

# Empirical Comparison Of Algorithms For Network Community

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[Complex Networks & Their Applications V](#) - Hocine Cherifi  
2016-11-25

This book highlights cutting-edge research in the field of network science, offering scientists, researchers and graduate students a unique opportunity to catch up on the latest advances in theory and a

multitude of applications. It presents the peer-reviewed proceedings of the fifth International Workshop on Complex Networks & their Applications (COMPLEX NETWORKS 2016), which took place in Milan during the last week of November 2016. The carefully selected papers are

divided into 11 sections reflecting the diversity and richness of research areas in the field. More specifically, the following topics are covered: Network models; Network measures; Community structure; Network dynamics; Diffusion, epidemics and spreading processes; Resilience and control; Network visualization; Social and political networks; Networks in finance and economics; Biological and ecological networks; and Network analysis.

**Trends and Applications in Knowledge Discovery and Data Mining** - Xiao-Li Li

2015-11-25

This book constitutes the refereed proceedings at PAKDD Workshops 2015, held in conjunction with PAKDD, the 19th Pacific-Asia Conference on Knowledge Discovery and Data Mining in Ho Chi Minh City, Vietnam, in May 2015. The 23 revised papers presented were carefully reviewed and selected from 57 submissions. The workshops affiliated with PAKDD 2015

include: Pattern Mining and Application of Big Data (BigPMA), Quality Issues, Measures of Interestingness and Evaluation of data mining models (QIMIE), Data Analytics for Evidence-based Healthcare (DAEBH), Vietnamese Language and Speech Processing (VLSP).

*Machine Learning Techniques for Online Social Networks* - Tansel Özyer 2018-05-30

The book covers tools in the study of online social networks such as machine learning techniques, clustering, and deep learning. A variety of theoretical aspects, application domains, and case studies for analyzing social network data are covered. The aim is to provide new perspectives on utilizing machine learning and related scientific methods and techniques for social network analysis. Machine Learning Techniques for Online Social Networks will appeal to researchers and students in these fields.

Mining Social Networks and Security Informatics - Tansel Özyer 2013-06-01

Crime, terrorism and security are in the forefront of current societal concerns. This edited volume presents research based on social network techniques showing how data from crime and terror networks can be analyzed and how information can be extracted. The topics covered include crime data mining and visualization; organized crime detection; crime network visualization; computational criminology; aspects of terror network analyses and threat prediction including cyberterrorism and the related area of dark web; privacy issues in social networks; security informatics; graph algorithms for social networks; general aspects of social networks such as pattern and anomaly detection; community discovery; link analysis and spatio-temporal network mining. These topics will be of interest to researchers and practitioners in the general area of security informatics. The volume will also serve as a general reference for readers that would want to become

familiar with current research in the fast growing field of cybersecurity.

### **Complex Networks and Their Applications VII** - Luca

Maria Aiello 2018-12-01

This book highlights cutting-edge research in the field of network science, offering scientists, researchers, students and practitioners a unique update on the latest advances in theory, together with a wealth of applications. It presents the peer-reviewed proceedings of the VII International Conference on Complex Networks and their Applications (COMPLEX NETWORKS 2018), which was held in Cambridge on December 11-13, 2018. The carefully selected papers cover a wide range of theoretical topics such as network models and measures; community structure and network dynamics; diffusion, epidemics and spreading processes; and resilience and control; as well as all the main network applications, including social and political networks; networks in finance and

economics; biological and neuroscience networks; and technological networks.

### **Hybrid Artificial Intelligent**

**Systems** - Enrique Onieva  
2015-05-29

This volume constitutes the proceedings of the 10th International Conference on Hybrid Artificial Intelligent Systems, HAIS 2015, held Bilbao, Spain, June 2014. The 60 papers published in this volume were carefully reviewed and selected from 190 submissions. They are organized in topical sections such as data mining and knowledge discovery; video and image analysis; bio-inspired models and evolutionary computation; learning algorithms; hybrid intelligent systems for data mining and applications; classification and cluster analysis, HAIS applications.

