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KEY=J - SHEPPARD PRESTON

Accuracy and Stability of Numerical Algorithms

Second Edition

SIAM Accuracy and Stability of Numerical Algorithms gives a thorough, up-to-date treatment of the behavior of numerical algorithms in finite precision arithmetic. It combines algorithmic derivations, perturbation theory, and rounding error analysis, all enlivened by historical perspective and informative quotations. This second edition expands and updates the coverage of the first edition (1996) and includes numerous improvements to the original material. Two new chapters treat symmetric indefinite systems and skew-symmetric systems, and nonlinear systems and Newton's method. Twelve new sections include coverage of additional error bounds for Gaussian elimination, rank revealing LU factorizations, weighted and constrained least squares problems, and the fused multiply-add operation found on some modern computer architectures.

Numerical Methods Using Matlab

This package consists of the textbook plus MATLAB & Simulink Student Version 2010a For undergraduate Introduction to Numerical Analysis courses in mathematics, science, and engineering departments. This book provides a fundamental introduction to numerical analysis for undergraduate students in the areas of mathematics, computer science, physical sciences, and engineering. Knowledge of calculus is assumed.

Pandemics: Insurance and Social Protection

Springer Nature

Handbook of the Sociology of Gender

Springer Science & Business Media During the past three decades, feminist scholars have successfully demonstrated the ubiquity and omnirelevance of gender as a sociocultural construction in virtually all human collectivities, past and present. Intrapsychic, interactional, and collective social processes are gendered, as are micro, meso, and macro social structures. Gender shapes, and is shaped, in all arenas of social life, from the most mundane practices of everyday life to those of the most powerful corporate actors. Contemporary understandings of gender emanate from a large community of primarily feminist scholars that spans the gamut of learned disciplines and also includes non-academic activist thinkers. However, while incorporating some cross-disciplinary material, this volume focuses specifically on sociological theories and research concerning gender, which are discussed across the full array of social processes, structures, and institutions. As editor, I have explicitly tried to shape the contributions to this volume along several lines that reflect my long-standing views about sociology in general, and gender sociology in particular. First, I asked authors to include cross-national and

historical material as much as possible. This request reflects my belief that understanding and evaluating the here-and-now and working realistically for a better future can only be accomplished from a comparative perspective. Too often, American sociology has been both tempero- and ethnocentric. Second, I have asked authors to be sensitive to within-gender differences along class, racial/ethnic, sexual preference, and age cohort lines.

Experimental Statistics

Courier Corporation A handbook for those seeking engineering information and quantitative data for designing, developing, constructing, and testing equipment. Covers the planning of experiments, the analyzing of extreme-value data; and more. 1966 edition. Index. Includes 52 figures and 76 tables.

Parables for the Virtual

Movement, Affect, Sensation

Duke University Press Although the body has been the focus of much contemporary cultural theory, the models that are typically applied neglect the most salient characteristics of embodied existence—movement, affect, and sensation—in favor of concepts derived from linguistic theory. In *Parables for the Virtual* Brian Massumi views the body and media such as television, film, and the Internet, as cultural formations that operate on multiple registers of sensation beyond the reach of the reading techniques founded on the standard rhetorical and semiotic models. Renewing and assessing William James's radical empiricism and Henri Bergson's philosophy of perception through the filter of the post-war French philosophy of Deleuze, Guattari, and Foucault, Massumi links a cultural logic of variation to questions of movement, affect, and sensation. If such concepts are as fundamental as signs and significations, he argues, then a new set of theoretical issues appear, and with them potential new paths for the wedding of scientific and cultural theory. Replacing the traditional opposition of literal and figural with new distinctions between stasis and motion and between actual and virtual, *Parables for the Virtual* tackles related theoretical issues by applying them to cultural mediums as diverse as architecture, body art, the digital art of Stelarc, and Ronald Reagan's acting career. The result is an intriguing combination of cultural theory, science, and philosophy that asserts itself in a crystalline and multi-faceted argument. *Parables for the Virtual* will interest students and scholars of continental and Anglo-American philosophy, cultural studies, cognitive science, electronic art, digital culture, and chaos theory, as well as those concerned with the "science wars" and the relation between the humanities and the sciences in general.

LAPACK95 Users' Guide

SIAM LAPACK95 Users' Guide provides an introduction to the design of the LAPACK95 package.

