-by-step guide to software development for financial analysts, traders, developers and quants, the authors show both novice and experienced practitioners how to develop robust and accurate pricing models and employ them in real environments. Traders will learn how to design and implement applications for curve and surface modeling, fixed income products, hedging strategies, plain and exotic option modeling, interest rate options, structured bonds, unfunded structured products, and more. A unique mix of modern software technology and quantitative finance, this book is both timely and practical. The approach is thorough and comprehensive and the authors use a combination of C# language features, design patterns, mathematics and finance to produce efficient and maintainable software. Designed for quant developers, traders and MSc/MFE students, each chapter has numerous exercises and the book is accompanied by a dedicated companion website, http://www.datasimfinancial.com/forum/viewforum.php?f=196&sid=f30022095850dee48c7db5ff62192b34, providing all source code, alongside audio, support and discussion forums for readers to comment on the code and obtain new versions of the software.

The Mechanics' Magazine and Journal of Engineering, Agricultural Machinery, Manufactures

and Shipbuilding

Until now, the picture painted of French second language learning in Canada has tended to focus on successful French immersion. This volume offers a broader representation, in response to the demographic changes that have made the French language classroom a more complex place. Focusing on inclusion and language maintenance, the chapters discuss how a multilingual population can add the two official languages to their repertoire whilst maintaining their languages of origin/heritage; how the revitalization of Indigenous languages can best be supported in the language classroom, and how students with disabilities can be helped to successfully learn languages.

Michigan School Moderator

R. G. Collingwood saw one of the main tasks of philosophers and of historians of human thought in uncovering what he called the ultimate presuppositions of different thinkers, of different philosophical movements and of entire eras of intellectual history. He also noted that such ultimate presuppositions usually remain tacit at first, and are discovered only by subsequent reflection. Collingwood would have been delighted by the contrast that constitutes the overall theme of the essays collected in this volume. Not only has this dichotomy of views been one of the most crucial watersheds in the entire twentieth-century philosophical thought. Not only has it remained largely implicit in the writings of the philosophers for whom it mattered most. It is a truly Collingwoodian presupposition also in that it is not a premise assumed by different thinkers in their argumentation. It is the presupposition of a question, an assumption to the effect that a certain general question can be raised and answered. Its role is not belied by the fact that several philosophers who answered it one way or the other seem to be largely unaware that the other answer also makes sense - if it does. This Collingwoodian question can be formulated in a first rough approximation by asking whether language - our actual working language, Tarski's "colloquiallanguage" - is universal in the sense of being inescapable. This formulation needs all sorts of explanations, however.

Taking Sudoku Seriously

Mechanics magazine

"The African Governance Report, the most comprehensive report on governance in Africa, assesses and monitors the progress of African countries on governance, identifies capacity gaps in governance institutions and proposes policies and strategic interventions to improve governance on the continent. This third edition of the Report, while continuing to monitor

governance trends, adopts a thematic approach: elections and the management of diversity in Africa. Elections are central to democratic governance and the political management of diversity in plural societies. While elections are held with greater regularity in Africa, their content and quality remains suspect in many countries, with Africa's rich diversity deployed as a combustive tool in electoral conflicts. Elections have often triggered conflict, with violence, tensions, acrimonies and sharp elite divisions surrounding electoral processes and outcomes-- a worrying trend for Africa's democratic future. The Report investigates elections in the face of managing diversity in Africa. It recommends major electoral, institutional, political and constitutional reforms to enable elections to facilitate the democratic management of diversity, while significantly improving their quality and credibility. These include reform of the party system to make it more inclusive and democratic, a move to more proportional electoral systems, and an increase in the autonomy and effectiveness of election management boards. The Report argues that regional and subregional initiatives and frameworks for elections, democracy and governance have to be implemented and monitored to improve electoral performance and promote democratic consolidation and stability."--Page [4] of cover.

Inspiring Primary Learners

Mechanics Magazine

Free Money for Graduate School, published in 1990, is a book by Laurie Blum, author of the Free Money series.