*AI 2018: Advances in Artificial Intelligence* - Tanja Mitrovic  
2018-12-03

This book constitutes the proceedings of the 31st Australasian Joint Conference on Artificial Intelligence, AI

2018, held in Wellington, New Zealand, in December 2018.

The 50 full and 26 short papers presented in this volume were carefully reviewed and selected from 125 submissions. The paper were organized in topical sections named: agents, games and robotics; AI applications and innovations; computer vision; constraints and search; evolutionary computation; knowledge representation and reasoning; machine learning and data mining; planning and scheduling; and text mining and NLP.

Rough Sets - Víctor Flores  
2016-09-28

This book constitutes the refereed proceedings of the International Joint Conference on Rough Sets, IJCRS 2016, held in Santiago de Chile, Chile, in October 2016. The 46 revised full papers presented together with 7 keynotes, tutorials and expert papers were carefully reviewed and selected from 108 submissions. The papers are grouped in topical sections on Rough Sets, Approximation and Granulation; Rough Sets, Non-

Determinism and Incompleteness; Rough Sets and Three-way Decisions; Fuzziness and Similarity in Knowledge Representation; Machine Learning and Decision Making; Ranking and Clustering; Derivation and Application of Rules and Trees; Derivation and Application of Feature Subsets.

**Experimental Algorithms** -

Ralf Klasing 2012-05-28

This book constitutes the refereed proceedings of the 11th International Symposium on Experimental Algorithms, SEA 2012, held Bordeaux, France, in June 2012. The 31 revised full papers presented together with 3 invited papers were carefully reviewed and selected from 64 submissions and present current research in the area of design, analysis, and experimental evaluation and engineering of algorithms, as well as in various aspects of computational optimization and its applications.

*High Performance Computing* -

Esteban Meneses 2019-03-30

This book constitutes the proceedings of the 5th Latin

American Conference, CARLA 2018, held in Bucaramanga, Colombia, in September 2018. The 24 papers presented in this volume were carefully reviewed and selected from 38 submissions. They are organized in topical sections on: Artificial Intelligence; Accelerators; Applications; Performance Evaluation; Platforms and Infrastructures; Cloud Computing.

**Social Networks: A**

**Framework of**

**Computational Intelligence** -

Witold Pedrycz 2013-12-09

This volume provides the audience with an updated, in-depth and highly coherent material on the conceptually appealing and practically sound information technology of Computational Intelligence applied to the analysis, synthesis and evaluation of social networks. The volume involves studies devoted to key issues of social networks including community structure detection in networks, online social networks, knowledge growth and evaluation, and diversity of collaboration

mechanisms. The book engages a wealth of methods of Computational Intelligence along with well-known techniques of linear programming, Formal Concept Analysis, machine learning, and agent modeling. Human-centricity is of paramount relevance and this facet manifests in many ways including personalized semantics, trust metric, and personal knowledge management; just to highlight a few of these aspects. The contributors to this volume report on various essential applications including cyber attacks detection, building enterprise social networks, business intelligence and forming collaboration schemes. Given the subject area, this book is aimed at a broad audience of researchers and practitioners. Owing to the nature of the material being covered and a way it is organized, the volume will appeal to the well-established communities including those active in various disciplines in which social networks, their

analysis and optimization are of genuine relevance. Those involved in operations research, management, various branches of engineering, and economics will benefit from the exposure to the subject matter.

*Community Structure of Complex Networks* - Hua-Wei Shen 2013-01-06

Community structure is a salient structural characteristic of many real-world networks. Communities are generally hierarchical, overlapping, multi-scale and coexist with other types of structural regularities of networks. This poses major challenges for conventional methods of community detection. This book will comprehensively introduce the latest advances in community detection, especially the detection of overlapping and hierarchical community structures, the detection of multi-scale communities in heterogeneous networks, and the exploration of multiple types of structural regularities. These advances have been successfully applied to analyze large-scale online

social networks, such as Facebook and Twitter. This book provides readers a convenient way to grasp the cutting edge of community detection in complex networks. The thesis on which this book is based was honored with the "Top 100 Excellent Doctoral Dissertations Award" from the Chinese Academy of Sciences and was nominated as the "Outstanding Doctoral Dissertation" by the Chinese Computer Federation.

