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Finite Volumes for Complex Applications VII-Elliptic, Parabolic and Hyperbolic Problems Jürgen Fuhrmann 2014-05-16 The methods considered in the 7th conference on "Finite Volumes for Complex Applications" (Berlin, June 2014) have properties which offer distinct advantages for a number of applications. The second volume of the proceedings covers reviewed contributions reporting successful applications in the fields of fluid dynamics, magnetohydrodynamics, structural analysis, nuclear physics, semiconductor theory and other topics. The finite volume method in its various forms is a space discretization technique for partial differential equations based on the fundamental physical principle of conservation. Recent decades have brought significant success in the theoretical understanding of the method. Many finite volume methods preserve further qualitative or asymptotic properties, including maximum principles, dissipativity, monotone decay of free energy, and asymptotic stability. Due to these properties, finite volume methods belong to the wider class of compatible discretization methods, which preserve qualitative properties of continuous problems at the discrete level. This structural approach to the discretization of partial differential equations becomes particularly important for multiphysics and multiscale applications. Researchers, PhD and masters level students in numerical analysis, scientific computing and related fields such as partial differential equations will find this volume useful, as will engineers working in numerical modeling and simulations.
Advances in Computational Intelligence Ildar Batyrshin 2013-03-21 The two-volume set LNAI 7629 and LNAI 7630 constitutes the refereed proceedings of the 11th Mexican International Conference on Artificial Intelligence, MICAI 2012, held in San Luis Potosí, Mexico, in October/November 2012. The 80 revised papers presented were carefully reviewed and selected from 224 submissions. The second volume includes 40 papers focusing on soft computing. The papers are organized in the following topical sections: natural language processing; evolutionary and nature-inspired metaheuristic algorithms; neural networks and hybrid intelligent systems; fuzzy systems and probabilistic models in decision making.
Minds and Behaviors at Work Wendy Cunningham 2016-07-19 Although the Latin American region has shown an impressive growth in educational attainment over the past two decades, that education has failed to yield expected benefits. A mounting body of research and policy debates argues that the quantity of education is not an adequate metric of human capital acquisition. Rather, individuals' skills—what they actually know and can do—should stand as policy targets and be fostered across the life course. Evidence from around the world shows that both cognitive and socio-emotional skills are demanded by employers and favorably affect a range of outcomes, including educational attainment and employment outcomes. Through original empirical research investigating the role of cognitive and socio-emotional skills in shaping adults' labor market outcomes in Bolivia, Colombia, El Salvador, and Peru, supplemented by similar studies in other Latin American countries, this review confirms that cognitive skills matter for reaping labor market gains in terms of higher wages and formal jobs in Latin America; but so do socio-emotional skills. Moreover, socio-emotional skills seem to particularly influence labor force participation and tertiary education attendance as a platform to build knowledge. The study also presents a policy framework for skills development by: (i) providing insights by developmental psychologists about when people are neuro-biologically, socio-emotionally, and situationally ready to develop socio-emotional skills, and (ii) suggesting new directions in cognitive development.
High Performance Computing in Science and Engineering '01 Egon Krause 2012-12-06 This volume summarizes the state of the art in supercomputing, with special emphasis on the industrial relevance of the presented results and methods. The book showcases an innovative usage of state-of-the-art modeling, novel numerical algorithms and the use of leading-edge high-performance computing systems in a GRID-like environment.