The Age of STEM

This text is an introduction to the modern theory and applications of probability and stochastics. The style and coverage is geared towards the theory of stochastic processes, but with some attention to the applications. In many instances the gist of the problem is introduced in practical, everyday language and then is made precise in mathematical form. The first four chapters are on probability theory: measure and integration, probability spaces, conditional expectations, and the classical limit theorems. There follows chapters on martingales, Poisson random measures, Levy Processes, Brownian motion, and Markov Processes. Special attention is paid to Poisson random measures and their roles in regulating the excursions of Brownian motion and the jumps of Levy and Markov processes. Each chapter has a large number of varied examples and exercises. The book is based on the author's lecture notes in courses offered over the years at Princeton University. These courses attracted graduate students from engineering, economics, physics, computer sciences, and mathematics. Erhan Cinlar has received many awards for excellence in teaching, including the President's Award for Distinguished Teaching at Princeton University. His research interests include theories of Markov processes, point processes, stochastic calculus, and

stochastic flows. The book is full of insights and observations that only a lifetime researcher in probability can have, all told in a lucid yet precise style.

The Statistical Year-book of Canada for

Economists in Cambridge

Wouldn't it be great to experience three-dimensional ideas in three dimensions? In this bookâ€"the first of its kindâ€"mathematician and mathematical artist Henry Segerman takes readers on a fascinating tour of two-, three-, and four-dimensional mathematics, exploring Euclidean and non-Euclidean geometries, symmetry, knots, tilings, and soap films. Visualizing Mathematics with 3D Printing includes more than 100 color photographs of 3D printed models. Readers can take the book's insights to a new level by visiting its sister website, 3dprintmath.com, which features virtual three-dimensional versions of the models for readers to explore. These models can also be ordered online or downloaded to print on a 3D printer. Combining the strengths of book and website, this volume pulls higher geometry and topology out of the realm of the abstract and puts it into the hands of anyone fascinated by mathematical relationships of shape. With the book in one hand and a 3D printed model in the other, readers can find deeper meaning while holding a hyperbolic honeycomb, touching the twists of a torus knot, or caressing the curves of a Klein quartic.

C# for Financial Markets

Transactions of the Institution of Naval Architects

This book introduces mathematicians to the fascinating emerging mathematical interplay between ideas from stochastics and information theory and important practical issues in studying complex multiscale nonlinear systems. It emphasizes the serendipity between modern applied mathematics and applications where rigorous analysis, the development of qualitative and/or asymptotic models, and numerical modeling all interact to explain complex phenomena. After a brief introduction to the emerging issues in multiscale modeling, the book has three main chapters. The first chapter is an introduction to information theory with novel applications to statistical mechanics, predictability, and Jupiter's Red Spot for geophysical flows. The second chapter discusses new mathematical issues regarding fluctuation-dissipation theorems for complex nonlinear systems including information flow, various approximations, and illustrates applications to various mathematical models. The third chapter discusses stochastic modeling of complex nonlinear systems. After a general discussion, a new

elementary model, motivated by issues in climate dynamics, is utilized to develop a self-contained example of stochastic mode reduction. Based on A. Majda's Aisenstadt lectures at the University of Montreal, the book is appropriate for both pure and applied mathematics graduate students, postdocs and faculty as well as interested researchers in other scientific disciplines. No background in geophysical flows is required.

African Governance Report III 2013

Packed with more than a hundred color illustrations and a wide variety of puzzles and brainteasers, Taking Sudoku Seriously uses this popular craze as the starting point for a fun-filled introduction to higher mathematics. How many Sudoku solution squares are there? What shapes other than three-by-three blocks can serve as acceptable Sudoku regions? What is the fewest number of starting clues a sound Sudoku puzzle can have? Does solving Sudoku require mathematics? Jason Rosenhouse and Laura Taalman show that answering these questions opens the door to a wealth of interesting mathematics. Indeed, they show that Sudoku puzzles and their variants are a gateway into mathematical thinking generally. Among many topics, the authors look at the notion of a Latin square--an object of long-standing interest to mathematicians--of which Sudoku squares are a special case; discuss how one finds interesting Sudoku puzzles; explore the connections between Sudoku, graph theory, and polynomials; and consider Sudoku extremes, including puzzles with the maximal number of vacant regions, with the minimal number of starting clues, and numerous others. The book concludes with a gallery of novel Sudoku variations--just pure solving fun! Most of the puzzles are original to this volume, and all solutions to the puzzles appear in the back of the book or in the text itself. A math book and a puzzle book, Taking Sudoku Seriously will change the way readers look at Sudoku and mathematics, serving both as an introduction to mathematics for puzzle fans and as an exploration of the intricacies of Sudoku for mathematics buffs.