Bretherick's Handbook of Reactive Chemical Hazards

An indexed guide to published data

Elsevier 'Bretherick' is widely accepted as the reference work on reactive chemical hazards and is essential for all those working with chemicals. It attempts to include every chemical for which documented information on reactive hazards has been found. The text covers over 5000 elements and compounds and as many again of secondary entries involving two or more compounds. One of its most valuable features is the extensive cross referencing throughout both sections which links similar compounds or incidents not obviously related. The fifth edition has been completely updated and revised by the new Editor and contains documented information on hazards and appropriate references up to 1994, although the text still follows the format of previous editions. Volume 1 is devoted to specific information on the stability of the listed compounds, or the reactivity of mixtures of two or more of them under various circumstances. Each compound is identified by an UPAC-based name, the CAS registry number, its empirical formula and structure. Each description of an incident or violent reaction gives reference to the original literature. Each chemical is classified on the basis of similarities in structure or reactivity, and these groups are listed alphabetically in Volume 2. The group entries contain a complete listing of all the compounds in Volume 1 assigned to that group to assist cross referral to similar compounds. Volume 2 also contains hazard topic entries arranged alphabetically, some with lists. Appendices include a fire related data table for higher risk chemicals, indexes of registry

numbers and chemical names as well as reference abbreviations and a glossary.

Software Engineering Methods in Intelligent Algorithms

Proceedings of 8th Computer Science On-line Conference 2019, Vol. 1

Springer This book presents software engineering methods in the context of the intelligent systems. It discusses real-world problems and exploratory research describing novel approaches and applications of software engineering, software design and algorithms. The book constitutes the refereed proceedings of the Software Engineering Methods in Intelligent Algorithms Section of the 8th Computer Science On-line Conference 2019 (CSOC 2019), held on-line in April 2019.

Convective Flow and Heat Transfer from Wavy Surfaces

Viscous Fluids, Porous Media, and Nanofluids

CRC Press Convective Flow and Heat Transfer from Wavy Surfaces: Viscous Fluids, Porous Media, and Nanofluids addresses the wavy irregular surfaces in heat transfer devices. Fluid flow and heat transfer studies from wavy surfaces have received attention, since they add complexity and require special mathematical techniques. This book considers the flow and heat transfer characteristics from wavy surfaces, providing an understanding of convective behavioral changes.

Lectures on Matrices

American Mathematical Soc. It is the organization and presentation of the material, however, which make the peculiar appeal of the book. This is no mere compendium of results--the subject has been completely reworked and the proofs recast with the skill and elegance which come only from years of devotion. --*Bulletin of the American Mathematical Society* The very clear and simple presentation gives the reader easy access to the more difficult parts of the theory. --*Jahrbuch über die Fortschritte der Mathematik* In 1937, the theory of matrices was seventy-five years old. However, many results had only recently evolved from special cases to true general theorems. With the publication of his Colloquium Lectures, Wedderburn provided one of the first great syntheses of the subject. Much of the material in the early chapters is now familiar from textbooks on linear algebra. Wedderburn discusses topics such as vectors, bases, adjoints, eigenvalues and the characteristic polynomials, up to and including the properties of Hermitian and orthogonal matrices. Later chapters bring in special results on commuting families of matrices, functions of matrices--including elements of the differential and integral calculus sometimes known as matrix analysis, and transformations of bilinear forms. The final chapter treats associative algebras, culminating with the well-known Wedderburn-Artin theorem that simple algebras are necessarily isomorphic to matrix algebras. Wedderburn ends with an appendix of historical notes on the development of the theory of matrices, and a bibliography that emphasizes the history of the subject.

Educational Neuroscience

John Wiley & Sons Educational Neuroscience presents a series of readings from educators, psychologists, and neuroscientists that explore the latest findings in developmental cognitive neurosciences and their potential applications to education. Represents a new research area with direct relevance to current educational practices and policy making Features individual chapters written collaboratively by educationalist, psychologists, and neuroscientists to ensure maximum clarity and relevance to a broad range of readers Edited by a trio of leading academics with extensive experience in the field