The Truth About Our Schools Melissa Benn 2015-11-06 "A superb, crucial, blistering expose of all the myths about our education system that are all too often used to attack it. Melissa Benn again proves why she is one of country's most formidable education campaigners - and why the powerful should fear her. Owen Jones, Guardian columnist and best-selling author Never has it been more urgent to publicise the truth about what works and doesn't work in our education system. Debunking the ideology of marketisation, and exposing the half-truths that pass for objective reporting, Benn and Downs meticulously lay out the evidence: that a national system of comprehensive schools delivers the best outcomes. This hugely important book should be required reading for each new Education Secretary. Caroline Lucas, MP Opinions about comprehensive education are often made into easy-to-swallow sound-bites by media and politicians alike and whilst the benefits of a genuinely comprehensive education for all pupils are obvious, untruths have unwittingly evolved into hard facts. Based on Melissa Benn and Janet Downs' work as part of the pioneering Local Schools Network, The Truth About Our Schools calls for us to urgently and articulately challenge unquestioned myths about state education. Benn and Downs have meticulously built an argument for its still enormously vital role, and rigorously challenge assumptions that: Comprehensive education has failed Local authorities control and hold back schools Choice, competition and markets are the route to educational success Choice will improve education in England: the free school model. Academies raise standards Teachers don't need qualifications Private schools have the magic DNA Progressive education lowers standards Anyone who thinks that comprehensive education cannot deliver, that local authorities are the chief block to improving our school system, that competition and markets are the route to educational success and that private schools hold the magic DNA that can simply be transferred to other state schools will have their beliefs shaken by this blisteringly incisive book. .
Fundamentals of Geoenvironmental Engineering Abdel-Mohsen Onsy Mohamed 2017-10-31 Fundamentals of Geoenvironmental Engineering: Understanding Soil, Water, and Pollutant Interaction and Transport examines soil-water-pollutant interaction, including physico-chemical processes that occur when soil is exposed to various contaminants. Soil characteristics relevant to remedial techniques are explored, providing foundations for the correct process selection. Built upon the authors' extensive experience in research and practice, the book updates and expands the content to include current processes and pollutants. The book discusses propagation of soil pollution and soil characteristics relevant to remedial techniques. Practicing geotechnical and environmental engineers can apply the theory and case studies in the book directly to current projects. The book first discusses the stages of economic development and their connections to the sustainability of the environment. Subsequent chapters cover waste and its management, soil systems, soil-water and soil-pollutant interactions, subsurface transport of pollutants, role of groundwater, nano-, micro- and biologic pollutants, soil characteristics that impact pollution diffusion, and potential remediation processes like mechanical, electric, magnetic, hydraulic and dielectric permittivity of soils. Presents a clear understanding of the propagation of pollutants in soils Identifies the physico-chemical processes in soils Covers emerging pollutants (nano-, micro- and biologic contaminants) Features in-depth coverage of hydraulic, electrical, magnetic and dielectric permittivity characteristics of soils and their impact on remedial technologies
Functionals of Multidimensional Diffusions with Applications to Finance Jan Baldeaux 2013-08-13 This research monograph provides an introduction to tractable multidimensional diffusion models, where transition densities, Laplace transforms, Fourier transforms, fundamental solutions or functionals can be obtained in explicit form. The book also provides an introduction to the use of Lie symmetry group methods for diffusions, which allows to compute a wide range of functionals. Besides the well-known methodology on affine diffusions it presents a novel approach to affine processes with applications in finance. Numerical methods, including Monte Carlo and quadrature methods, are discussed together with supporting material on stochastic processes. Applications in finance, for instance, on credit risk and credit valuation adjustment are included in the book. The functionals of multidimensional diffusions analyzed in this book are significant for many areas of application beyond finance. The book is aimed at a wide readership, and develops an intuitive and rigorous understanding of the mathematics underlying the derivation of explicit formulas