Lingua Universalis vs. Calculus Ratiocinator:

The book's content is focused on rigorous and advanced quantitative methods for the pricing and hedging of counterparty credit and funding risk. The new general theory that is required for this methodology is developed from scratch, leading to a consistent and comprehensive framework for counterparty credit and funding risk, inclusive of collateral, netting rules, possible debit valuation adjustments, re-hypothecation and closeout rules. The book however also looks at quite practical problems, linking particular models to particular 'concrete' financial situations across asset classes, including interest rates, FX, commodities, equity, credit itself, and the emerging asset class of longevity. The authors also aim to help quantitative analysts, traders, and anyone else needing to frame and price counterparty credit and funding risk, to develop a 'feel' for applying sophisticated mathematics and stochastic calculus to solve practical problems. The main models are illustrated from theoretical formulation to final implementation with calibration to market data, always keeping in mind the concrete

questions being dealt with. The authors stress that each model is suited to different situations and products, pointing out that there does not exist a single model which is uniformly better than all the others, although the problems originated by counterparty credit and funding risk point in the direction of global valuation. Finally, proposals for restructuring counterparty credit risk, ranging from contingent credit default swaps to margin lending, are considered.

Probability and Stochastics

From early answer sheets filled in with number 2 pencils, to tests administered by mainframe computers, to assessments wholly constructed by computers, it is clear that technology is changing the field of educational and psychological measurement. The numerous and rapid advances have immediate impact on test creators, assessment professionals, and those who implement and analyze assessments. This comprehensive new volume brings together leading experts on the issues posed by technological applications in testing, with chapters on game-based assessment, testing with simulations, video assessment, computerized test development, large-scale test delivery, model choice, validity, and error issues. Including an overview of existing literature and ground-breaking research, each chapter considers the technological, practical, and ethical considerations of this rapidly-changing area. Ideal for researchers and professionals in testing and assessment, Technology and Testing provides a critical and in-depth look at one of the most pressing topics in educational testing today.

The Inland Architect and News Record

Inspiring Primary Learners offers trainee and qualified teachers high-quality case studies of outstanding practice in contemporary classrooms across the country. Expert authors unravel and reveal the theory and evidence that underpins lessons, helping you make connections with your own practice and understand what 'excellent' looks like, within each context, and how it is achieved. Illustrated throughout with interviews, photos, and examples of children's work, it covers a range of primary subjects and key topics including creating displays, outdoor learning, and developing a reading for pleasure culture. The voice of the practitioner is evident throughout as teachers share their own experience, difficulties, and solutions to ensure that children are inspired by their learning. Written in two parts, the first exemplifies examples of practice for each National Curriculum subject, whilst the second focuses on the wider curriculum and explores issues pertinent to the primary classroom, highlighting important discussions on topics such as: Reading for pleasure Writing for pleasure Creating a dynamic and responsive curriculum Creating inspiring displays Outdoor learning Pedagogy for imagination Relationships and Sex Education This key text shows how, even within the contested space of education, practitioners can inspire their primary learners through teaching with passion and purpose for the empowerment of the children in their class. For all new teachers, it provides advice and ideas for effective and engaging learning experiences

across the curriculum.

Punch

The Consequences of Global Disasters

This book contains a selection of peer-reviewed papers presented at the VIII Hotine-Marussi Symposium on Mathematical Geodesy in Rome, 17-21 June, 2013. The scientific sessions focused on global reference systems, geodetic data analysis, geopotential modelling, gravity field mapping as well as digital terrain modelling. A special chapter is dedicated to understand the generation of Flash.

Bulletin of Electrical Engineering and Informatics

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Free Money For Graduate School

An Introduction to Statistical Learning

List of members in each volume.

Science Abstracts

Across the world STEM (learning and work in Science, Technology, Engineering and Mathematics) has taken central importance in education and the economy in a way that few other disciplines have. STEM competence has become seen as

key to higher productivity, technological adaptation and research-based innovation. No area of educational provision has a greater current importance than the STEM disciplines yet there is a surprising dearth of comprehensive and world-wide information about STEM policy, participation, programs and practice. The Age of STEM is a state of the art survey of the global trends and major country initiatives in STEM. It gives an international overview of issues such as: STEM strategy and coordination curricula, teaching and assessment women in STEM indigenous students research training STEM in the graduate labour markets STEM breadth and STEM depth The individual chapters give comparative international analysis as well as a global overview, particularly focusing on the growing number of policies and practices in mobilising and developing talent in the STEM fields. The book will be of particular interest to anyone involved in educational policy, those in education management and leaders in both schooling and tertiary education. It will have a wider resonance among practitioners in the STEM disciplines, particularly at university level, and for those interested in contemporary public policy.

Notices of the American Mathematical Society

Latino America

The University of Cambridge has produced more Nobel Prize-winning economists than the whole of France. This impressive book collects together largely unpublished correspondence from some of the twentieth century's key figures including Keynes, Robinson, Hayek and Sraffa.

