Data Structures Dcsk

A follow-up book to the classic Wabi-Sabi: for Artists, Designers, Poets & Philosophers.
Stellar astrophysics still provides the basic framework for deciphering the imprints left over by the evolving universe on all scales. Advances or shortcomings in the former field have direct consequences in our ability to understand the global properties of the latter. This volume contains the most recent updates on a variety of topics that, though independent by themselves, are inevitably connected on a cosmological scale. These include comprehensive articles by leaders in fields extending from stellar atmospheres through properties of the stellar component in the Milky Way up to the stellar environment in high redshift galaxies. The wide coverage of astrophysical themes makes this volume very valuable for researchers and Ph.D. students in astrophysics.
The threatened species categories used in Red Data Books and Red Lists have been in place for almost 30 years. The IUCN Red List Categories and Criteria provide an easily and widely understood system for classifying species at high risk of global extinction, so as to focus attention on conservation measures designed to protect them. This latest version of the classification system was adopted by the IUCN Council in February 2001 and reflects comments from the IUCN and SSC memberships and the final meeting of the Criteria Review Working Group.
This book is a collection of papers from international experts presented at International Conference on NextGen Electronic Technologies (ICNETS2-2016). ICNETS2 encompassed six symposia covering all aspects of electronics and communications domains, including relevant nano/micro materials and devices. Presenting recent research on wireless communication networks and Internet of Things, the book will prove useful to researchers, professionals and students working in the core areas of electronics and their applications, especially in signal processing, embedded systems and networking.
Ideal for learning or reference, this book explains the five main principles of algorithm design and their implementation in Haskell.
Data analysis forms the basis of many forms of research ranging from the scientific to the governmental. With the advent of machine intelligence and neural networks, extracting, modeling, and approaching data has been unimpeachably altered. These changes, seemingly small, affect the way societies organize themselves, deliver services, or interact with each other. Intelligent Techniques for Data Analysis in Diverse Settings addresses the specialized requirements of data analysis in a comprehensive way. This title contains a comprehensive overview of the most innovative recent approaches borne from intelligent techniques such as neural networks, rough sets, fuzzy sets, and metaheuristics. Combining new data analysis technologies, applications, emerging trends, and case studies, this publication reviews the intelligent, technological, and organizational aspects of the field. This book is ideally designed for IT professionals and students, data analysis specialists, healthcare providers, and policy makers.
One of the first books in this area, this text focuses on important aspects of the system operation, analysis and performance evaluation of selected chaos-based digital communications systems – a hot topic in communications and signal processing.
This review incorporates the views and visions of 2,000 clinicians and other health and social care professionals from every NHS region in England, and has been developed in discussion with patients, carers and the general public. The changes proposed are locally-led, patient-centred and clinically driven. Chapter 2 identifies the challenges facing the NHS in the 21st century: ever higher expectations; demand driven by demographics as people live longer; health in an

age of information and connectivity; the changing nature of disease; advances in treatment; a changing health workplace. Chapter 3 outlines the proposals to deliver high quality care for patients and the public, with an emphasis on helping people to stay healthy, empowering patients, providing the most effective treatments, and keeping patients as safe as possible in healthcare environments. The importance of quality in all aspects of the NHS is reinforced in chapter 4, and must be understood from the perspective of the patient's safety, experience in care received and the effectiveness of that care. Best practice will be widely promoted, with a central role for the National Institute for Health and Clinical Excellence (NICE) in expanding national standards. This will bring clarity to the high standards expected and quality performance will be measured and published. The review outlines the need to put frontline staff in control of this drive for quality (chapter 5), with greater freedom to use their expertise and skill and decision-making to find innovative ways to improve care for patients. Clinical and managerial leadership skills at the local level need further development, and all levels of staff will receive support through education and training (chapter 6). The review recommends the introduction of an NHS Constitution (chapter 7). The final chapter sets out the means of implementation.

