Correlating Events With Time Series For Incident Diagnosis

The past years have seen new technologies that could be utilized for early warning and real-time loss estimation. They include self-organizing sensor networks, new satellite imagery with high resolution, multi-sensor observational capacities, and crowd sourcing. From this and improved physical models, data processing and communication methodologies a significant step towards better early warning technologies has been achieved by research. At the same time, early warning systems became part of the disaster management practice for instance in Japan and Indonesia. This book marks the important point where: Research activities continue to improve early warning Experience with applications is expanding At this critical point in development of early warning for geological disasters it is timely to provide a volume that documents the state-of-the-art, provides an overview on recent developments and serves as knowledge resource for researcher and practitioners.

"This volume atempts to explore and clarify the relationship among the geological records, the extinctions, and the causes of catastrophes for life in Earth's history. Most of the papers address the geological record and the extinctions across the Cretaceou-Teriary boundary, and the buried Chicxulub structure that is now consensually deemed to be of impact origin and to be intimately related to that boundary." (GSA website).

Featuring contributions from leading international academics and practitioners, Credit Risk: Models, Derivatives, and Management illustrates how a risk management system can be implemented through an understanding of portfolio credit risks, a set of suitable models, and the derivation of reliable empirical results. Divided into six sections, the book • Explores the rapidly developing area of credit derivative products, including iTraxx Futures, iTraxx Default Swaptions, and constant proportion debt obligations • Addresses the relationships between the DJ iTraxx credit default swap (CDS) index and the stock market as well as CDS spreads and macroeconomic factors • Investigates systematic and firm-specific default risk factors, compares CDS pricing results from the CreditGrades industry benchmark to a trinomial tree approach, and applies the Hull–White intensity-based model to the pricing of names from the CDX index • Analyzes aggregate default and recovery rates on corporate bond defaults over a twenty-year period, the responses of hazard rates to changes in a set of economic variables, low-default portfolios, and tests on the accuracy of the Basel II framework • Describes benchmark models of implied credit correlation risk, copula-based default dependence concepts, the fit of various copula models, and a common factor model of systematic credit risk • Studies the pricing of options on single-name CDSs, the pricing of credit derivatives, collateralized debt obligation (CDO) price data, the pricing of CDO tranches, applications of Gaussian and Student's t copula functions, and the pricing of CDOs Using mathematical models and methodologies, this volume provides the essential knowledge to properly manage credit risk and make sound financial decisions.

This book constitutes the thoroughly refereed proceedings of the 15th International Conference on Software Technologies, ICSOFT 2020, which was held virtually due to the Covid-19 pandemic. The 12 revised full papers were carefully reviewed and selected from 95 submissions. The papers deal with the following topics: business process modelling; IT service management; interoperability and service-oriented architecture; project management software; scheduling and estimating; software metrics; requirements elicitation and specification; software and systems integration among others.

This book constitutes the proceedings of the 13th International Conference on Quantitative Evaluation Systems, QEST 2016, held in Quebec City, Canada, in August 2016. The 21 full papers and 3 tool demonstration papers presented were carefully reviewed and selected from 46 submissions. They are organized in topical sections entitled: Markov processes; tools; sampling, inference, and optimization methods; Markov decision processes and Markovian analysis; networks.

The application of data warehousing and data mining techniques to computer security is an important emerging area, as information processing and internet accessibility costs decline and more and more organizations become vulnerable to cyber attacks. These security breaches include attacks on single computers, computer networks, wireless networks, databases, or authentication compromises. This book describes data warehousing and data mining techniques that can be used to detect attacks. It is designed to be a useful handbook for practitioners and researchers in industry, and is also suitable as a text for advanced-level students in computer science.

Devoted to the application of neural networks to the concrete problem of time series of sea data Good reference for a diverse audience of grad students, researchers, and practitioners in applied mathematics, data analysis, meteorlogy, hydraulic, civil and marine engineering Methods, models and alogrithms developed in the work are useful for the construction of sea structures, ports, and marine experiments

"This book provides a valuable resource by addressing the most pressing issues facing cyber-security from both a national and global perspective"--Provided by publisher.