Landau: The Physicist & the Man

This book constitutes the refereed proceedings of the International Conference on Modern Probabilistic Methods for Analysis of Telecommunication Networks, Belarusian Winter Workshop in Queueing Theory, BWWQT 2013, held in Minsk, Belarus, in January 2013. The 23 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers present new results in study and optimization of information transmission models in telecommunication networks using different approaches, mainly based on theories of queueing systems and queueing networks.

Canadian Journal of Forest Research

VIII Hotine-Marussi Symposium on Mathematical Geodesy

Education in Southern Africa is a comprehensive critical reference guide to education in the region. With chapters written by an international team of leading regional education experts, the book explores the education systems of each country in the region. With chapters covering Botswana, Lesotho, Madagascar, Mozambique, Namibia, South Africa, Swaziland and Zimbabwe, the book critically examines the development of education provision in each country as well as local and global contexts. Including a comparative introduction to the issues facing education in the region as a whole and guides to available online datasets, this handbook will be an essential reference for researchers, scholars, international agencies and policy-makers at all levels.

Education in Southern Africa

An Introduction to Statistical Learning provides an accessible overview of the field of statistical learning, an essential toolset for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. This book presents some of the most important modeling and prediction techniques, along with relevant applications. Topics include linear regression, classification, resampling methods, shrinkage approaches, tree-based methods, support vector machines, clustering, and more. Color graphics and real-world examples are used to illustrate the methods presented. Since the goal of this textbook is to facilitate the use of these statistical learning techniques by practitioners in science, industry, and other fields, each chapter contains a tutorial on implementing the analyses and methods presented in R, an extremely popular open source statistical software platform. Two of the authors co-wrote The Elements of Statistical Learning (Hastie, Tibshirani and Friedman, 2nd edition 2009), a popular reference book for statistics and machine learning researchers. An Introduction to Statistical Learning covers many of the same topics, but at a level accessible to a much broader audience. This book is targeted at statisticians and non-statisticians alike who wish to use cutting-edge statistical learning techniques to analyze their data. The text assumes only a previous course in linear regression and no knowledge of matrix algebra.

The Engineer

The name of Lev Davidovich Landau is widely known as that of one of the greatest twentieth-century physicists. A brilliant teacher to those pupils he carefully chose, notoriously controversial in his outlook and opinions, the combination of his outstanding intellect and striking personality brought him almost legendary fame. This volume contains letters, papers and recollections by friends and pupils, describing Landau's views of science, culture and life, and provides the reader with a vivid portrait of a remarkable man.

Minority Populations in Canadian Second Language Education

Sometime in April 2014, somewhere in a hospital in California, a Latino child tipped the demographic scales as Latinos displaced non-Hispanic whites as the largest racial/ethnic group in the state. So, one-hundred-sixty-six years after the Treaty of Guadalupe Hidalgo brought the Mexican province of Alta California into the United States, Latinos once again became the largest population in the state. Surprised? Texas will make the same transition sometime before 2020. When that happens, America's two most populous states, carrying the largest number of Electoral College votes, will be Latino. New Mexico is already there. New York, Florida, Arizona, and Nevada are shifting rapidly. Latino populations since 2000 have doubled in Alabama, Arkansas, Georgia, and South Dakota. The US is undergoing a substantial and irreversible shift in its identity. So, too, are the Latinos who make up these populations. Matt Barreto and Gary M. Segura are the country's preeminent experts in the shape, disposition, and mood of Latino America. They show the extent to which Latinos have already transformed the US politically and socially, and how Latino Americans are the most buoyant and dynamic ethnic and racial group, often in quite counterintuitive ways. Latinos' optimism, strength of family, belief in the constructive role of government, and resilience have the imminent potential to reshape the political and partisan landscape for a generation and drive the outcome of elections as soon as 2016.