for functionals of multidimensional diffusions.?

Benchmarking, Measuring, and Optimizing Wanling Gao 2020-06-09 This book constitutes the refereed proceedings of the Second International Symposium on Benchmarking, Measuring, and Optimization, Bench 2019, held in Denver, CO, USA, in November 2019. The 20 full papers and 11 short papers presented were carefully reviewed and selected from 79 submissions. The papers are organized in topical sections named: Best Paper Session; AI Challenges on Cambircon using AIBenc; AI Challenges on RISC-V using AIBench; AI Challenges on X86 using AIBench; AI Challenges on 3D Face Recognition using AIBench; Benchmark; AI and Edge; Big Data; Datacenter; Performance Analysis; Scientific Computing.

Evolutionary Computation in Combinatorial Optimization Jin-Kao Hao 2012-03-23 This book constitutes the refereed proceedings of the 12th European Conference on Evolutionary Computation in Combinatorial Optimization, EvoCOP 2012, held in Málaga, Spain, in April 2012, colocated with the Evo* 2012 events EuroGP, EvoBIO, EvoMUSART, and EvoApplications. . The 22 revised full papers presented were carefully reviewed and selected from 48 submissions. The papers present the latest research and discuss current developments and applications in metaheuristics - a paradigm to effectively solve difficult combinatorial optimization problems appearing in various industrial, economic, and scientific domains. Prominent examples of metaheuristics are evolutionary algorithms, simulated annealing, tabu search, scatter search, memetic algorithms, variable neighborhood search, iterated local search, greedy randomized adaptive search procedures, estimation of distribution algorithms, and ant colony optimization.

The Undercover Economist Strikes Back Tim Harford 2015-01-06 A provocative and lively exploration of the increasingly important world of macroeconomics, by the author of the bestselling The Undercover Economist. Thanks to the worldwide financial upheaval, economics is no longer a topic we can ignore. From politicians to hedge fund managers to middle-class IRA holders, everyone must pay attention to how and why the global economy works the way it does. Enter Financial Times columnist and bestselling author Tim Harford. In this new book that demystifies macroeconomics, Harford strips away the spin, the hype, and the jargon to reveal the truth about how the world's economy actually works. With the wit of a raconteur and the clear grasp of an expert, Harford explains what's really happening beyond today's headlines, why all of us should care, and what we can do about it to understand it better.

Applied Parallel and Scientific Computing Pekka Manninen 2013-02-12 This volume constitutes the refereed proceedings of the 11th International Conference on Applied Parallel and Scientific Computing, PARA 2012, held in Helsinki, Finland, in June 2012. The 35 revised full papers presented were selected from numerous submissions and are organized in five technical sessions covering the topics of advances in HPC applications, parallel algorithms, performance analyses and optimization, application of parallel computing in industry and engineering, and HPC interval methods. In addition, three of the topical minisymposia are described by a corresponding overview article on the minisymposia topic. In order to cover the state-of-the-art of the field, at the end of the book a set of abstracts describe some of the conference talks not elaborated into full articles.

Stochastic Processes and Related Topics Ioannis Karatzas 2012-12-06 In the last twenty years extensive research has been devoted to a better understanding of the stable and other closely related infinitely divisible mod els. Stamatis Cambanis, a distinguished educator and researcher, played a special leadership role in the development of these research efforts, particu larly related to stable processes from the early seventies until his untimely death in April '95. This commemorative volume consists of a collection of research articles devoted to reviewing the state of the art of this and other rapidly developing research and to explore new directions of research in these fields. The volume is a tribute to the Life and Work of Stamatis by his students, friends, and colleagues whose personal and professional lives he has deeply touched through his generous insights and dedication to his profession. Before the idea of this volume was conceived, two conferences were held in the memory of Stamatis. The first was organized by the University of Athens and the Athens University of Economics and was held in Athens during December 18-19, 1995. The second was a significant part of a Spe cial IMS meeting held at the campus of the University of North Carolina at Chapel Hill during October 17-19, 1996. It is the selfless effort of sev eral people that brought about these conferences. We believe that this is an appropriate place to acknowledge their effort; and on behalf of all the participants, we extend sincere thanks to all these persons.

Singapore Math and Science Education Innovation Oon Seng Tan 2021-09-05 This edited volume explores key areas of interests in Singapore math and science education including issues on teacher education, pedagogy, curriculum, assessment, teaching practices, applied learning, ecology of learning, talent grooming, culture of science and math, vocational education and STEM. It presents to policymakers and educators a clear picture of the education scene in Singapore and insights into the role of math and science education in helping the country excel beyond international studies such as PISA, the pedagogical and curricula advancements in math and science learning, and the research and practices that give Singaporean students the competitive edge in facing the uncertain and challenging landscape of the future.