This book constitutes the refereed proceedings of the First International Conference on Data Warehousing and Knowledge Discovery, DaWaK'99, held in Florence, Italy in August/September 1999. The 31 revised full papers and nine short papers presented were carefully reviewed and selected from 88 submissions. The book is divided in topical sections on data warehouse design; online analytical processing; view synthesis, selection, and optimization; multidimensional databases; knowledge discovery; association rules; inexing and object similarities; generalized association rules and data and web mining; time series data bases; data mining applications and data analysis.

This book describes recent advances in the use of fuzzy logic for the design of hybrid intelligent systems based on nature-inspired optimization and their applications in areas such as intelligent control and robotics, pattern recognition, medical diagnosis, time series prediction and optimization of complex problems. Based on papers presented at the North American Fuzzy Information Processing Society Annual Conference (NAFIPS 2017), held in Cancun, Mexico from 16 to 18 October 2017, the book is divided into nine main parts, the first of which first addresses theoretical aspects, and proposes new concepts and algorithms based on type-1 fuzzy systems. The second part consists of papers on new concepts and algorithms for type-2 fuzzy systems, and on applications of type-2 fuzzy systems in diverse areas, such as time series prediction and pattern recognition. In turn, the third part contains papers that present enhancements to meta-heuristics based on fuzzy logic techniques describing new nature-inspired optimization algorithms that use fuzzy dynamic adaptation of parameters. The fourth part

presents emergent intelligent models, which range from quantum algorithms to cellular automata. The fifth part explores applications of fuzzy logic in diverse areas of medicine, such as the diagnosis of hypertension and heart diseases. The sixth part describes new computational intelligence algorithms and their applications in different areas of intelligent control, while the seventh examines the use of fuzzy logic in different mathematic models. The eight part deals with a diverse range of applications of fuzzy logic, ranging from environmental to autonomous navigation, while the ninth covers theoretical concepts of fuzzy models

The assessment of risks posed by natural hazards such as floods, droughts, earthquakes, tsunamis or cyclones is often based on short-term historical records that may not reflect the full range or magnitude of events possible. As human populations grow, especially in hazard-prone areas, methods for accurately assessing natural hazard risks are becoming increasingly important. In Extreme Events Jonathan Nott describes the many methods used to reconstruct such hazards from natural long-term records. He demonstrates how long-term (multi-century to millennial) records are essential in gaining a realistic understanding of the variability of natural hazards, and how short-term historical records can often misrepresent the likely risks associated with natural hazards. This book will form a useful resource for students taking courses covering natural hazards and risk assessment. It will also be valuable for urban planners, policy makers and non-specialists as a guide to understanding and reconstructing long-term records of natural hazards.

Focuses on presenting specific innovative computing artifacts and tools developed by researchers that are not commercially used. This work presents approaches and frameworks that focus on ability of an enterprise to analyze, build and protect computing infrastructure that supports value-added dimensions to the enterprise's business processes.

This book is a printed edition of the Special Issue "Sea Surface Temperature Retrievals from Remote Sensing" that was published in Remote Sensing

This two volume set LNCS 10177 and 10178 constitutes the refereed proceedings of the 22nd International Conference on Database Systems for Advanced Applications, DASFAA 2017, held in Suzhou, China, in March 2017. The 73 full papers, 9 industry papers, 4 demo papers and 3 tutorials were carefully selected from a total of 300 submissions. The papers are organized around the following topics: semantic web and knowledge management; indexing and distributed systems; network embedding; trajectory and time series data processing; data mining; query processing and optimization; text mining; recommendation; security, privacy, senor and cloud; social network analytics; map matching and spatial keywords; query processing and optimization; search and information retrieval; string and sequence processing; stream date processing; graph and network data processing; spatial databases; real time data processing; big data; social networks and graphs.

This two-volume set LNCS 10904 and 10905 constitutes the refereed proceedings of the 20th International Conference on Human Interface and the Management of Information, HIMI 2018, held as part of HCI International 2018 in Las Vegas, NV, USA, in July 2018.The total of 1170 papers and 195 posters included in the 30 HCII 2018 proceedings volumes was carefully reviewed and selected from 4373 submissions. The 56 papers presented in this volume were organized in topical sections named: information visualization; multimodal interaction; information in virtual and augmented reality; information and vision; and text and data mining and analytics.

Dealing with all aspects of risk management that have undergone significant innovation in recent years, this book aims at being a reference work in its field. Different to other books on the topic, it addresses the challenges and opportunities facing the different risk management types in banks, insurance companies, and the corporate sector. Due to the rising volatility in the financial markets as well as political and operational risks affecting the business sector in general, capital adequacy rules are equally important for non-financial companies. For the banking sector, the book emphasizes the modifications implied by the Basel II proposal. The volume has been written for academics as well as practitioners, in particular finance specialists. It is unique in bringing together such a wide array of experts and correspondingly offers a complete coverage of recent developments in risk management.

This two-volume set summarizes recent research on corporate decision-making. The first volume covers measurement and theoretical subjects as well as sources of capital, including banks, public offerings, and private investors. In the second volume, contributors focus on the ways corporations are structured and the practices through which they can be bought and sold. Thus, its major subjects include dividends, capital structure, financial distress, takeovers, restructurings, and managerial incentives. *Takes stock of the main empirical findings to date across an unprecedented spectrum of corporate finance issues *Discusses everything from econometric methodology, to raising capital and capital structure choice, and to managerial incentives and corporate investment behavior. *Contributors are leading empirical researchers that remain active in their respective areas of expertise *Writing style makes the chapters accessible to industry practitioners

Data analysis is an important part of modern business administration, as efficient compilation of information allows managers and business leaders to make the best decisions for the financial solvency of their organizations. Understanding the use of analytics, reporting, and data mining in everyday business environments is imperative to the success of modern businesses. Business Intelligence: Concepts, Methodologies, Tools, and Applications presents a comprehensive examination of business data analytics along with case studies and practical applications for businesses in a variety of fields and corporate arenas. Focusing on topics and issues such as critical success factors, technology adaptation, agile development approaches, fuzzy logic tools, and best practices in business process management, this multivolume reference is of particular use to business analysts, investors, corporate managers, and entrepreneurs in a variety of prominent industries.

This book introduces the latest advances relating to the pathophysiology, biophysics, monitoring and treatment of traumatic brain injury, hydrocephalus, and stroke presented at the 16th International Conference on Intracranial Pressure and Neuromonitoring (the "ICP Conference"), held in Cambridge, Massachusetts, in June 2016 in conjunction with the 6th Annual Meeting of the Cerebral Autoregulation Research Network. Additionally, the conference held special sessions on neurocritical care informatics and cerebrovascular

autoregulation. The peer-reviewed papers included were written by leading experts in neurosurgery, neurointensive care, anesthesiology, physiology, clinical engineering, clinical informatics and mathematics who have made important contributions in this translational area of research, and their focus ranges from the latest research findings and developments to clinical trials and experimental studies. The book continues the proud tradition of publishing key work from the ICP Conferences and is a must-read for anyone wishing to stay abreast of recent advances in the field.

Coverage in this proceedings includes XML schemas, data mining, spatial data, indexes and cubes, data streams, P2P and transactions, complex pattern processing, IR techniques, queries and transactions, XML databases, data warehouses, and distributed data.