Web Information Systems Engineering -- WISE 2014 - Boualem Benatallah  
2014-09-11

This book constitutes the proceedings of the 15th International Conference on Web Information Systems Engineering, WISE 2014, held in Thessaloniki, Greece, in October 2014. The 52 full papers, 16 short and 14 poster papers, presented in the two-volume proceedings LNCS 8786 and 8787 were carefully reviewed and selected from 196 submissions. They are organized in topical sections named: Web mining, modeling

and classification; Web querying and searching; Web recommendation and personalization; semantic Web; social online networks; software architectures and platforms; Web technologies and frameworks; Web innovation and applications; and challenge.

*Models and Theories in Social Systems* - Cristina Flaut  
2018-10-12

This book concisely presents a broad range of models and theories on social systems. Because of the huge spectrum of topics involving social systems, various issues related to Mathematics, Statistics, Teaching, Social Science, and Economics are discussed. In an effort to introduce the subject to a wider audience, this volume, part of the series "Studies in Systems, Decision and Control", equally addresses the needs of mathematicians, statisticians, sociologists and philosophers. The studies examined here are divided into four parts. The first part, "Perusing the Minds Behind Scientific Discoveries",

traces the winding path of Syamal K. Sen and Ravi P. Agarwal's scholarship throughout history, and most importantly, the thought processes that allowed each of them to master their subject. The second part covers "Theories in Social Systems" and the third discusses "Models in Social Systems", while the fourth and final part is dedicated to "Mathematical Methods in the Social Sciences". Given its breadth of coverage, the book will offer inquisitive readers a valuable point of departure for exploring these rich, vast, and ever-expanding fields of knowledge.

**Advances in Conceptual Modeling** - Jeffrey Parsons  
2014-12-15

This book constitutes the refereed proceedings of workshops, held at the 32nd International Conference on Conceptual Modeling, ER 2013, in Hong Kong, China in November 2013. The 30 revised full papers were carefully reviewed and selected out of 57 submissions. The papers are organized in

sections related to the individual workshops: LSAWM, Legal and Social Aspects in Web Modeling; MoBiD, 1st International Workshop on Modeling and Management of Big Data; RIGiM, 5th International Workshop on Requirements, Intentions and Goals in Conceptual Modeling; SeCoGIS, 7th International Workshop on Semantic and Conceptual Issues in Geographic Information Systems; WISM, 10th International Workshop on Web Information Systems Modeling; DaSeM, Data Mining and Semantic Computing for Object Modeling; SCME, 1st Symposium on Conceptual Modeling Education; and PhD Symposium. Continuing the ER tradition, the ER 2013 workshops provided researchers, students, and industry professionals with a forum to present and discuss emerging, cutting-edge topics related to conceptual modeling and its applications.

*Intelligent Computing Theories* - De-Shuang Huang 2013-07-20  
This book constitutes the



refereed conference proceedings of the 9th International Conference on Intelligent Computing, ICIC 2013, held in Nanning, China, in July 2013. The 74 revised full papers presented were carefully reviewed and selected from numerous submissions and are organized in topical sections on neural networks, nature inspired computing and optimization, cognitive science and computational neuroscience, knowledge discovery and data mining, evolutionary learning and genetic algorithms machine learning theory and methods, natural language processing and computational linguistics, fuzzy theory and models, soft computing, unsupervised and reinforced learning, intelligent computing in finance, intelligent computing in petri nets, intelligent data fusion and information security, virtual reality and computer interaction, intelligent computing in pattern recognition, intelligent computing in image processing, intelligent

computing in robotics, complex systems theory and methods. Complex Networks IV - Gourab Ghoshal 2013-02-19  
A network is a mathematical object consisting of a set of points (called vertices or nodes) that are connected to each other in some fashion by lines (called edges). Turns out this simple description corresponds to a bewildering array of systems in the real world, ranging from technological ones such as the Internet and World Wide Web, biological networks such as that of connections of the nervous systems or blood vessels, food webs, protein interactions, infrastructural systems such as networks of roads, airports or the power-grid, to patterns of social acquaintance such as friendship, network of Hollywood actors, connections between business houses and many more. Recent years have witnessed a substantial amount of interest within the scientific community in the properties of these networks. The emergence of the internet in