Physical Chemistry in Depth Johannes Karl Fink 2009-09-16 "Physical Chemistry in Depth" is not a stand-alone text, but complements the text of any standard textbook on "Physical Chemistry" into depth having in mind to provide profound understanding of some of the topics presented in these textbooks. Standard textbooks in Physical Chemistry start with thermodynamics, deal with kinetics, structure of matter, etc. The "Physical Chemistry in Depth" follows this adjustment, but adds chapters that are treated traditionally in ordinary textbooks inadequately, e.g., general scaling laws, the graphlike structure of matter, and cross connections between the individual disciplines of Physical Chemistry. Admittedly, the text is loaded with some mathematics, which is a prerequisite to thoroughly understand the topics presented here. However, the mathematics needed is explained at a really low level so that no additional mathematical textbook is needed.

Katy's First Day at School Tammy Jones 2015-01-01 This story is about the first day of school fears.

Operational Research A. Ismael F. Vaz 2018-02-15 This proceedings book presents selected contributions from the XVIII Congress of APDIO (the Portuguese Association of Operational Research) held in Valença on June 28–30, 2017. Prepared by leading Portuguese and international researchers in the field of operations research, it covers a wide range of complex real-world applications of operations research methods using recent theoretical techniques, in order to narrow the gap between academic research and practical applications. Of particular interest are the applications of, nonlinear and mixed-integer programming, data envelopment analysis, clustering techniques, hybrid heuristics, supply chain management, and lot sizing and job scheduling problems. In most chapters, the problems, methods and methodologies described are complemented by supporting figures, tables and algorithms. The XVIII Congress of APDIO marked the 18th installment of the regular biannual meetings of APDIO – the Portuguese Association of Operational Research. The meetings bring together researchers, scholars and practitioners, as well as MSc and PhD students, working in the field of operations research to present and discuss their latest works. The main theme of the latest meeting was Operational Research Pro Bono. Given the breadth of topics covered, the book offers a valuable resource for all researchers, students and practitioners interested in the latest trends in this field.

Learning and Intelligent Optimization Youssef Hamadi 2012-10-01 This book constitutes the thoroughly refereed post-conference proceedings of the 6th International Conference on Learning and Intelligent Optimization, LION 6, held in Paris, France, in January 2012. The 23 long and 30 short revised papers were carefully reviewed and selected from a total of 99 submissions. The papers focus on the intersections and uncharted territories between machine learning, artificial intelligence, mathematical programming and algorithms for hard optimization problems. In addition to the paper contributions the conference also included 3 invited speakers, who presented forefront research results and frontiers, and 3 tutorial talks, which were crucial in bringing together the different components of LION community.

Pattern Recognition and Artificial Intelligence Yue Lu 2020-10-09 This book constitutes the proceedings of the Second International Conference on Pattern Recognition and Artificial Intelligence, ICPRAI 2020, which took place in Zhongshan, China, in October 2020. The 49 full and 14 short papers presented were carefully reviewed and selected for inclusion in the book. The papers were organized in topical sections as follows: handwriting and text processing; features and classifiers; deep learning; computer vision and image processing; medical imaging and applications; and forensic studies and medical diagnosis.

Applications of Metaheuristics in Process Engineering Jayaraman Valadi 2014-08-07 Metaheuristics exhibit desirable properties like simplicity, easy parallelizability and ready applicability to different types of optimization problems such as real parameter optimization, combinatorial optimization and mixed integer optimization. They are thus beginning to play a key role in different industrially important process engineering applications, among them the synthesis of heat and mass exchange equipment, synthesis of distillation columns and static and dynamic optimization of chemical and bioreactors. This book explains cutting-edge research techniques in related computational intelligence domains and their applications in real-world process engineering. It will be of interest to industrial practitioners and research academics.

Proceedings of International Conference on Emerging Technologies and Intelligent Systems Mostafa Al-Emran 2021 This book sheds light on the emerging research trends in intelligent systems and their applications. It mainly focuses on three different themes, including software engineering, ICT in education, and management information systems. Each chapter contributes to the aforementioned themes by discussing the recent design, developments, and

modifications of intelligent systems and their applications.

Research Anthology on Culturally Responsive Teaching and Learning Management Association, Information Resources 2021-05-28 As education continues to take great strides to become more inclusive and understanding of diverse students and cultures, teaching practices and methods for learning are an essential part of the puzzle and must be addressed to create culturally responsive educational experiences. Teachers must make meaningful connections between a student's culture, language, life experiences, and background to what the student is learning in the classroom. By integrating culture into the classroom, student achievement can be fostered, and students can excel. Underserved populations may face discrimination when it comes to culture, language, or race, and their needs can often be neglected. By implementing culturally responsive teaching, students can feel valued, motivated, understood, and included in their education. The Research Anthology on Culturally Responsive Teaching and Learning displays the best practices and lessons learned for culturally responsive teaching and learning across different types of institutions, classroom subjects, and with different types of students from diverse cultural backgrounds. The chapters focus on culturally responsive practices and how these methods for teaching can impact student success, empowerment, and cultural competence. This book is essential in understanding cultural diversity and inequity in education as well as the ways to address it. This book is ideal for faculty, teachers, counselors, administrators, principals, curriculum developers, instructional designers, professionals, researchers, and students seeking to improve their understanding of culturally responsive teaching and learning.

Anticipatory Systems Robert Rosen 2012-02-02 Robert Rosen was not only a biologist, he was also a brilliant mathematician whose extraordinary contributions to theoretical biology were tremendous. Founding, with this book, the area of Anticipatory Systems Theory is a remarkable outcome of his work in theoretical biology. This second edition of his book Anticipatory Systems, has been carefully revised and edited, and includes an Introduction by Judith Rosen. It has also been expanded with a set of Prolegomena by Dr. Mihai Nadin, who offers an historical survey of this fast growing field since the original work was published. There is also some exciting new work, in the form of an additional chapter on the Ontology of Anticipation, by Dr. John Kineman. An addendum-- with autobiographical reminiscences by Robert Rosen, himself, and a short story by Judith Rosen about her father-- adds a personal touch. This work, now available again, serves as the guiding foundations for the growing field of Anticipatory Systems and, indeed, any area of science that deals with living organisms in some way, including the study of Life and Mind. It will also be of interest to graduate students and researchers in the field of Systems Science.

Modeling, Simulation and Optimization of Complex Processes Hans Georg Bock 2012-02-03 This proceedings volume contains a selection of papers presented at the Fourth International Conference on High Performance Scientific Computing held at the Hanoi Institute of Mathematics, Vietnamese Academy of Science and Technology (VAST), March 2-6, 2009. The conference was organized by the Hanoi Institute of Mathematics, the Interdisciplinary Center for Scientific Computing (IWR), Heidelberg, and its Heidelberg Graduate School of Mathematical and Computational Methods for the Sciences, and Ho Chi Minh City University of Technology. The contributions cover the broad interdisciplinary spectrum of scientific computing and present recent advances in theory, development of methods, and applications in practice. Subjects covered are mathematical modelling, numerical simulation, methods for optimization and control, parallel computing, software development, applications of scientific computing in physics, mechanics, biology and medicine, engineering, hydrology problems, transport, communication networks, production scheduling, industrial and commercial problems.

Swarm Intelligence for Electric and Electronic Engineering Fornarelli, Girolamo 2012-12-31 With growing developments in artificial intelligence and focus on swarm behaviors; algorithms have been utilized in solving a variety of problems in the field of engineering. This approach has been specifically suited to face the challenges in electric and electronic engineering. Swarm Intelligence for Electric and Electronic Engineering provides an exchange of knowledge on the advances, discoveries, and improvements of swarm intelligence in electric and electronic engineering. This comprehensive collection aims to bring together new swarm-based algorithms as well as approaches to complex problems and various real-world applications.

Modern Inorganic Synthetic Chemistry Ruren Xu 2017-02-11 Modern Inorganic Synthetic Chemistry, Second Edition captures, in five distinct sections, the latest advancements in inorganic synthetic chemistry, providing materials chemists, chemical engineers, and materials scientists with a valuable reference source to help them advance their research efforts and achieve breakthroughs. Section one includes six chapters centering on synthetic chemistry under specific conditions, such as high-temperature, low-temperature and cryogenic, hydrothermal and solvothermal, high-pressure, photochemical and fusion conditions. Section two focuses on the synthesis and related chemistry problems of highly distinct categories of inorganic compounds, including superheavy elements, coordination compounds and coordination polymers, cluster compounds, organometallic compounds, inorganic polymers, and nonstoichiometric compounds. Section three elaborates on the synthetic chemistry of five important classes of inorganic functional materials, namely, ordered porous materials, carbon materials, advanced ceramic materials, host-guest materials, and hierarchically structured materials. Section four consists of four chapters where the synthesis of functional inorganic aggregates is discussed, giving special attention to the growth of single crystals, assembly of nanomaterials, and preparation of amorphous materials and membranes. The new edition's biggest highlight is Section five where the frontier in inorganic synthetic chemistry is reviewed by focusing on biomimetic synthesis and rationally designed synthesis. Focuses on the chemistry of inorganic synthesis, assembly, and organization of wide-ranging inorganic systems Covers all major methodologies of inorganic synthesis Provides state-of-the-art synthetic methods Includes real examples in the organization of complex inorganic functional materials Contains more than 4000 references that are all highly reflective of the latest advancement in inorganic synthetic chemistry Presents a comprehensive coverage of the key issues involved in modern inorganic synthetic chemistry as written by experts in the field

Soft Computing for Problem Solving Jagdish Chand Bansal 2018-12-14 This two-volume book presents outcomes of the 7th International Conference on Soft Computing for Problem Solving, SocProS 2017. This conference is a joint technical collaboration between the Soft Computing Research Society, Liverpool Hope University (UK), the Indian Institute of Technology Roorkee, the South Asian University New Delhi and the National Institute of Technology Silchar, and brings together researchers, engineers and practitioners to discuss thought-provoking developments and challenges in order to select potential future directions The book presents the latest advances and innovations in the interdisciplinary areas of soft computing, including original research papers in the areas including, but not limited to, algorithms (artificial immune systems, artificial neural networks, genetic algorithms, genetic programming, and particle swarm optimization) and applications (control systems, data mining and clustering, finance, weather forecasting, game theory, business and forecasting applications). It is a valuable resource for both young and experienced researchers dealing with complex and intricate real-world problems for which finding a solution by traditional methods is a difficult task.

Monte Carlo and Quasi-Monte Carlo Methods 2012 Josef Dick 2013-12-05 This book represents the refereed proceedings of the Tenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing that was held at the University of New South Wales (Australia) in February 2012. These biennial conferences are major events for Monte Carlo and the premiere event for quasi-Monte Carlo research. The proceedings include articles based on invited lectures as well as carefully selected contributed papers on all theoretical aspects and applications of Monte Carlo and quasi-Monte Carlo methods. The reader will be provided with information on latest developments in these very active areas. The book is an excellent reference for theoreticians and practitioners interested in solving high-dimensional computational problems arising, in particular, in finance, statistics and computer graphics.

Computational Logistics Ana Paias 2016-08-15 This book constitutes the refereed proceedings of the 7th International Conference on Computational Logistics, ICCL 2016, held in Lisbon, Portugal, in September 2016. The 29 papers presented in this volume were carefully reviewed and selected for inclusion in the book. They are organized in topical sections entitled: container terminals and maritime transportation; intermodal transport; location and routing; (general) logistics and supply chain management.

Intelligent Computer Mathematics Cezary Kaliszyk 2019-07-02 This book constitutes the refereed proceedings of the 12th International Conference on Intelligent Computer Mathematics, CICM 2019, held in Prague, Czech Republic, in July 2019. The 19 full papers presented were carefully reviewed and selected from a total of 41 submissions. The papers focus on digital and computational solutions which are becoming the prevalent means for the generation, communication, processing, storage and curation of mathematical information. Separate communities have developed to investigate and build computer based systems for computer algebra, automated deduction, and mathematical publishing as well as novel user interfaces. While all of these systems excel in their own right, their integration can lead to synergies offering significant added value.