Visualizing Mathematics with 3D Printing

Discovering Discrete Dynamical Systems is a mathematics textbook designed for use in a student-led, inquiry-based course for advanced mathematics majors. Fourteen modules each with an opening exploration, a short exposition and related exercises, and a concluding project guide students to self-discovery on topics such as fixed points and their classifications, chaos and fractals, Julia and Mandelbrot sets in the complex plane, and symbolic dynamics. Topics have been carefully chosen as a means for developing student persistence and skill in exploration, conjecture, and generalization while at the same time providing a coherent introduction to the fundamentals of discrete dynamical systems. This book is written for undergraduate students with the prerequisites for a first analysis course, and it can easily be used by any faculty member in a mathematics department, regardless of area of expertise. Each module starts with an exploration in which the students are asked an open-ended question. This allows the students to make discoveries which lead them to formulate the questions that will be addressed in the exposition and exercises of the module. The exposition is brief and has been written with the intent that a student who has taken, or is ready to take, a course in analysis can read the material independently. The exposition concludes with exercises which have been designed to both illustrate and explore in more depth the ideas covered in the exposition. Each module concludes with a project in which students bring the ideas from the module to bear on a more challenging or in-depth problem. A section entitled "To the Instructor" includes suggestions on how to structure a course in order to realize the inquiry-based intent of the book. The book has also been used successfully as the basis for an independent study course and as a supplementary text for an analysis course with traditional content.

Unleashing the Second American Century

Disasters of the 21st century differ substantially from other kinds of hazards that previous societies have had to cope with because of the twin forces of globalization and the communications revolution. But what makes today's disasters—industrial, technological, environmental, and socio-cultural—so different in scope and impact? What are the possible disasters of the future? And how can we, as collective humanity, best manage and respond to the globalization of disasters? The Consequences of Global Disasters makes a distinctive contribution to the ever-expanding field of disaster research by developing a multi-contextual, multi-disciplinary and multi-methodological approach to the social analysis of disasters. Anthony Elliott and Eric L. Hsu have brought together a highly distinguished group of international contributors to focus on how people react to the unsettling effects of disasters, which come in a multitude of forms. Numerous contributors concentrate on the cultural, political and psychological ramifications of the 2011 Great East Japan earthquake and tsunami, but disasters in other contexts, such as Australia, China and Haiti, are considered as well. By offering unique empirical, methodological and theoretical insights, The Consequences of Global Disasters sets an agenda for future developments in the field of disaster research and will be a key resource for students and scholars working in social science disciplines such as sociology, cultural studies, international relations, psycho-social studies, social work, Japanese studies and social theory.

Information Theory and Stochastics for Multiscale Nonlinear Systems

Scholars and policymakers alike agree that innovation in the biosciences is key to future growth. The field continues to shift and expand, and it is certainly changing the way people live their lives in a variety of ways. With a large share of federal research dollars devoted to the biosciences, the field is just beginning to live up to its billing as a source of innovation, economic productivity and growth. Vast untapped potential to imagine and innovate exists in the biosciences given new tools now widely available. In The Biologist's Imagination, William Hoffman and Leo Furcht examine the history of innovation in the biosciences, tracing technological innovation from the late eighteenth century to the present and placing special emphasis on how and where technology evolves. Place is often key to innovation, from the early industrial age to the rise of the biotechnology industry in the second half of the twentieth century. The book uses the distinct history of bioinnovation to discuss current trends as they relate to medicine, agriculture, energy, industry, ecosystems, and climate. Fast-moving research fields like genomics, synthetic biology, stem cell research, neuroscience, bioautomation and bioprinting are accelerating these trends. Hoffman and Furcht argue that our system of bioscience innovation is itself in need of innovation. It needs to adapt to the massive changes brought about by converging technologies and the globalization of higher education, workforce skills, and entrepreneurship. The Biologist's Imagination is both a review of past models for bioscience innovation and a forward-looking, original argument for what future models should take into account.

The Athenaeum

Journal of Knot Theory and Its Ramifications

"An optimistic, fact-based look at how four transformational forces-unrivaled manufacturing depth, soaring levels of creativity, massive new energy sources, gigantic amounts of capital available-will propel the U.S. to new economic heights In Unleashing the Second American Century, business expert Joel Kurtzman shows conclusively that all the talk about the relative decline of the United States is not only baseless-it's dead wrong. A widely-held misconception is that "America doesn't make things anymore." But the U.S is by far the world's dominant manufacturing power, and most of what we make is recession-proof. America also has a stunning level of talent and creativity in the world's fastest-growing economic sectors, such as biotech, pharmaceutical, computer hardware and software, and telecommunications. Due to shale and gas, America has the world's largest energy reserves, and is more favorably endowed than even the Middle East. Finally, America has an unprecedented amount of capital now idle-approximately $4.4 trillion, a sum that is about $1 trillion larger than the German economy, the world's fourth largest. As Kurtzman shows, when the business community fully grasps the opportunities in the U.S., prosperity will return-and much faster than we now think possible"--

Technology and Testing

The Biologist's Imagination

Modern Probabilistic Methods for Analysis of Telecommunication Networks

Discovering Discrete Dynamical Systems

Counterparty Credit Risk, Collateral and Funding

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION