

The Sage Handbook Of Remote Sensing Sage Handbooks

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GIS Algorithms - Ningchuan Xiao 2015-11-09
Geographic information systems (GIS) have become increasingly important in helping us understand complex social, economic, and natural dynamics where spatial components play a key role. The critical algorithms used in GIS, however, are notoriously difficult to both teach and understand, in part due to the lack of a coherent representation. *GIS Algorithms* attempts to address this problem by combining rigorous formal language with example case studies and student exercises. Using Python code throughout, Xiao breaks the subject down into three fundamental areas: Geometric Algorithms Spatial Indexing Spatial Analysis and Modelling With its comprehensive coverage of the many algorithms involved, *GIS Algorithms* is a key new textbook in this complex and critical area of geography.

Urban Informatics - Wenzhong Shi 2021-04-06
This open access book is the first to systematically introduce the principles of urban informatics and its application to every aspect of the city that involves its functioning, control, management, and future planning. It introduces new models and tools being developed to understand and implement these technologies that enable cities to function more efficiently - to become 'smart' and 'sustainable'. The smart city has quickly emerged as computers have become ever smaller to the point where they can be embedded into the very fabric of the city, as well as being central to new ways in which the population can communicate and act. When

cities are wired in this way, they have the potential to become sentient and responsive, generating massive streams of 'big' data in real time as well as providing immense opportunities for extracting new forms of urban data through crowdsourcing. This book offers a comprehensive review of the methods that form the core of urban informatics from various kinds of urban remote sensing to new approaches to machine learning and statistical modelling. It provides a detailed technical introduction to the wide array of tools information scientists need to develop the key urban analytics that are fundamental to learning about the smart city, and it outlines ways in which these tools can be used to inform design and policy so that cities can become more efficient with a greater concern for environment and equity.

Key Methods in Geography - Nicholas Clifford 2010-05-30

"Its range is far broader than the majority of methods texts, being concerned with both human and physical geography... Given the seriousness with which *Key Methods in Geography* approaches all aspects of research, it will continue to find wide favour among undergraduate geographers." - Times Higher Education Textbook Guide "All geographers, whatever their interest, need to do research. This book will help them get started in the best possible way, with thoughtful advice on everything from project design, through choice of methods, to data analysis and presentation. The editors have assembled an impressive array

of authors, all experts in their chosen field." - Tim Burt, University of Durham "Excellent book. Valuable teaching aid. Well written and covers a wide range of methods thoroughly." - Sue Rodway-Dyer, Exeter University "This is an excellent book and deals with a number of topics (which I teach) outside of the tutorial module where it is a recommended text for geographers. A very useful textbook throughout a 3 year Geography programme." - Ian Harris, Bangor University

Key Methods in Geography is an introduction to the principal methodological issues involved in the collection, analysis and presentation of geographical information. It is unique in the reference literature for providing an overview of qualitative and quantitative methods for human and physical geography. An accessible primer, it will be used by students as a reference throughout their degree, on all issues from research design to presentation. This second edition has been fully revised and updated and includes new chapters on internet mediated research, diaries as a research method, making observations and measurements in the field, and the analysis of natural systems. Organized into four sections: Getting Started in Geographical Research; Generating and Working with Data in Human Geography; Generating and Working with Data in Physical Geography; Representing and Interpreting Geographical Data; each chapter comprises: A short definition A summary of the principal arguments A substantive 5,000-word discussion Use of real-life examples Annotated notes for further reading. The teaching of research methods is integral to all geography courses: **Key Methods in Geography, 2nd Edition** explains all of the key methods with which geography undergraduates must be conversant.

Routledge Handbook of Space Law - Ram S. Jakhu 2016-11-10

This handbook is a reference work providing a comprehensive, objective and comparative overview of Space Law. The global space economy reached \$330 billion in 2015, with a growth rate of 9 per cent vis-à-vis the previous year. Consequently, Space Law is changing and expanding expeditiously, especially at the national level. More laws and regulations are being adopted by space-faring nations, while more countries are adapting their Space Laws