Biophysics

Searching for Principles

Princeton University Press Interactions between the fields of physics and biology reach back over a century, and some of the most significant developments in biology--from the discovery of DNA's structure to imaging of the human brain--have involved collaboration across this disciplinary boundary. For a new generation of physicists, the phenomena of life pose exciting challenges to physics itself, and biophysics has emerged as an important subfield of this discipline. Here, William Bialek provides the first graduate-level introduction to biophysics aimed at physics students. Bialek begins by exploring how photon counting in vision offers important lessons about the opportunities for quantitative, physics-style experiments on diverse biological phenomena. He draws from these lessons three general physical principles--the importance of noise, the need to understand the extraordinary performance of living systems without appealing to finely tuned parameters, and the critical role of the representation and flow of information in the business of life. Bialek then applies these principles to a broad range of phenomena, including the control of gene expression, perception and memory, protein folding, the mechanics of the inner ear, the dynamics of biochemical reactions, and pattern formation in developing embryos. Featuring numerous problems and exercises throughout, Biophysics emphasizes the unifying power of abstract physical principles to motivate new and novel experiments on biological systems. Covers a range of biological phenomena from the physicist's perspective Features 200 problems Draws on statistical mechanics, quantum mechanics, and related mathematical concepts Includes an annotated bibliography and detailed appendixes Instructor's manual (available only to teachers)

Computational Flow Modeling for Chemical Reactor Engineering

Academic Press Full text engineering e-book.

Handbook of Medical Neuropsychology

Applications of Cognitive Neuroscience

Springer Science & Business Media This handbook celebrates the abundantly productive interaction of neuropsychology and medicine. This interaction can be found in both clinical settings and research laboratories, often between research teams and clinical practitioners. It accounts for the rapidity with which awareness and understanding of the neuropsychological components of many common medical disorders have recently advanced. The introduction of neuropsychology into practice and research involving conditions without obvious neurological components follows older and eminently successful models of integrated care and treatment of the classical brain disorders. In the last 50 years, with the growing understanding of neurological disorders, neuropsychologists and medical specialists in clinics, at bedside, and in laboratories together have contributed to important clinical and scientific advances in the understanding of the common pathological conditions of the brain: stroke, trauma, epilepsy, certain movement disorders, tumor, toxic conditions (mostly alcohol-related), and degenerative brain diseases. It is not surprising that these seven pathological conditions were the first to receive attention from neuropsychologists as their behavioral symptoms can be both prominent and debilitating, often with serious social and economic consequences.

Language and Communication in Mental Retardation

Development, Processes, and intervention

Psychology Press Research on language and communication development and intervention in persons with mental retardation has been conducted at a fast and furious pace during the last two decades. Past attempts to summarize this research have been rather restricted, focusing on a single, narrowly defined substantive domain such as lexical development, or of a single etiology such as Down Syndrome. This volume, in contrast, presents a critical, integrative review of research and theory on language development and processing across all domains and a variety of etiologies. In addition, many previous attempts to review portions of this research have failed to consider the research within the context of current theory and data from developmental psycholinguistics and linguistics. A major contribution of this book is the emphasis on relevant work outside of mental retardation for understanding and treating the language and communication problems of persons with mental retardation. Finally, this book is comprehensive and up-to-date across all the areas of language covered including appropriate introductory material in linguistics and psychology -- discussions of the innateness,

cognition-first and motherese views of normal language acquisition. In addition, the authors' extensive bibliography is valuable in and of itself to any serious student or professional in the area.

Lightning Protection of Aircraft

CreateSpace This book is an attempt to present under one cover the current state of knowledge concerning the potential lightning effects on aircraft and that means that are available to designers and operators to protect against these effects. The impetus for writing this book springs from two sources- the increased use of nonmetallic materials in the structure of aircraft and the constant trend toward using electronic equipment to handle flight-critical control and navigation function.

Ramanujan

Letters and Commentary

American Mathematical Soc. The letters that Ramanujan wrote to G. H. Hardy on January 16 and February 27, 1913, are two of the most famous letters in the history of mathematics. These and other letters introduced Ramanujan and his remarkable theorems to the world and stimulated much research, especially in the 1920s and 1930s. This book brings together many letters to, from, and about Ramanujan. The letters came from the National Archives in Delhi, the Archives in the State of Tamil Nadu, and a variety of other sources. Helping to orient the reader is the extensive commentary, both mathematical and cultural, by Berndt and Rankin; in particular, they discuss in detail the history, up to the present day, of each mathematical result in the letters. Containing many letters that have never been published before, this book will appeal to those interested in Ramanujan's mathematics as well as those wanting to learn more about the personal side of his life. Ramanujan: Letters and Commentary was selected for the CHOICE list of Outstanding Academic Books for 1996.

Numerical Methods that Work

American Mathematical Soc.

Social Complexity and Complex Systems in Archaeology

Routledge Social Complexity and Complex Systems in Archaeology turns to complex systems thinking in search of a suitable framework to explore social complexity in Archaeology. Social complexity in archaeology is commonly related to properties of complex societies such as states, as opposed to so-called simple societies such as tribes or chiefdoms. These conceptualisations of complexity are ultimately rooted in Eurocentric perspectives with problematic implications for the field of archaeology. This book provides an in-depth conceptualisation of social complexity as the core concept in archaeological and interdisciplinary studies of the past, integrating approaches from complex systems thinking, archaeological theory, social practice theory, and sustainability and resilience science. The book covers a long-term perspective of social change and stability, tracing the full cycle of complexity trajectories, from emergence and development to collapse, regeneration and transformation of communities and societies. It offers a broad vision on social complexity as a core concept for the present and future development of archaeology. This book is intended to be a valuable resource for students and scholars in the field of archaeology and related disciplines such as history, anthropology, sociology, as well as the natural sciences studying human-environment interactions in the past.

The Childes Project

Tools for Analyzing Talk

Lawrence Erlbaum Associates Language research thrives on data collected from spontaneous interactions in naturally occurring situations. However, the process of collecting, transcribing, and analyzing naturalistic data can be extremely time-consuming and often unreliable. This book describes three basic tools for language analysis of transcript data by computer that have been developed in the context of the "Child Language Data Exchange System (CHILDES)" project. These are: the "CHAT" transcription and coding format, the "CLAN" package of analysis programs, and the "CHILDES" database. These

tools have brought about significant changes in the way research is conducted in the child language field. They are being used with great success by researchers working with second language learning, adult conversational interactions, sociological content analyses, and language recovery in aphasia, as well as by students of child language development. The tools are widely applicable, although this book concentrates on their use in the child language field, believing that researchers from other areas can make the necessary analogies to their own topics. This thoroughly revised 2nd edition includes documentation on a dozen new computer programs that have been added to the basic system for transcript analysis. The most important of these new programs is the "CHILDES" Text Editor (CED) which can be used for a wide variety of purposes, including editing non-Roman orthographies, systematically adding codes to transcripts, checking the files for correct use of "CHAT," and linking the files to digitized audio and videotape. In addition to information on the new computer programs, the manual documents changed the shape of the "CHILDES/BIB" system--given a major update in 1994--which now uses a new computer database system. The documentation for the "CHILDES" transcript database has been updated to include new information on old corpora and information on more than a dozen new corpora from many different languages. Finally, the system of "CHAT" notations for file transcript have been clarified to emphasize the ways in which the codes are used by particular "CLAN" programs. The new edition concludes with a discussion of new directions in transcript analysis and links between the "CHILDES" database and other developments in multimedia computing and global networking. It also includes complete references organized by research topic area for the more than 300 published articles that have made use of the "CHILDES" database and/or the "CLAN" programs. LEA also distributes the "CLAN" programs and the complete "CHILDES" Database--including corpora from several languages and discourse situations--described in "The CHILDES Project." Be sure to choose the correct platform (IBM or Macintosh) for the "CLAN" programs; the "CHILDES" Database CD-ROM runs on both platforms.

Modernizing the Academic Teaching and Research Environment

Methodologies and Cases in Business Research

Springer This book constitutes a valuable manual for young and seasoned business researchers alike, and provides a comprehensive summary for the whole research journey. It is a must-read for all researchers who need to understand the basics of business research, from identifying research topics, to planning and organizing the research process, and selecting the most appropriate methodology for the topic at hand. This book also provides insights on how to avoid common pitfalls in business research and outlines the research skills needed to write a fine piece of research. In order to capture the innovative element of research, the book also highlights methods for thinking outside the box. It also stresses the importance of respecting ethics while conducting business research. Lastly, it presents important cases and provides hands-on training for preparing survey tools. Readers looking to master business research won't want to miss out on this unique and insightful book.

Mentoring In Mathematics Teaching

Routledge The arena in which the preparation of student-teachers for the teaching of mathematics takes place is shifting its foundations and moving its boundaries. The whole basis of teacher education at secondary level is in flux with a move towards teacher-education programmes which are largely school based. Increasingly, there is seen to be an important role for the school teacher who acts as mentor to the student teacher in some relationship with a tutor from the initial training institution.; Teachers who are being encouraged to take on the mentoring role need preparation for its demands and teacher education courses need increasingly to make provision for the education and support of mentors. The purpose of this book is to discuss the mentoring process, to provide ideas and to highlight issues. It provides both practical help and guidance, and a philosophical consideration of the development of mathematics teachers and teaching.

Energy Project Financing

Resources and Strategies for Success

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

Handbook of Life Course Health Development

Springer This book is open access under a CC BY 4.0 license. This handbook synthesizes and analyzes the growing knowledge base on life course health development (LCHD) from the prenatal period through emerging adulthood, with implications for clinical practice and public health. It presents LCHD as an innovative field with a sound theoretical framework for understanding wellness and disease from a lifespan perspective, replacing previous medical, biopsychosocial, and early genomic models of health. Interdisciplinary chapters discuss major health concerns (diabetes, obesity), important less-studied conditions (hearing, kidney health), and large-scale issues (nutrition, adversity) from a lifespan viewpoint. In addition, chapters address methodological approaches and challenges by analyzing existing measures, studies, and surveys. The book concludes with the editors' research agenda that proposes priorities for future LCHD research and its application to health care practice and health policy. Topics featured in the Handbook include: The prenatal period and its effect on child obesity and metabolic outcomes. Pregnancy complications and their effect on women's cardiovascular health. A multi-level approach for obesity prevention in children. Application of the LCHD framework to autism spectrum disorder. Socioeconomic disadvantage and its influence on health development across the lifespan. The importance of nutrition to optimal health development across the lifespan. The Handbook of Life Course Health Development is a must-have resource for researchers, clinicians/professionals, and graduate students in developmental psychology/science; maternal and child health; social work; health economics; educational policy and politics; and medical law as well as many interrelated subdisciplines in psychology, medicine, public health, mental health, education, social welfare, economics, sociology, and law.

Increasing Psychological Well-being in Clinical and Educational Settings

Interventions and Cultural Contexts

Springer This volume deals with strategies aimed at increasing psychological well-being in both clinical and non-clinical settings, with a special focus on the impact of cross-cultural influences on these processes. Consisting of two parts, the book first examines clinical interventions for increasing well-being and positive functioning in adult populations. It looks at cultural differences in the experience of psychological well-being, presents an analysis of the concept of psychological well-being and discusses various interventions, including Well-Being Therapy and Cognitive Behavioral Therapy. Other concepts discussed are post-traumatic growth, wisdom and motivation. The second part of the book deals with psychological interventions in childhood and adolescence and has a strong emphasis on educational settings. It provides an overview of the main evidence-based psychotherapies for affective disorders in youths, and looks at the importance and impact of positive education, resilience, and hope. The book presents models for intervention and discusses several therapies in detail.

Process Modelling and Model Analysis

Elsevier Process Modelling and Model Analysis describes the use of models in process engineering. Process engineering is all about manufacturing--of just about anything! To manage processing and manufacturing systematically, the engineer has to bring together many different techniques and analyses of the interaction between various aspects of the process. For example, process engineers would apply models to perform feasibility analyses of novel process designs, assess environmental impact, and detect potential hazards or accidents. To manage complex systems and enable process design, the behavior of systems is reduced to simple mathematical forms. This book provides a systematic approach to the mathematical development of process models and explains how to analyze those models. Additionally, there is a comprehensive bibliography for further reading, a question and answer section, and an accompanying Web site developed by the authors with additional data and exercises. Introduces a structured modeling methodology emphasizing the importance of the modeling goal and including key steps such as model verification, calibration, and validation Focuses on novel and advanced modeling techniques such as discrete, hybrid, hierarchical, and empirical modeling Illustrates the notions, tools, and techniques of process modeling with examples and advances applications

Table of Binomial Coefficients

Political Anthropology

An Introduction

ABC-CLIO Standard text for teachers and students of political anthropology.

Attention and Performance Viii

Psychology Press First published in 1980. Routledge is an imprint of Taylor & Francis, an informa company.

The Massachusetts General Hospital Guide to Learning Disabilities

Assessing Learning Needs of Children and Adolescents

Springer This book connects experts in the field of child assessment to provide child psychiatrists with knowledge in evaluation and educational programming. The book provides a review of the latest science behind: common learning disabilities, including etiology and guidelines for assessment/diagnosis; neurodevelopmental disorders, like learning disabilities, ADHD; psychiatric disorders in childhood such as mood and anxiety disorders; and impact learning and development protocols. The Massachusetts General Hospital Guide to Learning Disabilities evaluates the interventions that are effective in addressing these learning challenges in the context of multiple factors in a way that no other current text does. Special topics such as special education law and managing the needs of transitional age youth allow psychiatrists to support their patients' and their families as they navigate the system. By offering a better understanding the learning needs of their patients, this texts gives readers the tools to consult with families and educators regarding how to address the learning needs of their patients at school and in other settings. The Massachusetts General Hospital Guide to Learning Disabilities is a vital took for child psychiatrists, students, assessment professionals, and other professionals studying or working with children suffering from learning disabilities.

Vascular Surgery

A Global Perspective

Springer Vascular surgery has experienced remarkable growth and diversification in the last decade, especially with its embracing the disruptive endovascular technological revolution. Vascular surgeons remain the only group of specialists capable of total treatment of patients with vascular disease, providing medical, minimally invasive, and surgical therapy. Although vascular surgeons practice in all areas of the world, practice patterns in different areas naturally have both similarities and differences that reflect both regional patterns of disease, genetic characteristics of local peoples, cultural preferences for treatment, local political and economic situations, different access to resources and devices, as well as different training paradigms. Thus, the practice of vascular surgery has diversified and evolved in parallel in many areas, converging and diverging in many ways. Vascular Surgery: A Global Perspective provides the first review and comparison of the diversity of vascular surgery practice around the world. The book is grouped according to common vascular diseases such as aneurysmal and occlusive arterial disease, as well as venous and lymphatic disease and dialysis access. Each major disease topic includes multiple chapters written by expert specialists from around the world, each discussing their local approach to the disease and its treatment. Similarly, the status of vascular surgery practice is addressed, including discussion of the influence of payment systems on practice, patient access to the internet for information, training paradigms, and the legal system including malpractice. This textbook provides the first worldwide summary of the care of patients with vascular disease and will be of interest to a wide audience including vascular surgeons, vascular medical specialists, cardiologists, radiologists, internists, and family practice physicians.

Beyond Transparency

Open Data and the Future of Civic Innovation

The rise of open data in the public sector has sparked innovation, driven efficiency, and fueled economic development. While still emerging, we are seeing evidence of the transformative potential of open data in shaping the future of our civic life, and the opportunity to use open data to reimagine the relationship between residents and government, especially at the local level. As we look ahead, what have we learned so far from open data in practice and how we can apply those lessons to realize a more promising future for America's cities and communities? Edited by Brett Goldstein, former Chief Data Officer for the City of Chicago, with Code for America, this book features essays from over twenty of the world's leading experts in a first-of-its-kind instructive anthology about how open data is changing the face of our public institutions. Contributors include: Michael Flowers, Chief Analytics Officer, New York City Beth Blauer, former director of Maryland StateStat Jonathan Feldman, CIO, City of Asheville Tim O'Reilly, founder & CEO, O'Reilly Media Eric Gordon, Director of Engagement Game Lab, Emerson College Beth Niblock, CIO, Louisville Metro Government Ryan & Mike Alfred, Co-Founders, Brightscope Emer Coleman, former director of the London Datastore Mark Headd, Chief Data Officer, City of Philadelphia "As an essential volume for anyone interested in the future of governance, urban policy, design, data-driven policymaking, journalism, or civic engagement, "Beyond Transparency" combines the inspirational glow and political grit of Profiles in Courage with the clarity of an engineer's calm explanation of how something technical actually works. Here are the detailed how-to stories of many members of the first generation of open government pioneers, written in a generous, accessible style; this compilation presents us with a great deal to admire, ample provocation, and wise guidance from a group of remarkable individuals." -Susan Crawford, author of Captive Audience "Just as he did during his time in my administration, Goldstein has brought together industry leaders to discuss issues of relevance in the open data movement and the practical implications of implementing these policies... This book will help continue the work to make open government a reality across the country." - Mayor Rahm Emanuel, City of Chicago "A must-read for anyone who is passionate about what open data can do to transform city living." - Boris Johnson, Mayor of London

The DFT

An Owners' Manual for the Discrete Fourier Transform

SIAM This book explores both the practical and theoretical aspects of the Discrete Fourier Transform, one of the most widely used tools in science, engineering, and computational mathematics. Designed to be accessible to an audience with diverse interests and mathematical backgrounds, the book is written in an informal style and is supported by many examples, figures, and problems. Conceived as an "owner's" manual, this comprehensive book covers such topics as the history of the DFT, derivations and properties of the DFT, comprehensive error analysis, issues concerning the implementation of the DFT in one and several dimensions, symmetric DFTs, a sample of DFT applications, and an overview of the FFT.