particular, coupled with the widespread availability of inexpensive computing resources has facilitated studies ranging from large scale empirical analysis of networks in the real world, to the development of theoretical models and tools to explore the various properties of these systems. The study of networks is broadly interdisciplinary and central developments have occurred in many fields, including mathematics, physics, computer and information sciences, biology, and the social sciences. This book brings together a collection of cutting-edge research in the field from a diverse array of researchers ranging from physicists to social scientists, and presents them in a coherent fashion, highlighting the strong interconnections between the different areas. Topics included are social networks and social media, opinion and innovation diffusion, synchronization, transportation networks and human mobility, as well as theory, modeling and metrics

of Complex Networks.

**Big and Complex Data Analysis** - S. Ejaz Ahmed  
2017-03-21

This volume conveys some of the surprises, puzzles and success stories in high-dimensional and complex data analysis and related fields. Its peer-reviewed contributions showcase recent advances in variable selection, estimation and prediction strategies for a host of useful models, as well as essential new developments in the field. The continued and rapid advancement of modern technology now allows scientists to collect data of increasingly unprecedented size and complexity. Examples include epigenomic data, genomic data, proteomic data, high-resolution image data, high-frequency financial data, functional and longitudinal data, and network data. Simultaneous variable selection and estimation is one of the key statistical problems involved in analyzing such big and complex data. The purpose of this book is to stimulate research and foster interaction

between researchers in the area of high-dimensional data analysis. More concretely, its goals are to: 1) highlight and expand the breadth of existing methods in big data and high-dimensional data analysis and their potential for the advancement of both the mathematical and statistical sciences; 2) identify important directions for future research in the theory of regularization methods, in algorithmic development, and in methodologies for different application areas; and 3) facilitate collaboration between theoretical and subject-specific researchers.

### **AI and IoT for Sustainable Development in Emerging Countries** - Zakaria Boulouard 2022

This book comprises a number of state-of-the-art contributions from both scientists and practitioners working in a large pool of fields where AI and IoT can open up new horizons. Artificial intelligence and Internet of Things have introduced themselves today as must-have technologies in

almost every sector. Ranging from agriculture to industry and health care, the scope of applications of AI and IoT is as wide as the horizon. Nowadays, these technologies are extensively used in developed countries, but they are still at an early stage in emerging countries. AI and IoT for Sustainable Development in Emerging Countries-- Challenges and Opportunities is an invaluable source to dive into the latest applications of AI and IoT and how they have been used by researchers from emerging countries to solve sustainable development-related issues by taking into consideration the specificities of their countries. This book starts by presenting how AI and IoT can tackle the challenges of sustainable development in general and then focuses on the following axes: · AI and IoT for smart environment and energy · Industry 4.0 and intelligent transportation · A vision towards an artificial intelligence of medical things · AI, social media, and big data

analytics. It aspires to provide a relevant reference for students, researchers, engineers, and professionals working in these particular areas or those interested in grasping its diverse facets and exploring the latest advances on their respective fields and the role of AI and IoT in them.

Machine Learning and Knowledge Discovery in Databases - Toon Calders  
2014-09-01

This three-volume set LNAI 8724, 8725 and 8726 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases: ECML PKDD 2014, held in Nancy, France, in September 2014. The 115 revised research papers presented together with 13 demo track papers, 10 nectar track papers, 8 PhD track papers, and 9 invited talks were carefully reviewed and selected from 550 submissions. The papers cover the latest high-quality interdisciplinary research results in all areas related to

machine learning and knowledge discovery in databases.

*User Community Discovery* - Georgios Paliouras 2015-10-28  
This book redefines community discovery in the new world of Online Social Networks and Web 2.0 applications, through real-world problems and applications in the context of the Web, pointing out the current and future challenges of the field. Particular emphasis is placed on the issues of community representation, efficiency and scalability, detection of communities in hypergraphs, such as multi-mode and multi-relational networks, characterization of social media communities and online privacy aspects of online communities. *User Community Discovery* is for computer scientists, data scientists, social scientists and complex systems researchers, as well as students within these disciplines, while the connections to real-world problem settings and applications makes the book

appealing for engineers and practitioners in the industry, in particular those interested in the highly attractive fields of data science and big data analytics.