and regulations related to activities in outer space. More regulatory bodies are being created, while more regulatory diversity (from public law to private law) is being instituted as increasing and innovative activities are undertaken by private entities which employ new technologies and business initiatives. At the international level, Space Law (both hard law and soft law) is expanding in certain areas, especially in satellite broadcasting and telecommunications. The **Routledge Handbook of Space Law** summarises the existing state of knowledge on a comprehensive range of topics and aspires to set the future international research agenda by indicating gaps and inconsistencies in the existing law and highlighting emerging legal issues. Unlike other books on the subject, it addresses major international and national legal aspects of particular space activities and issues, rather than providing commentary on or explanations about a particular Space Law treaty or national regulation. Drawing together contributions from leading academic scholars and practicing lawyers from around the world, the volume is divided into five key parts: • Part I: General Principles of International Space Law • Part II: International Law of Space Applications • Part III: National Regulation of Space Activities • Part IV: National Regulation of Navigational Satellite Systems • Part V: Commercial Aspects of Space Law This handbook is both practical and theoretical in scope, and may serve as a reference tool to academics, professionals and policy-makers with an interest in Space Law.

Practical Handbook of Remote Sensing - Samantha Lavender 2015-10-28

A Beginner's Guide to the World of Satellite Data Over a thousand active satellites are in orbit around the Earth with applications including navigation, the transmission of data and satellite remote sensing; a space-based technology providing data accessible to everyone. The **Practical Handbook of Remote Sensing** offers a complete understanding of th

The SAGE Handbook of Biogeography - Andrew Millington 2011-09-22

"A superb resource for understanding the diversity of the modern discipline of biogeography, and its history and future, especially within geography departments. I

expect to refer to it often." - Professor Sally Horn, University of Tennessee "As you browse through this fine book you will be struck by the diverse topics that biogeographers investigate and the many research methods they use.... Biogeography is interdisciplinary, and a commonly-voiced concern is that one biogeographer may not readily understand another's research findings. A handbook like this is important for synthesising, situating, explaining and evaluating a large literature, and pointing the reader to informative publications." - Geographical Research "A valuable contribution in both a research and teaching context. If you are biologically trained, it provides an extensive look into the geographical tradition of biogeography, covering some topics that may be less familiar to those with an evolution/ecology background. Alternatively, if you are a geography student, researcher, or lecturer, it will provide a useful reference and will be invaluable to the non-biogeographer who suddenly has the teaching of an introductory biogeography course thrust upon them." - Adam C. Algar, *Frontiers of Biogeography* The SAGE Handbook of Biogeography is a manual for scoping the past, present and future of biogeography that enable readers to consider, where relevant, how similar biogeographical issues are tackled by researchers in different 'schools'. In line with the concept of all SAGE Handbooks, this is a retrospective and prospective overview of biogeography that will: Consider the main areas of biogeography researched by geographers Detail a global perspective by incorporating the work of different schools of biogeographers Explore the divergent evolution of biogeography as a discipline and consider how this diversity can be harnessed Examine the interdisciplinary debates that biogeographers are contributing to within geography and the biological sciences. Aimed at an international audience of research students, academics, researchers and practitioners in biogeography, the text will attract interest from environmental scientists, ecologists, biologists and geographers alike.

Flynn's Parasites of Laboratory Animals -

David G. Baker 2008-01-09

Prepared under the auspices of the American College of Laboratory Animal Medicine, this

second edition has been thoroughly updated and revised to improve utility and readability. The book is now organized by vertebrate host species, with parasites presented phylogenetically within chapters. Additional highlights of this edition include introductory chapters on modern diagnostic techniques and parasite biology, and a new appendix features a complete drug formulary. The well-presented and extensively illustrated volume addresses all aspects of laboratory animal parasites. Regarded as the most comprehensive and authoritative work available on the topic, this book is an essential reference for veterinary parasitologists, clinicians, students and laboratory animal scientists.

The SAGE Handbook of GIS and Society -

Timothy Nyerges 2011-05-09

"The definitive guide to a technology that succeeds or fails depending upon our ability to accommodate societal context and structures. This handbook is lucid, integrative, comprehensive and, above all, prescient in its interpretation of GIS implementation as a societal process." - Paul Longley, University College London "This is truly a handbook - a book you will want to keep on hand for frequent reference and to which GIS professors should direct students entering our field... Selection of a few of the chapters for individual attention is difficult because each one contributes meaningfully to the overall message of this volume. An important collection of articles that will set the tone for the next two decades of discourse and research about GIS and society." - *Journal of Geographical Analysis* Over the past twenty years research on the evolving relationship between GIS and Society has been expanding into a wide variety of topical areas, becoming in the process an increasingly challenging and multifaceted endeavour. The SAGE Handbook of GIS and Society is a retrospective and prospective overview of GIS and Society research that provides an expansive and critical assessment of work in that field. Emphasizing the theoretical, methodological and substantive diversity within GIS and Society research, the book highlights the distinctiveness and intellectual coherence of the subject as a field of study, while also examining its resonances with and between key themes, and

among disciplines ranging from geography and computer science to sociology, anthropology, and the health and environmental sciences. Comprising 27 chapters, often with an international focus, the book is organized into six sections: Foundations of Geographic Information and Society Geographical Information and Modern Life Alternative Representations of Geographic Information and Society Organizations and Institutions Participation and Community Issues Value, Fairness, and Privacy Aimed at academics, researchers, postgraduates, and GIS practitioners, this Handbook will be the basic reference for any inquiry applying GIS to societal issues.

The SAGE Encyclopedia of Out-of-School Learning - Kylie Pepler 2017-01-15

The SAGE Encyclopedia of Out-of-School Learning documents what the best research has revealed about out-of-school learning: what facilitates or hampers it; where it takes place most effectively; how we can encourage it to develop talents and strengthen communities; and why it matters. Key features include: Approximately 260 articles organized A-to-Z in 2 volumes available in a choice of electronic or print formats. Signed articles, specially commissioned for this work and authored by key figures in the field, conclude with Cross References and Further Readings to guide students to the next step in a research journey. Reader's Guide groups related articles within broad, thematic areas to make it easy for readers to spot additional relevant articles at a glance. Detailed Index, the Reader's Guide, and Cross References combine for search-and-browse in the electronic version. Resource Guide points to classic books, journals, and web sites, including those of key associations.

Computer Processing of Remotely-Sensed Images - Paul M. Mather 2022-04-11

Computer Processing of Remotely-Sensed Images A thorough introduction to computer processing of remotely-sensed images, processing methods, and applications Remote sensing is a crucial form of measurement that allows for the gauging of an object or space without direct physical contact, allowing for the assessment and recording of a target under conditions which would normally render access

difficult or impossible. This is done through the analysis and interpretation of electromagnetic radiation (EMR) that is reflected or emitted by an object, surveyed and recorded by an observer or instrument that is not in contact with the target. This methodology is particularly of importance in Earth observation by remote sensing, wherein airborne or satellite-borne instruments of EMR provide data on the planet's land, seas, ice, and atmosphere. This permits scientists to establish relationships between the measurements and the nature and distribution of phenomena on the Earth's surface or within the atmosphere. Still relying on a visual and conceptual approach to the material, the fifth edition of this successful textbook provides students with methods of computer processing of remotely sensed data and introduces them to environmental applications which make use of remotely-sensed images. The new edition's content has been rearranged to be more clearly focused on image processing methods and applications in remote sensing with new examples, including material on the Copernicus missions, microsattellites and recently launched SAR satellites, as well as time series analysis methods. The fifth edition of *Computer Processing of Remotely-Sensed Images* also contains: A cohesive presentation of the fundamental components of Earth observation remote sensing that is easy to understand and highly digestible Largely non-technical language providing insights into more advanced topics that may be too difficult for a non-mathematician to understand Illustrations and example boxes throughout the book to illustrate concepts, as well as revised examples that reflect the latest information References and links to the most up-to-date online and open access sources used by students *Computer Processing of Remotely-Sensed Images* is a highly insightful textbook for advanced undergraduates and postgraduate students taking courses in remote sensing and GIS in Geography, Geology, and Earth & Environmental Science departments.

The SAGE Handbook of Intercultural Competence - Darla K. Deardorff 2009-08-31

Containing chapters by some of the world's leading experts and scholars on the subject, this book provides a broad context for intercultural competence. Including the latest research on

intercultural models and theories, it presents guidance on assessing intercultural competence through the exploration of key assessment principles.

The Handbook of Human Services

Management - Rino J. Patti 2008-10

Focusing on an effectiveness-driven approach to management in the human services, Rino J. Patti's *The Handbook of Human Services Management*, Second Edition explores the latest information on practice innovations, theoretical perspectives, and empirical research to provide an essential perspective on what managers do to create and sustain organizations that deliver high quality, effective services to consumers. Offering the most comprehensive coverage of human services management available today, this second edition includes 24 chapters authored by distinguished practitioners and scholars in human services management: 10 that are entirely new and 14 that have been extensively revised. The Handbook is accompanied by an Instructor's Manual.