Fluency in Reading

Synchronization of Processes

Routledge This is the first book to examine in-depth the crucial role of the speed of information processing in the brain in determining reading fluency in both normal and dyslexic readers. Part I explains fluency in reading from both traditional and modern perspectives. Fluency has historically been viewed as the outcome of other reading-related factors and has often been seen as a convenient measure of reading skills. This book, however, argues that fluency has a strong impact on other aspects of reading and plays a central role in the entire reading process. Part II deals with the determinants of reading fluency. Chief among these is the speed of information processing in the brain. Using both behavioral and electrophysiological evidence, the book systematically examines the features of processing speed in the various brain systems involved in reading: visual-orthographic, auditory-phonological, and semantic and shows how speed of processing affects fluency in reading. Part III deals with the complex issues of cross-modal integration and specifically with the need for effective synchronization of the brain processes involved in reading. It puts forward the Synchronization Hypothesis and discusses the role of the Asynchrony Phenomenon as a major factor in dyslexia. Finally, it summarizes research on manipulating reading rate by means of the Acceleration method, providing evidence for a possible

intervention aimed at reducing Asynchrony. Key features of this outstanding new book include: *Expanded View of Fluency. Reading fluency is seen as both a dependent and an independent Variable. Currently available books focus on reading rate solely as the outcome of other factors whereas this volume stresses that it is both an outcome and a cause. *Information Processing Focus. Fluency itself is determined to a large extent by a more general factor, namely, speed of processing in the brain. The book presents wide-ranging evidence for individual differences in speed of processing across many subpopulations. *Brain Synchronization Focus. The book posits a new theory arguing that effective reading requires synchronization of the different brain systems: visual orthographic, auditory-phonological, and semantic. *Research-Based Interventions. Interventions to enhance fluency and, thereby, reading skills in general are presented in detail. *Author Expertise. Zvia Breznitz is Head of the Department of Learning Disabilities and Director of the Laboratory for Neurocognitive Research at Haifa University in Israel, where she has been researching this topic for over a decade. This book is appropriate for researchers and advanced students in reading, dyslexia, learning disabilities, cognitive psychology, and neuropsychology.

Computer Modeling for Injection Molding

Simulation, Optimization, and Control

John Wiley & Sons This book covers a wide range of applications and uses of simulation and modeling techniques in polymer injection molding, filling a noticeable gap in the literature of design, manufacturing, and the use of plastics injection molding. The authors help readers solve problems in the advanced control, simulation, monitoring, and optimization of injection molding processes. The book provides a tool for researchers and engineers to calculate the mold filling, optimization of processing control, and quality estimation before prototype molding.

Processing Foods

Quality Optimization and Process Assessment

CRC Press Processing Foods: Quality Optimization and Process Assessment provides a large body of updated information - helping researchers and industrialists make use of new concepts, technologies and approaches that are at the heart of modern food research. It will be a useful tool in the interweaving of scientific and technological information that the mul

Heart Rate Variability, Health and Well-being: A Systems Perspective

Frontiers Media SA The development of a new tool, analytic device, or approach frequently facilitates rapid growth in scientific understanding, although the process is seldom linear. The study of heart rate variability (HRV) defined as the extent to which beat-to-beat variation in heart rate varies, is a rapidly maturing paradigm that integrates health and wellness observations across a wide variety of biomedical and psychosocial phenomena and illustrates this nonlinear path of development. The utility of HRV as an analytic and interventive technique goes far beyond its original application as a robust predictor of sudden cardiac death. This Research Topic aims to provide a conceptual framework to use in exploring the utility of HRV as a robust parameter of health status, using a broad and inclusive definition of 'health' and 'well-being'. From the broadest perspective, current biomedical science emerged from shamanistic and religious healing practices and empirically observed interventions made as humans emerged from other hominins. The exponential growth of physics, chemistry and biology provided scientific support for the model emphasizing pathology and disorders. Even before the momentous discovery of germ theory, sanitation and other preventive strategies brought about great declines in mortality and morbidity. The revolution that is currently expanding the biomedical model is an integrative approach that includes the wide variety of non-physio/chemical factors that contribute to health. In the integrative approach, health is understood to be more than the absence of disease and emphasis is placed on optimal overall functioning, within the ecological niche occupied by the organism. This approach also includes not just interventive techniques and procedures, but also those social and cultural structures that provide access to safe and effective caring for sufferers. Beyond the typical drug and surgical interventions - which many identify with the Western biomedical model that currently enjoys an unstable hegemony - such factors also include cognitive-behavioral, social and cultural practices such as have been shown to be major contributors to the prevention and treatment of disease and the promotion of health and optimal functioning. This Integrative Model of Health and Well-being also derives additional conceptual power by recognizing the role played by evolutionary processes in which conserved, adaptive human traits and response tendencies are not congruent with current industrial and postindustrial global environmental demands and characteristics. This mismatch contributes to an increasing incidence of chronic conditions related to lifestyle and health behavior. Such a comprehensive model will make possible a truly personalized approach to health and well-being, including and going far beyond the current emphasis on genomic analysis, which has promised more than it has currently delivered. HRV offers an inexpensive and easily obtained measure of