Recent Developments and the New Direction in Soft-Computing Foundations and Applications Lotfi A. Zadeh 2018-05-28 This book is an authoritative collection of contributions in the field of soft-computing. Based on selected works presented at the 6th World Conference on Soft Computing, held on May 22-25, 2016, in Berkeley, USA, it describes new theoretical advances, as well as cutting-edge methods and applications. Theories cover a wealth of topics, such as fuzzy logic, cognitive modeling, Bayesian and probabilistic methods, multi-criteria decision making, utility theory, approximate reasoning, human-centric computing and many others. Applications concerns a number of fields, such

as internet and semantic web, social networks and trust, control and robotics, computer vision, medicine and bioinformatics, as well as finance, security and e-Commerce, among others. Dedicated to the 50th Anniversary of Fuzzy Logic and to the 95th Birthday Anniversary of Lotfi A. Zadeh, the book not only offers a timely view on the field, yet it also discusses thought-provoking developments and challenges, thus fostering new research directions in the diverse areas of soft computing.

Continuum Mechanics Through the Eighteenth and Nineteenth Centuries Gérard A. Maugin 2014-04-04 Conceived as a series of more or less autonomous essays, the present book critically exposes the initial developments of continuum thermo-mechanics in a post Newtonian period extending from the creative works of the Bernoullis to the First World war, i.e., roughly during first the "Age of reason" and next the "Birth of the modern world". The emphasis is rightly placed on the original contributions from the "Continental" scientists (the Bernoulli family, Euler, d'Alembert, Lagrange, Cauchy, Piola, Duhamel, Neumann, Clebsch, Kirchhoff, Helmholtz, Saint-Venant, Boussinesq, the Cosserat brothers, Caratheodory) in competition with their British peers (Green, Kelvin, Stokes, Maxwell, Rayleigh, Love,..). It underlines the main breakthroughs as well as the secondary ones. It highlights the role of scientists who left essential prints in this history of scientific ideas. The book shows how the formidable developments that blossomed in the twentieth century (and perused in a previous book of the author in the same Springer Series: "Continuum Mechanics through the Twentieth Century", Springer 2013) found rich compost in the constructive foundational achievements of the eighteenth and nineteenth centuries. The pre-WWI situation is well summarized by a thorough analysis of treatises (Appell, Hellinger) published at that time. English translations by the author of most critical texts in French or German are given to the benefit of the readers.

Rabi N. Bhattacharya Manfred Denker 2016-06-30 This volume presents some of the most influential papers published by Rabi N. Bhattacharya, along with commentaries from international experts, demonstrating his knowledge, insight, and influence in the field of probability and its applications. For more than three decades, Bhattacharya has made significant contributions in areas ranging from theoretical statistics via analytical probability theory, Markov processes, and random dynamics to applied topics in statistics, economics, and geophysics. Selected reprints of Bhattacharya's papers are divided into three sections: Modes of Approximation, Large Times for Markov Processes, and Stochastic Foundations in Applied Sciences. The accompanying articles by the contributing authors not only help to position his work in the context of other achievements, but also provide a unique assessment of the state of their individual fields, both historically and for the next generation of researchers. Rabi N. Bhattacharya: Selected Papers will be a valuable resource for young researchers entering the diverse areas of study to which Bhattacharya has contributed. Established researchers will also appreciate this work as an account of both past and present developments and challenges for the future.