**Dynamics On and Of Complex Networks, Volume 2**

Animesh Mukherjee  
2013-06-04

This self-contained book systematically explores the statistical dynamics on and of complex networks with a special focus on time-varying networks. In the constantly changing modern world, there is an urgent need to understand problems related to systems that dynamically evolve in either structure or function, or both. This work is an attempt to address such problems in the framework of complex networks. Dynamics on and of Complex Networks, Volume 2: Applications to Time-Varying Dynamical Systems is a collection of surveys and cutting-edge research contributions exploring key issues, challenges, and characteristics of dynamical networks that

emerge in various complex systems. Toward this goal, the work is thematically organized into three main sections with the primary thrust on time-varying networks: Part I studies social dynamics; Part II focuses on community identification; and Part III illustrates diffusion processes. The contributed chapters in this volume are intended to promote cross-fertilization in several research areas and will be valuable to newcomers in the field, experienced researchers, practitioners, and graduate students interested in pursuing research in dynamical networks with applications to computer science, statistical physics, nonlinear dynamics, linguistics, and the social sciences. This volume follows Dynamics On and Of Complex Networks: Applications to Biology, Computer Science, and the Social Sciences (2009), ISBN 978-0-8176-4750-6.

**Unsupervised Learning Algorithms** - M. Emre Celebi  
2016-04-29

This book summarizes the state-of-the-art in unsupervised

learning. The contributors discuss how with the proliferation of massive amounts of unlabeled data, unsupervised learning algorithms, which can automatically discover interesting and useful patterns in such data, have gained popularity among researchers and practitioners. The authors outline how these algorithms have found numerous applications including pattern recognition, market basket analysis, web mining, social network analysis, information retrieval, recommender systems, market research, intrusion detection, and fraud detection. They present how the difficulty of developing theoretically sound approaches that are amenable to objective evaluation have resulted in the proposal of numerous unsupervised learning algorithms over the past half-century. The intended audience includes researchers and practitioners who are increasingly using unsupervised learning algorithms to analyze their

data. Topics of interest include anomaly detection, clustering, feature extraction, and applications of unsupervised learning. Each chapter is contributed by a leading expert in the field.

### **Handbook of Approximation Algorithms and**

**Metaheuristics** - Teofilo F. Gonzalez 2018-05-15

Handbook of Approximation Algorithms and Metaheuristics, Second Edition reflects the tremendous growth in the field, over the past two decades. Through contributions from leading experts, this handbook provides a comprehensive introduction to the underlying theory and methodologies, as well as the various applications of approximation algorithms and metaheuristics. Volume 1 of this two-volume set deals primarily with methodologies and traditional applications. It includes restriction, relaxation, local ratio, approximation schemes, randomization, tabu search, evolutionary computation, local search, neural networks, and other metaheuristics. It also explores

multi-objective optimization, reoptimization, sensitivity analysis, and stability. Traditional applications covered include: bin packing, multi-dimensional packing, Steiner trees, traveling salesperson, scheduling, and related problems. Volume 2 focuses on the contemporary and emerging applications of methodologies to problems in combinatorial optimization, computational geometry and graphs problems, as well as in large-scale and emerging application areas. It includes approximation algorithms and heuristics for clustering, networks (sensor and wireless), communication, bioinformatics search, streams, virtual communities, and more. About the Editor Teofilo F. Gonzalez is a professor emeritus of computer science at the University of California, Santa Barbara. He completed his Ph.D. in 1975 from the University of Minnesota. He taught at the University of Oklahoma, the Pennsylvania State University, and the University of Texas at Dallas,

before joining the UCSB computer science faculty in 1984. He spent sabbatical leaves at the Monterrey Institute of Technology and Higher Education and Utrecht University. He is known for his highly cited pioneering research in the hardness of approximation; for his sublinear and best possible approximation algorithm for k-tMM clustering; for introducing the open-shop scheduling problem as well as algorithms for its solution that have found applications in numerous research areas; as well as for his research on problems in the areas of job scheduling, graph algorithms, computational geometry, message communication, wire routing, etc.