Statistics in Medicine, Fourth Edition, helps medical and biomedical investigators design and answer questions about analyzing and interpreting data and predicting the sample size required to achieve useful results. It makes medical statistics easy for the non-biostatistician by outlining common methods used in 90% of medical research. The text covers how to plan studies from conception to publication, what to do with data, and follows with step-by-step instructions for biostatistical methods from the simplest levels, to more sophisticated methods now used in medical articles. Examples from almost every medical specialty, and from dentistry, nursing, pharmacy and health care management are provided. This book does not require background knowledge of statistics or mathematics beyond high school algebra and provides abundant clinical examples and exercises to reinforce concepts. It is a valuable source for biomedical researchers, healthcare providers and anyone who conducts research or quality improvement projects. Expands and revises important topics, such as basic concepts behind descriptive statistics and testing, descriptive statistics in three dimensions, the relationship between statistical testing and confidence intervals, and more Presents an easy-to-follow format with medical examples, step-by-step methods and check-yourself exercises Explains statistics for users with little statistical and mathematical background Encompasses all research development stages, from conceiving a study, planning it in detail, carrying out the methods, putting obtained data in analyzable form, analyzing and interpreting the results, and publishing the study

This book covers all types of literature on existing trend analysis approaches, but more than 60% of the methodologies are developed here and some of them are reflected to scientific literature and others are also innovative versions, modifications or improvements. The suggested methodologies help to design, develop, manage and deliver scientific applications and training to meet the needs of interested staff in companies, industries and universities including students. Technical content and expertise are also provided from different theoretical and especially active roles in the design, development and delivery of science in particular and economics and business in general. It is also ensured that, wherever possible and technically appropriate, priority is given to the inclusion and integration of real life data, examples and processes within the book content. The time seems right, because available books just focus on special sectors (fashion, social, business). This book reviews all the available trend approaches in the present literature on rational and logical bases.

Divided roughly into two sections, this book provides a brief history of the development of ECG along with heart rate variability (HRV) algorithms and the engineering innovations over the last decade in this area. It reviews clinical research, presents an overview of the clinical field, and the importance of heart rate variability in diagnosis. The book then discusses the use of particular ECG and HRV algorithms in the context of clinical applications.

This book investigates the causes and consequences of congressional attacks on the US Supreme Court, arguing that the extent of public support for judicial independence constitutes the practical limit of judicial independence. First, the book presents a historical overview of Court-curbing proposals in Congress. Then, building on interviews with Supreme Court justices, members of Congress, and judicial and legislative staffers, the book theorizes that congressional attacks are driven by public discontent with the Court. From this theoretical model, predictions are derived about the decision to engage in Court-curbing and judicial responsiveness to Court-curbing activity in Congress. The Limits of Judicial Independence draws on illustrative archival evidence, systematic analysis of an original dataset of Court-curbing proposals introduced in Congress from 1877 onward and judicial decisions.

Contributors describe the current understanding of abrupt climate variations that have occurred at millennial to submillennial time scales, events now recognized as characteristics of the global climate during the last glaciation. Subjects covered include analysis of modern climate and ocean dynamics, paleoclimate reconstructions derived from the marine, terrestrial and ice core records, and paleoclimate modeling studies. The breadth of global paleoclimate knowledge presented here provides information required to answer many questions and provides a road map to address remaining problems. Most material is from a June 1998 conference. Lacks a subject index. Annotation copyrighted by Book News, Inc., Portland, OR.

Induced seismic events are of high scientific and economic significance. They are the result of human activities interacting with regional and local tectonics, changing the local crustal stress state by mining, extraction of rock masses, injection of fluids into the rock massif, and by changing the surface loading and pore pressure state near large reservoirs. Within Europe the study of induced seismic events has a long tradition and international scientific organizations have actively stimulated the co-operation in this field. During its General Assembly in September 1994, the European Seismological Society organized the symposium "Induced Seismic Events". The focus of this symposium was concentrated on induced events in central and eastern Europe, as well as in the former Soviet Union. The major contributions to the symposium, and also some Chinese, Canadian, and South African results are presented here. Case studies as well as data analyses and methodological studies are included. Seismologists and specialists working

in the field of geohazard prevention will find much information in this volume that is pertinent to their work.

The author is concerned with whether or not surveys of consumer anticipations can improve predictions of purchase behavior relative to predictions that use only objective variables obtainable at the same date. The basic objective of the study is improved predictions of changes over time. Originally published in 1964. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.

This new volume of Methods in Enzymology continues the legacy of this premier serial with quality chapters authored by leaders in the field. This volume covers fluorescence fluctuation spectroscopy and includes chapters on such topics as Förster resonance energy transfer (fret) with fluctuation algorithms, protein corona on nanoparticles by FCS, and FFS approaches to the study of receptors in live cells. Continues the legacy of this premier serial with quality chapters authored by leaders in the field Covers fluorescence fluctuation spectroscopy Contains chapters on such topics as Förster resonance energy transfer (fret) with fluctuation algorithms, protein corona on nanoparticles by FCS, and FFS approaches to the study of receptors in live cells

This book presents the latest perspectives and challenges within the interrelated fields of econophysics and sociophysics, which have emerged from the application of statistical physics to economics and sociology. Economic and financial markets appear to be in a permanent state of flux. Billions of agents interact with each other, giving rise to complex dynamics of economic quantities at the micro and macro levels. With the availability of huge data sets, researchers can address questions at a much more granular level than was previously possible. Fundamental questions regarding the aggregation of actions and information and the coordination, complexity, and evolution of economic and financial networks are currently receiving much attention in the econophysics research agenda. In parallel, the sociophysics literature has focused on large-scale social data and their interrelations. In this book, leading researchers from different communities – economists, sociologists, financial analysts, mathematicians, physicists, statisticians, and others – report on their recent work and their analyses of economic and social behavior.

Event mining encompasses techniques for automatically and efficiently extracting valuable knowledge from historical event/log data. The field, therefore, plays an important role in data-driven system management. Event Mining: Algorithms and Applications presents state-of-the-art event mining approaches and applications with a focus on computing system management. The book first explains how to transform log data in disparate formats and contents into a canonical form as well as how to optimize system monitoring. It then shows how to extract useful knowledge from data. It describes intelligent and efficient methods and algorithms to perform data-driven pattern discovery and problem determination for managing complex systems. The book also discusses data-driven approaches for the detailed diagnosis of a system issue and addresses the application of event summarization in Twitter messages (tweets). Understanding the interdisciplinary field of event mining can be challenging as it requires familiarity with several research areas and the relevant literature is scattered in diverse publications. This book makes it easier to explore the field by providing both a good starting point for readers not familiar with the topics and a comprehensive reference for those already working in this area.

This two volume set of LNCS 11029 and LNCS 11030 constitutes the refereed proceedings of the 29th International Conference on Database and Expert Systems Applications, DEXA 2018, held in Regensburg, Germany, in September 2018. The 35 revised full papers presented together with 40 short papers were carefully reviewed and selected from 160 submissions. The papers of the first volume discuss a range of topics including: Big data analytics; data integrity and privacy; decision support systems; data semantics; cloud data processing; time series data; social networks; temporal and spatial databases; and graph data and road networks. The papers of the second volume discuss a range of the following topics: Information retrieval; uncertain information; data warehouses and recommender systems; data streams; information networks and algorithms; database system architecture and performance; novel database solutions; graph querying and databases; learning; emerging applications; data mining; privacy; and text processing.

The book Intelligent Systems for Science and Information is the remarkable collection of extended chapters from the selected papers that were published in the proceedings of Science and Information (SAI) Conference 2013. It contains twenty-four chapters in the field of Intelligent Systems, which received highly recommended feedback during SAI Conference 2013 review process. All chapters have gone through substantial extension and consolidation and were subject to another round of rigorous review and additional modification. These chapters represent the state of the art of the cutting-edge research and technologies in related areas, and can help inform relevant research communities and individuals of the future development in Science and Information.

All articles, notes, queries, corrigenda, and obituaries appearing in the following journals during the indicated years are indexed: Annals of mathematical statistics, 1961-1969; Biometrics, 1965-1969#3; Biometrics, 1951-1969; Journal of the American Statistical Association, 1956-1969; Journal of the Royal Statistical Society, Series B, 1954-1969,#2; South African statistical journal, 1967-1969,#2; Technometrics, 1959-1969.--p.iv.