neurovisceral functioning which has been found to relate to the occurrence and severity of numerous physical disease states, as well as many cognitive-behavioral health disorders. This use of the term neurovisceral refers to the relationships between the nervous system and the viscera, providing a more focused and specific conceptual alternative to the now nearly archaic “mind-body” distinction. This awareness has led to the recent and growing use of HRV as a health biomarker or health status measure of neurovisceral functioning. It facilitates studying the complex two way interaction between the central nervous system and other key systems such as the cardiac, gastroenterological, pulmonary and immune systems. The utility of HRV as a broad spectrum health indicator with possible application both clinically and to population health has only begun to be explored. Interventions based on HRV have been demonstrated to be effective evidence-based interventions, with HRV biofeedback treatment for PTSD representing an empirically supported modality for this complex and highly visible affliction. As an integral measure of stress, HRV can be used to objectively assess the functioning of the central, enteric and cardiac nervous systems, all of which are largely mediated by the vagal nervous complex. HRV has also been found to be a measure of central neurobiological concepts such as executive functioning and cognitive load. The relatively simple and inexpensive acquisition of HRV data and its ease of network transmission and analysis make possible a promising digital epidemiology which can facilitate objective population health studies, as well as web based clinical applications. An intriguing example is the use of HRV data obtained at motor vehicle crash sites in decision support regarding life flight evacuations to improve triage to critical care facilities. This Research Topic critically addresses the issues of appropriate scientific and analytic methods to capture the concept of the Integrative Health and Well-being Model. The true nature of this approach can be appreciated only by using both traditional linear quantitative statistics and nonlinear systems dynamics metrics, which tend to be qualitative. The Research Topic also provides support for further development of new and robust methods for evaluating the safety and effectiveness of interventions and practices, going beyond the sometimes tepid and misleading “gold standard” randomized controlled clinical trial.

Handbook of Early Childhood Special Education

Springer This handbook discusses early childhood special education (ECSE), with particular focus on evidence-based practices. Coverage spans core intervention areas in ECSE, such as literacy, motor skills, and social development as well as diverse contexts for services, including speech-language pathology, physical therapy, and pediatrics. Contributors offer strategies for planning, implementing, modifying, and adapting interventions to help young learners extend their benefits into the higher grades. Concluding chapters emphasize the importance of research in driving evidence-based practices (EBP). Topics featured in the Handbook include: Family-centered practices in early childhood intervention. The application of Response to Intervention (RtI) in young children with identified disabilities. Motor skills acquisition for young children with disabilities. Implementing evidence-based practices in ECSE classrooms. · Cultural, ethnic, and linguistic implications for ECSE. The Handbook of Early Childhood Special Education is a must-have resource for researchers, professors, upper-level undergraduate and graduate students, clinicians, and practitioners across such disciplines as child and school psychology, early childhood education, clinical social work, speech and physical therapy, developmental psychology, behavior therapy, and public health.

Information and Communication Technology for Development (ICT4D)

Routledge Mobile phones are close to ubiquitous in developing countries; Internet and broadband access are becoming commonplace. Information and communication technologies (ICTs) thus represent the fastest, broadest and deepest technical change experienced in international development. They now affect every development sector - supporting the work of hundreds of millions of farmers and micro-entrepreneurs; creating millions of ICT-based jobs; assisting healthcare workers and teachers; facilitating political change; impacting climate change; but also linked with digital inequalities and harms - with the pace of change continuously accelerating. Information and Communication Technology for Development (ICT4D) provides the first dedicated textbook to examine and explain these emerging phenomena. It will help students, practitioners, researchers and other readers understand the place of ICTs within development; the ICT-enabled changes already underway; and the key issues and interventions that engage ICT4D practice and strategy. The book has a three-part structure. The first three chapters set out the foundations of ICT4D: the core relation between ICTs and development; the underlying components needed for ICT4D to work; and best practice in implementing ICT4D. Five chapters then analyse key development goals: economic growth, poverty eradication, social development, good governance and environmental sustainability. Each chapter assesses the goal-related impact associated with ICTs and key lessons from real-world cases. The final chapter looks ahead to emerging technologies and emerging models of ICT-enabled development. The book uses extensive in-text diagrams, tables and boxed examples with chapter-end discussion and assignment questions and further reading. Supported by online activities, video links, session outlines and slides, this textbook provides the basis for undergraduate, postgraduate and online learning modules on ICT4D.