### **Social Networking -**

Mrutyunjaya Panda 2014-07-08  
With the proliferation of social media and on-line communities in networked world a large gamut of data has been collected and stored in databases. The rate at which such data is stored is growing at a phenomenal rate and

pushing the classical methods of data analysis to their limits. This book presents an integrated framework of recent empirical and theoretical research on social network analysis based on a wide range of techniques from various disciplines like data mining, social sciences, mathematics, statistics, physics, network science, machine learning with visualization techniques and security. The book illustrates the potential of multi-disciplinary techniques in various real life problems and intends to motivate researchers in social network analysis to design more effective tools by integrating swarm intelligence and data mining.

*Social Media Mining and Social Network Analysis: Emerging Research* - Xu, Guandong  
2013-01-31

*Social Media Mining and Social Network Analysis: Emerging Research* highlights the advancements made in social network analysis and social web mining and its influence in the fields of computer science, information systems, sociology,

organization science discipline and much more. This collection of perspectives on developmental practice is useful for industrial practitioners as well as researchers and scholars.

**Mobile Social Networking** - Alvin Chin 2013-10-30

The use of contextually aware, pervasive, distributed computing, and sensor networks to bridge the gap between the physical and online worlds is the basis of mobile social networking. This book shows how applications can be built to provide mobile social networking, the research issues that need to be solved to enable this vision, and how mobile social networking can be used to provide computational intelligence that will improve daily life. With contributions from the fields of sociology, computer science, human-computer interaction and design, this book demonstrates how mobile social networks can be inferred from users' physical interactions both with the environment and with others,



as well as how users behave around them and how their behavior differs on mobile vs. traditional online social networks.

Probabilistic Approaches for Social Media Analysis - Kun Yue 2020

"This unique compendium focuses on the acquisition and analysis of social media data. The approaches concern both the data-intensive characteristics and graphical structures of social media. The book addresses the critical problems in social media analysis, which representatively cover its lifecycle. The must-have volume is an excellent reference text for professionals, researchers, academics and graduate students in AI and databases"--

**From Social Data Mining and Analysis to Prediction and Community Detection** - Mehmet Kaya 2017-03-21

This book presents the state-of-the-art in various aspects of analysis and mining of online social networks. Within the broader context of online social

networks, it focuses on important and upcoming topics of social network analysis and mining such as the latest in sentiment trends research and a variety of techniques for community detection and analysis. The book collects chapters that are expanded versions of the best papers presented at the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM'2015), which was held in Paris, France in August 2015. All papers have been peer reviewed and checked carefully for overlap with the literature. The book will appeal to students and researchers in social network analysis/mining and machine learning.

**Multimodal Political Networks** - David Knoke 2021-05-27

Research on social networks has become a significant area of investigation in the social sciences, and social network concepts and tools are widely employed across many subfields within the field. This volume introduces political

theorists and researchers to new theoretical, methodological, and substantive tools for extending political network research into new realms and revitalizing established domains. The authors synthesize new understandings of multimodal political networks, consisting of two or more types of social entities - voters, politicians, parties, events, organizations, nations - and the complex relations between them. They discuss ways to theorize about multimodal connections, methods for measuring and analyzing multimodal datasets, and how the results can reveal new insights into political structures and action. Several empirical applications demonstrate in great detail how multimodal analysts can detect and visualize political communities consisting of diverse social entities.