This book constitutes the refereed proceedings of the Third International Conference on Image and Signal Processing, ICISP 2008, held in Cherbourg-Octeville, France, in July 2008. The 48 revised full papers and 22 revised poster papers presented were carefully reviewed and selected from 193 submissions. The papers are organized in topical sections on image filtering, image segmentation, computer vision, feature extraction, pattern recognition, graph-based representations, motion detection and estimation, new interfaces, document processing, and signal processing.

Chaotic Signals in Digital Communications combines fundamental background knowledge with state-of-the-art methods for using chaotic signals and systems in digital communications. The book builds a bridge between theoretical works and practical implementation to help researchers attain consistent performance in realistic environments. It shows the possible shortcomings of the chaos-based communication systems proposed in the literature, particularly when they are subjected to non-ideal conditions. It also presents a toolbox of techniques for researchers working to actually implement such systems. A Combination of Tutorials and In-Depth, Cutting-Edge Research Featuring contributions by active leading researchers, the book begins with an introduction to communication theory, dynamical systems, and chaotic communications suitable for those new to the field. This lays a solid foundation for the more applied chapters that follow. A Toolbox of Techniques—Including New Ways to Tackle Channel Imperfections The book covers typical chaos communication methods, namely chaotic masking, chaotic modulation, chaotic shift key, and symbolic message bearing, as well as bidirectional communication and secure communication. It also presents novel methodologies to deal with communication channel imperfections.

These tackle band-limited channel chaos communication, radio channels with fading, and the resistance of a special chaotic signal to multipath propagations. In addition, the book addresses topics related to engineering applications, such as optical communications, chaotic matched filters and circuit implementations, and microwave frequency-modulated differential chaos shift keying (FM-DCSK) systems. Insights for Both Theoretical and Experimental Researchers Combining theory and practice, this book offers a unique perspective on chaotic communication in the context of non-ideal conditions. Written for theoretical and experimental researchers, it tackles the practical issues faced in implementing chaos-based signals and systems in digital communications applications.

A contemplation on the abstruse nature of machine learning, mathematics, and the deep incursion of racial hierarchy. The Black Technical Object aims at introducing the history of statistical analysis and a knowledge of sociogenesis--a system of racism amenable to scientific explanation--into machine learning research as an act of impairing the racial ordering of the world. While machine learning--computer programming designed for taxonomic patterning--provides useful insight into racism and racist behavior, a gap is present in the relationship between machine learning, the racial history of scientific explanation, and the Black lived experience. Ramon Amaro explores how the history of data and statistical analysis provides a clear (and often sudden) grasp of the complex relationship between race and machine learning. Amaro juxtaposes a practical analysis of machine learning with a theory of Black alienation in order to inspire alternative approaches to contemporary algorithmic practice. In doing so, he offers a continuous contemplation on the abstruse nature of machine learning, mathematics, and the deep incursion of racial hierarchy.

This book constitutes the refereed post-conference proceedings of the Fifth International Conference on IoT as a Service, IoTaaS 2019, which took place in Xi’an, China, in November 2019. The 54 revised full papers were carefully reviewed and selected from 106 submissions. The papers contribute to the discussion on the challenges posed by Internet of Things (Io). The two technical tracks and three workshops deal in detail: Networking and Communications Technologies for IoT, IoT as a service, International Workshop on Edge Intelligence and Computing for IoT Communications and Applications, International Workshop on Wireless Automated Networking for Internet of Things, and International Workshop on Ubiquitous Services Transmission for Internet of Things.

Since the 1970's, there has been a great deal of research effort spent on studying chaotic systems and the properties of the chaotic signals generated. Characterized by their wideband, impulse-like autocorrelation and low cross-correlation properties, chaotic signals are useful spread-spectrum signals for carrying digital information. Spectrum spreading has become one of the most popular modulation techniques for high-speed wireless communications. It makes use of signals of very wide bandwidth to carry information at relatively low data

rates, and possesses advantages such as low probability of interception, resistance to jamming, multiple-access capability and mitigation to multipath effect, which are particularly important in a wireless scenario. In addition to enjoying the aforementioned benefits, chaotic signals can be generated using simple circuitries, thus lowering the cost of transceivers. Early study of chaos-based communication systems was focused on a single-user case. In the past few years, more effort has been put on investigating systems with multiple-access capability, which is a key feature of spread-spectrum communication systems. Digital Communications with Chaos presents a detailed study of some multiple-access schemes used for chaos-based communications, and evaluates their performance. In addition, the effectiveness of the multiuser detection techniques, whose primary objective is to reduce interference between users and hence improve performance, is evaluated in the context of multiple-access digital communication systems. Hot research topic Describes communication technologies for the future Authors among the pioneers researching in chaos-based communications

London Bridge lined with houses from end to end was one of the most extraordinary structures ever seen in London. It was home to over 500 people, perched above the rushing waters of the Thames, and was one of the city's main shopping streets. It is among the most familiar images of London in the past, but little has previously been known about the houses and the people who lived and worked in them. This book uses plentiful newly-discovered evidence, including detailed descriptions of nearly every house, to tell the story of the bridge and its houses and inhabitants. With the new information it is possible to reconstruct the plan of the bridge and houses in the seventeenth century, to trace the history of each house back through rentals and a survey to 1358, revealing the original layout, to date most of the houses which appear in later views, and to show how the houses and their occupants changed during five and half centuries. The book describes what stopped the houses falling into the river, how the houses were gradually enlarged, what their layout was inside, what goods were sold on the bridge and how these changed over time, the extensive rebuilding in 1477-1548 and 1683-96, and the removal of the houses around 1760. There are many new discoveries - about the structure of the bridge, the width of the roadway, the original layout of the houses, how the houses were supported, the size and internal planning of the houses, the quality of their architecture, and the trades practised on the bridge. The book includes five newly-commissioned reconstruction drawings showing what we now know about the bridge and its houses.

With a good background in nonlinear dynamics, chaos theory, and applications, the author of this leading book gives a systematic treatment of the basic principle of nonlinear dynamics in different fields. The contributions from leading international scientists active in the field provide a comprehensive overview of our current level of background on chaos theory and applications in different sciences. In addition, they

show overlap with the traditional field of control theory in scientific community.

This volume contains the proceedings of the 5th International Conference on Frontier Computing (FC 2016), Tokyo, Japan, July 13-15, 2016. This international meeting provided a forum for researchers to share current understanding of recent advances and emergence in information technology, science, and engineering, with themes in the scope of Communication Networks, Business Intelligence and Knowledge Management, Web Intelligence, and any related fields that further the development of information technology. The articles presented cover a wide spectrum of topics: database and data mining, networking and communications, web and internet of things, embedded system, soft computing, social network analysis, security and privacy, optics communication, and ubiquitous/pervasive computing. Many papers report results of great academic potential and value, and in addition, indicate promising directions of research in the focused realm of this conference series. Readers, including students, academic researchers, and professionals, will benefit from the results presented in this book. It also provides an overview of current research and can be used as a guidebook for those new to the field.

This book focuses on modelling and simulation, control and optimization, signal processing, and forecasting in selected nonlinear dynamical systems, presenting both literature reviews and novel concepts. It develops analytical or numerical approaches, which are simple to use, robust, stable, flexible and universally applicable to the analysis of complex nonlinear dynamical systems. As such it addresses key challenges are addressed, e.g. efficient handling of time-varying dynamics, efficient design, faster numerical computations, robustness, stability and convergence of algorithms. The book provides a series of contributions discussing either the design or analysis of complex systems in sciences and engineering, and the concepts developed involve nonlinear dynamics, synchronization, optimization, machine learning, and forecasting. Both theoretical and practical aspects of diverse areas are investigated, specifically neurocomputing, transportation engineering, theoretical electrical engineering, signal processing, communications engineering, and computational intelligence. It is a valuable resource for students and researchers interested in nonlinear dynamics and synchronization with applications in selected areas.

Students and staff from KCL’s Social Sciences BA programme turn the research lens back on their own world and together explore the many challenges of ‘trying to do things differently’ in Higher Education. In doing so, they grapple with fundamental questions in education such as: how to meaningfully foreground democracy, partnership, and emotional care; the role and limits of free speech; and how to deconstruct enduring inequality and marginalisation. In a period of considerable change and challenge for education, there is surely no better time to be critically analysing the principles guiding our universities through the lens of real-life practice. "In a period when university arrangements are being rethought in the wake of COVID-19 and the resurgence of Black Lives Matter, this compelling text is both timely and forward looking. ‘We’re trying to do things differently’ successfully brings together first year undergraduates and lecturers to research, analyse and document how students and staff co-create meaningful educational experiences. The authors offer a nuanced picture of the centrality of relationships and recognition to the degree course. It shows how the students foreground love, kindness and social justice, rather than curriculum

and outcomes, while being alert to the politics of difference and absence in higher education classrooms. The book draws on well-worn and innovative writing styles to produce analyses and arguments that are eye-opening, persuasive and raise difficult questions for future educational practices. This book is a must for anyone interested in championing excellence and social justice in higher education." Ann Phoenix, Professor of Psychosocial Studies, UCL Institute of Education "This is a book with a difference. It is based on critical scholarship and draws on reflexive analysis but – and this is the important and unique part - it is a book written mainly by university students about how to enact meaningful relationships in the academy. It takes as its substantive focus one new undergraduate programme but the agenda is about change, social justice and the hard work of real inclusion. This book stands as a wake-up call to all of us who care deeply about socially just education and democracy in our institutions of higher education. It is also a wonderful example of how to write something that really matters!" - Meg Maguire, Professor of Sociology of Education, King's College London

The monograph begins with a systematic introduction of chaos and chaos synchronization, and then extends to the methodologies and technologies in secure communication system design and implementation. The author combines theoretical frameworks with empirical studies, making the book a pratical reference for both academics and industrial engineers.

This two-volume set (CCIS 158 and CCIS 159) constitutes the refereed proceedings of the International Workshop on Computer Science for Environmental Engineering and EcoInformatics, CSEEE 2011, held in Kunming, China, in July 2011. The 150 revised full papers presented in both volumes were carefully reviewed and selected from a large number of submissions. The papers are organized in topical sections on computational intelligence; computer simulation; computing practices and applications; ecoinformatics; image processing information retrieval; pattern recognition; wireless communication and mobile computing; artificial intelligence and pattern classification; computer networks and Web; computer software, data handling and applications; data communications; data mining; data processing and simulation; information systems; knowledge data engineering; multimedia applications.

Chaos is a fascinating phenomenon that has been observed in nature, laboratory, and has been applied in various real-world applications. Chaotic systems are deterministic with no random elements involved yet their behavior appears to be random. Obser- tions of chaotic behavior in nature include weather and climate, the dynamics of sat- lites in the solar system, the time evolution of the magnetic field of celestial bodies, population growth in ecology, to mention only a few examples. Chaos has been observed in the laboratory in a number of systems such as electrical circuits, lasers, chemical reactions, fluid dynamics, mechanical systems, and magneto-mechanical devices. Chaotic behavior has also found numerous applications in electrical and communication engineering, information and communication technologies, biology and medicine. To the best of our knowledge, this is the first book edited on chaos applications in intelligent computing. To access the latest research related to chaos applications in intelligent computing, we launched the book project where researchers from all over the world provide the necessary coverage of the mentioned field. The primary obj- tive of this project was to assemble as much research coverage as possible related to the field by defining the latest innovative technologies and providing

the most c- prehensive list of research references.

How do you draw a map of 100,000 places, of more than a million flows of people, of changes over time and space, of different kinds of spaces, surfaces and volumes, from human travel time to landscapes of hopes, fears, migration, manufacturing and mortality? How do you turn the millions of numbers concerning some of the most important moments of our lives into images that allow us to appreciate the aggregate while still remembering the detail? The visualization of spatial social structure means, literally, making visible the geographical patterns to the way our lives have come to be socially organised, seeing the geography in society. To a statistical readership visualization implies using data. More widely defined it implies freeing our imaginations. The Visualization of Spatial Social Structure introduces the reader to new ways of thinking about how to look at social statistics, particularly those about people in places. The author presents a unique combination of statistical focus and understanding of social structures and innovations in visualization, describing the rationale for, and development of, a new way of visualizing information in geographical research. These methods are illustrated through extensive full colour graphics; revealing mistakes, techniques and discoveries which present a picture of a changing political and social geography. More complex aspects on the surface of social landscapes are revealed with sculptured symbols allowing us to see the relationships between the wood and the trees of social structure. Today's software can be so flexible that these techniques can now be emulated without coding. This book centres on a particular place and time; 1980s Britain, and a particular set of records; routine social statistics. A great deal of information about the 80s' social geography of Britain is contained within databases such as the population censuses, surveys and administrative data. Following the release of the 2011 census, now is a good time to look back at the past to introduce many new visualization techniques that could be used by future researchers.

Chaos control refers to purposefully manipulating chaotic dynamical behaviors of some complex nonlinear systems. There exists no similar control theory-oriented book available in the market that is devoted to the subject of chaos control, written by control engineers for control engineers. World-renowned leading experts in the field provide their state-of-the-art survey about the extensive research that has been done over the last few years in this subject. The new technology of chaos control has major impact on novel engineering applications such as telecommunications, power systems, liquid mixing, internet technology, high-performance circuits and devices, biological systems modeling like the brain and the heart, and decision making. The book is not only aimed at active researchers in the field of chaos control involving control and systems engineers, theoretical and experimental physicists, and applied mathematicians, but also at a general audience in related fields.

This book constitutes the refereed proceedings of the 17th International Symposium on Algorithms and Data Structures, WADS 2021, held in virtually in August 2021. The 47 full papers, presented together with two invited lectures, were carefully reviewed and selected from a total of 123 submissions. They present original research on the theory, design and application of algorithms and data structures.

Filip Vostal examines the changing nature of academic time, and analyzes the 'will to accelerate' that has emerged as a significant cultural and structural force in knowledge production.

The concept of transmitting information from one chaotic system to another derives from the observation of the synchronization of two chaotic systems. Having developed two chaotic systems that can be synchronized, scientists can modulate on one phase signal the information to be transmitted, and subtract (demodulate) the information from the corres

Engineers have long required a comprehensive yet concise resource to turn to for reliable, up-to-date information on the continually evolving field of telecommunications. In five easily searched volumes, the Wiley Encyclopedia of Telecommunications provides a broad, clear overview of both the fundamentals of and recent advances in telecommunications. This essential reference-the only one dedicated to telecommunications for electrical engineers-is available in print and online formats. Topics Include: Optical communications Modulation and demodulation Coding and decoding Communication networks Antennas John G. Proakis is the Series Editor for the Wiley Series in Telecommunications and Signal Processing. In preparing this Encyclopedia, Dr. Proakis been assisted by an editorial board of five leading telecommunications engineers from academia and industry to bring you: Approximately 300 articles on various topics in telecommunications Articles are written by experts in their fields A broad, clear overview of both the fundamentals and recent advances in telecommunications Cutting edge topics covering the entire field of telecommunications and signal processing For more information regarding the online edition of this major reference work, please visit: www.mrw.interscience.wiley.com/eot

How EU data practices establish and assign people to categories, and how this matters in enacting--"making up"--Europe as a population and people. What is "Europe" and who are "Europeans"? Data Practices approaches this contemporary political and theoretical question by treating it as a practical problem of counting. Only through the myriad data practices that make up methods such as censuses can EU member states know their national populations, and this in turn is utilized by the EU to understand the population of Europe. But this volume approaches data practices not simply as reflecting populations but as performative in two senses: they simultaneously enact--that is, "make up"--a European population and, by so doing--intentionally or otherwise--also contribute to making up a European people. The book develops a conception of data practices to analyze and interpret findings from collaborative ethnographic multisite fieldwork conducted by an interdisciplinary team of social science researchers as part of a five-year project, Peopling Europe: How Data Make a People. The book focuses on data practices that involve establishing and assigning people to categories and how this matters in enacting Europe as a population and people. Five core chapters explore key categories of people--usual residents, refugees, homeless people, migrants, and ethnic minorities--and how they come into being through specific data practices such as defining, estimating, recalibrating and inferring. Two additional chapters address two key subject positions that data practices produce and require: the data subject and the statistician subject.

This book constitutes the refereed proceedings of the 6th International Conference on Information Processing, ICIP 2012, held in Bangalore, India, in August 2012. The 75 revised full papers presented were carefully reviewed and selected from 380 submissions. The papers are organized in topical sections on wireless networks; image processing; pattern recognition and classification;

computer architecture and distributed computing; software engineering, information technology and optimization techniques; data mining techniques; computer networks and network security.

At the code level, discrete-time chaotic systems can be used to generate spreading codes for DS-SS systems. At the signal level, continuous-time chaotic systems can be used to generate wideband carriers for digital modulation schemes. The potential of chaos engineering is now recognized worldwide, with research groups actively pursuing the exploitation of chaotic phenomena in cryptography, spread spectrum communications, electromagnetic interference reduction, and many other applications. Although some noteworthy results have already been achieved, until now, the field has lacked both a systematic treatment of these developments and a careful, quantitative comparison of chaos-based and conventional techniques. Chaotic Electronics in Telecommunications fills both of those needs. It addresses the use of chaos in digital communications applications, from the coding level to circuit design. Each chapter offers a formal exposition of the theoretical and engineering tools needed to apply chaos, followed by discussion of the algorithms and circuits needed to apply the theory to real-world communications systems.

The data vault methodology presents a unique opportunity to model the enterprise data warehouse using the same automation principles applicable in today's software delivery, continuous integration, continuous delivery and continuous deployment while still maintaining the standards expected for governing a corporation's most valuable asset: data. This book provides at first the landscape of a modern architecture and then as a thorough guide on how to deliver a data model that flexes as the enterprise flexes, the data vault. Whether the data is structured, semi-structured or even unstructured one thing is clear, there is always a model either applied early (schema-on-write) or applied late (schema-on-read). Today's focus on data governance requires that we know what we retain about our customers, the data vault provides that focus by delivering a methodology focused on all aspects about the customer and provides some of the best practices for modern day data compliance.The book will delve into every data vault modelling artefact, its automation with sample code, raw vault, business vault, testing framework, a build framework, sample data vault models, how to build automation patterns on top of a data vault and even offer an extension of data vault that provides automated timeline correction, not to mention variation of data vault designed to provide audit trails, metadata control and integration with agile delivery tools.

DataOps is a new way of delivering data and analytics that is proven to get results. It enables IT and users to collaborate in the delivery of solutions that help organisations to embrace a data-driven culture. The DataOps Revolution: Delivering the Data-Driven Enterprise is a narrative about real world issues involved in using DataOps to make data-driven decisions in modern organisations. The book is built around real delivery examples based on the

author’s own experience and lays out principles and a methodology for business success using DataOps. Presenting practical design patterns and DataOps approaches, the book shows how DataOps projects are run and presents the benefits of using DataOps to implement data solutions. Best practices are introduced in this book through the telling of a story, which relates how a lead manager must find a way through complexity to turn an organisation around. This narrative vividly illustrates DataOps in action, enabling readers to incorporate best practices into everyday projects. The book tells the story of an embattled CIO who turns to a new and untested project manager charged with a wide remit to roll out DataOps techniques to an entire organisation. It illustrates a different approach to addressing the challenges in bridging the gap between IT and the business. The approach presented in this story lines up to the six IMPACT pillars of the DataOps model that Kinaesis (www.kinaesis.com) has been using through its consultants to deliver successful projects and turn around failing deliveries. The pillars help to organise thinking and structure an approach to project delivery. The pillars are broken down and translated into steps that can be applied to real-world projects that can deliver satisfaction and fulfillment to customers and project team members.

This book constitutes the refereed proceedings of the 16th International Symposium on Algorithms and Data Structures, WADS, 2019, held in Edmonton, AB, Canada, in August 2019. The 42 full papers presented together with 3 invited lectures, we carefully reviewed and selected from a total of 88 submissions. They present original research on the theory and application of algorithms and data structures in many areas, including combinatorics, computational geometry, databases, graphics, and parallel and distributed computing.