Europe's Lifelong Learning Markets, Governance and Policy Marcella Milana 2020-07-20 This book explores European governance and policy coordination within lifelong learning markets. Using an instruments approach, the editors and contributors examine the ways in which governance mechanisms employed by the European Union influence policy to regulate lifelong learning, and intervene in lifelong learning markets, at both European and national levels. Filling an important gap in the current literature, this book examines how strengthened policy coordination at the EU level contributed to the blurring of boundaries between policy fields and the redefinition of the function of adult education after the 2008 recession. Divided into three parts, this book draws on a range of case studies from countries including Spain, Denmark, Bulgaria and the UK. It will be of interest and value to students and scholars of education policy and governance, adult education and lifelong learning.

Brain Informatics Mufti Mahmud 2022-09-20 This book constitutes the refereed proceedings of the 15th International Conference on Brain Informatics, BI 2022, held as hybrid event in Padua, Italy (in person) and Queensland, Australia (online) in July 2022. The 29 papers were selected from 65 submissions and the main theme of BI 2022 is Brain Science meets Artificial Intelligence with respect to the five tracks: Cognitive and computational foundations of brain science; human information processing systems; brain big data analytics, curation and management; informatics paradigms for brain and mental health research; and brain-machine intelligence and brain inspired computing.

Handbook of Global Education Policy Karen Mundy 2016-05-02 This innovative new handbook offers a comprehensive overview of the ways in which domestic education policy is framed and influenced by global institutions and actors. Surveys current debates about the role of education in a global polity, highlights key transnational policy actors, accessibly introduces research methodologies, and outlines global agendas for education reform Includes contributions from an international cast of established and emerging scholars at the forefront of the field thoughtfully edited and organized by a team of world-renowned global education policy experts Each section features a thorough introduction designed to facilitate readers' understanding of the subsequent material and highlight links to interdisciplinary global policy scholarship Written in an accessible and engaging style that will appeal to domestic and international policy practitioners, social scientists, and education scholars alike

Advanced Parallel Processing Technologies Yunji Chen 2015-08-14 This book constitutes the proceedings of the 11th International Symposium on Advanced Parallel Processing Technologies, APPT 2015, held in Jinan, China, in August 2015. The 8 papers presented in this volume were carefully reviewed and selected from 24 submissions. They deal with the recent advances in big data processing; parallel architectures and systems; parallel software; parallel algorithms and applications; and distributed and cloud computing.

ECAI 2012 L. De Raedt 2012-08-15 Artificial intelligence (AI) plays a vital part in the continued development of computer science and informatics. The AI applications employed in fields such as medicine, economics, linguistics, philosophy, psychology and logical analysis, not forgetting industry, are now indispensable for the effective functioning of a multitude of systems. This book presents the papers from the 20th biennial European Conference on Artificial Intelligence, ECAI 2012, held in Montpellier, France, in August 2012. The ECAI conference remains Europe's principal opportunity for researchers and practitioners of Artificial Intelligence to gather and to discuss the latest trends and challenges in all subfields of AI, as well as to demonstrate innovative applications and uses of advanced AI technology. ECAI 2012 featured four keynote speakers, an extensive workshop program, seven invited tutorials and the new Frontiers of Artificial Intelligence track, in which six invited speakers delivered perspective talks on particularly interesting new research results, directions and trends in Artificial Intelligence or in one of its related fields. The proceedings of PAIS 2012 and the System Demonstrations Track are also included in this volume, which will be of interest to all those wishing to keep abreast of the latest developments in the field of AI.

Issues in Water and Power Engineering: 2013 Edition 2013-05-01 Issues in Water and Power Engineering / 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Fusion Engineering. The editors have built Issues in Water and Power Engineering: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Fusion Engineering in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Water and Power Engineering: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Handbook of Finite Fields Gary L. Mullen 2013-06-17 Poised to become the leading reference in the field, the Handbook of Finite Fields is exclusively devoted to the theory and applications of finite fields. More than 80 international contributors compile state-of-the-art research in this definitive handbook. Edited by two renowned researchers, the book uses a uniform style and format throughout and

Issues in Structural and Materials Engineering: 2013 Edition 2013-05-01 Issues in Structural and Materials Engineering: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Computer Engineering. The editors have built Issues in Structural and Materials Engineering: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Computer Engineering in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Structural and Materials Engineering: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.