**Congress on Intelligent Systems** - Harish Sharma  
2021-06-01

This book is a collection of selected papers presented at the First Congress on

Intelligent Systems (CIS 2020), held in New Delhi, India, during September 5-6, 2020. It includes novel and innovative work from experts, practitioners, scientists, and decision-makers from academia and industry. It covers topics such as Internet of Things, information security, embedded systems, real-time systems, cloud computing, big data analysis, quantum computing, automation systems, bio-inspired intelligence, cognitive systems, cyber physical systems, data analytics, data/web mining, data science, intelligence for security, intelligent decision making systems, intelligent information processing, intelligent transportation, artificial intelligence for machine vision, imaging sensors technology, image segmentation, convolutional neural network, image/video classification, soft computing for machine vision, pattern recognition, human-computer interaction, robotic devices and systems, autonomous vehicles, intelligent control systems,

human motor control, game playing, evolutionary algorithms, swarm optimization, neural network, deep learning, supervised learning, unsupervised learning, fuzzy logic, rough sets, computational optimization, and neuro-fuzzy systems.

### **Theory and Applications of Models of Computation -**

Manindra Agrawal 2012-05-04

This book constitutes the refereed proceedings of the 9th International Conference on Theory and Applications of Models of Computation, TAMC 2012, held in Beijing, China, in May 2012. The conference was combined with the Turing Lectures 2012, dedicated to celebrating Alan Turing's unique impact on mathematics, computing, computer science, informatics, morphogenesis, philosophy, and the wider scientific world. Eight Turing Lectures were given at the TAMC 2012. The 40 revised full papers presented together with invited talks were carefully reviewed and selected from 86 submissions. The papers

address 4 special sessions at TAMC 2012 which were algorithms and information in networks, complexity and cryptography, models of computing and networking, programming and verification.

### **Linking and Mining Heterogeneous and Multi-view Data -**

Deepak P 2018-12-13

This book highlights research in linking and mining data from across varied data sources. The authors focus on recent advances in this burgeoning field of multi-source data fusion, with an emphasis on exploratory and unsupervised data analysis, an area of increasing significance with the pace of growth of data vastly outpacing any chance of labeling them manually. The book looks at the underlying algorithms and technologies that facilitate the area within big data analytics, it covers their applications across domains such as smarter transportation, social media, fake news detection and enterprise search among others. This book enables

readers to understand a spectrum of advances in this emerging area, and it will hopefully empower them to leverage and develop methods in multi-source data fusion and analytics with applications to a variety of scenarios. Includes advances on unsupervised, semi-supervised and supervised approaches to heterogeneous data linkage and fusion; Covers use cases of analytics over multi-view and heterogeneous data from across a variety of domains such as fake news, smarter transportation and social media, among others; Provides a high-level overview of advances in this emerging field and empowers the reader to explore novel applications and methodologies that would enrich the field.

**Algorithms and Models for the Web Graph** - Anthony

Bonato 2018-05-29

This book constitutes the proceedings of the 15th International Workshop on Algorithms and Models for the Web Graph, WAW 2018, held in Moscow, Russia in May 2018.

The 11 full papers presented in this volume were carefully reviewed and selected from various submissions. The papers focus on topics like the information retrieval and data mining on the Web; Web as a text repository and as a graph, induced in various ways by link among pages, hosts and users; the understanding of graphs that arise from the Web and various user activities on the Web; stimulation of the development of high-performance algorithms and applications that exploit these graphs.

**Network Science** - Pedro Ribeiro 2022-02-24

This book constitutes the refereed proceedings of the 7th International Conference and School of Network Science, NetSci-X 2022, held in Porto, Portugal, in February 2021.

The 13 full papers were carefully reviewed and selected from 19 submissions. The papers deal with the study of network models in domains ranging from biology and physics to computer science, from financial markets to

cultural integration, and from social media to infectious diseases.

**Handbook of Research on Applied Cybernetics and Systems Science** - Saha,

Snehanshu 2017-04-17

In the digital era, novel applications and techniques in the realm of computer science are increasing constantly. These innovations have led to new techniques and developments in the field of cybernetics. The Handbook of Research on Applied Cybernetics and Systems Science is an authoritative reference publication for the latest scholarly information on complex concepts of more adaptive and self-regulating systems. Featuring exhaustive coverage on a variety of topics such as infectious disease modeling, clinical imaging, and computational modeling, this publication is an ideal source for researchers and students in the field of computer science seeking emerging trends in computer science and computational mathematics. GeNeDis 2016 - Panayiotis

Vlamos 2017-10-01

The 2nd World Congress on Geriatrics and

Neurodegenerative Disease Research (GeNeDis 2016),

focuses on recent advances in geriatrics and

neurodegeneration, ranging from basic science to clinical and pharmaceutical

developments and provides an international forum for the

latest scientific discoveries, medical practices and care

initiatives. Advanced information technologies are

discussed concerning the various research,

implementation and policy, as well as European and global

issues in the funding of long-term care and medico-social

policies regarding elderly people. This volume focuses on

the sessions from the conference on computational

biology and bioinformatics.

**Artificial Intelligence**

**Applications and**

**Innovations. AIAI 2021 IFIP**

**WG 12.5 International**

**Workshops** - Ilias

Maglogiannis 2021-06-26

This book constitutes the

refereed proceedings of six International Workshops held as parallel events of the 17th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2021, virtually and in Hersonissos, Crete, Greece, in June 2021: the 6th Workshop on 5G-Putting Intelligence to the Network Edge, 5G-PINE 2021; Artificial Intelligence in Biomedical Engineering and Informatics Workshop, AI-BIO 2021; Workshop on Defense Applications of AI, DAAI 2021; Distributed AI for Resource-Constrained Platforms Workshop, DARE 2021; Energy Efficiency and Artificial Intelligence Workshop, EEAI 2021; and the 10th Mining Humanistic Data Workshop, MHDW 2021. The 24 full papers and 16 short papers presented at these workshops were carefully reviewed and selected from 72 submissions. The papers presented at 5G-PINE focus on the latest AI applications in the telecommunication industry and AI in modern 5G-oriented

telecommunications infrastructures. The papers chosen for AI-BIO 2021 present research on the subject of AI, in its broadest sense, in biomedical engineering and health informatics. The DAAI 2021 papers aim at presenting recent evolutions in artificial intelligence applicable to defense and security applications. The papers selected for DARE 2021 address a variety of pertinent and challenging topics within the scope of distributed AI for resource-constrained platforms. The papers presented at EEAI 2021 aim to bring together interdisciplinary approaches that focus on the application of AI-driven solutions for increasing and improving energy efficiency of residential and tertiary buildings and of occupant behavior. The MHDW papers focus on topics such as recommendation systems, sentiment analysis, pattern recognition, data mining, and time series.

*Geo-Spatial Knowledge and Intelligence* - Hanning Yuan

2017-03-02

The two volume proceedings of CCIS 698 and 699 constitutes revised selected papers from the 4th International Conference on Geo-Informatics in Resource Management and Sustainable Ecosystem, GRMSE 2016, held in Hong Kong, China, in November 2016. The total of 118 papers presented in these proceedings were carefully reviewed and selected from 311 submissions. The contributions were organized in topical sections named: smart city in resource management and sustainable ecosystem; spatial data acquisition through RS and GIS in resource management and sustainable ecosystem; ecological and environmental data processing and management; advanced geospatial model and analysis for understanding ecological and environmental processes; applications of geo-informatics in resource management and sustainable ecosystem.

[Encyclopedia of Bioinformatics and Computational Biology](#) -

2018-08-21

Encyclopedia of Bioinformatics and Computational Biology: ABC of Bioinformatics combines elements of computer science, information technology, mathematics, statistics and biotechnology, providing the methodology and in silico solutions to mine biological data and processes. The book covers Theory, Topics and Applications, with a special focus on Integrative -omics and Systems Biology. The theoretical, methodological underpinnings of BCB, including phylogeny are covered, as are more current areas of focus, such as translational bioinformatics, cheminformatics, and environmental informatics. Finally, Applications provide guidance for commonly asked questions. This major reference work spans basic and cutting-edge methodologies authored by leaders in the field, providing an invaluable resource for students, scientists, professionals in research institutes, and a broad swath of researchers in biotechnology and the

biomedical and pharmaceutical industries. Brings together information from computer science, information technology, mathematics, statistics and biotechnology  
Written and reviewed by leading experts in the field, providing a unique and

authoritative resource Focuses on the main theoretical and methodological concepts before expanding on specific topics and applications  
Includes interactive images, multimedia tools and crosslinking to further resources and databases