Mathematical Models for Remote Sensing Image Processing - Gabriele Moser 2017-11-28

This book maximizes reader insights into the field of mathematical models and methods for the processing of two-dimensional remote sensing images. It presents a broad analysis of the field, encompassing passive and active sensors, hyperspectral images, synthetic aperture radar (SAR), interferometric SAR, and polarimetric SAR data. At the same time, it addresses highly topical subjects involving remote sensing data types (e.g., very high-resolution images, multiangular or multiresolution data, and satellite image time series) and analysis methodologies (e.g., probabilistic graphical models, hierarchical image representations, kernel machines, data fusion, and compressive sensing) that currently have primary importance in the field of mathematical modelling for remote sensing and image processing. Each chapter focuses on a particular type of remote sensing data and/or on a specific methodological area, presenting both a thorough analysis of the previous literature and a methodological and experimental discussion of at least two advanced mathematical methods for information extraction from remote sensing data. This

organization ensures that both tutorial information and advanced subjects are covered. With each chapter being written by research scientists from (at least) two different institutions, it offers multiple professional experiences and perspectives on each subject. The book also provides expert analysis and commentary from leading remote sensing and image processing researchers, many of whom serve on the editorial boards of prestigious international journals in these fields, and are actively involved in international scientific societies. Providing the reader with a comprehensive picture of the overall advances and the current cutting-edge developments in the field of mathematical models for remote sensing image analysis, this book is ideal as both a reference resource and a textbook for graduate and doctoral students as well as for remote sensing scientists and practitioners.

The Oxford Handbook of Social Networks - Ryan Light 2020-11-20

While some social scientists may argue that we have always been networked, the increased visibility of networks today across economic, political, and social domains can hardly be disputed. Social networks fundamentally shape our lives and social network analysis has become a vibrant, interdisciplinary field of research. In *The Oxford Handbook of Social Networks*, Ryan Light and James Moody have gathered forty leading scholars in sociology, archaeology, economics, statistics, and information science, among others, to provide an overview of the theory, methods, and contributions in the field of social networks. Each of the thirty-three chapters in this Handbook moves through the basics of social network analysis aimed at those seeking an introduction to advanced and novel approaches to modeling social networks statistically. They cover both a succinct background to, and future directions for, distinctive approaches to analyzing social networks. The first section of the volume consists of theoretical and methodological approaches to social networks, such as visualization and network analysis, statistical approaches to networks, and network dynamics. Chapters in the second section outline how network perspectives have contributed substantively across numerous fields, including

public health, political analysis, and organizational studies. Despite the rapid spread of interest in social network analysis, few volumes capture the state-of-the-art theory, methods, and substantive contributions featured in this volume. This Handbook therefore offers a valuable resource for graduate students and faculty new to networks looking to learn new approaches, scholars interested in an overview of the field, and network analysts looking to expand their skills or substantive areas of research.

Urban Analytics - Alex D. Singleton 2017-11-27

The economic and political situation of cities has shifted in recent years in light of rapid growth amidst infrastructure decline, the suburbanization of poverty and inner city revitalization. At the same time, the way that data are used to understand urban systems has changed dramatically. *Urban Analytics* offers a field-defining look at the challenges and opportunities of using new and emerging data to study contemporary and future cities through methods including GIS, Remote Sensing, Big Data and Geodemographics. Written in an accessible style and packed with illustrations and interviews from key urban analysts, this is a groundbreaking new textbook for students of urban planning, urban design, geography, and the information sciences.

The SAGE Handbook of Qualitative Geography - Dydia DeLyser 2010

The process of learning qualitative research has altered dramatically and this Handbook explores the growth, change, and complexity within the topic and looks back over its history to assess the current state of the art, and indicate possible future directions. Moving beyond textbook rehearsals of standard issues, the book examines key methodological debates and conflicts, approaching them in a critical, discursive manner.

Physical Principles of Remote Sensing - W. G. Rees 2013

A quantitative yet accessible introduction to remote sensing techniques, this new edition covers a broad spectrum of Earth science applications.

Data and Society - Anne Beaulieu 2021-10-27

Data and Society: A Critical Introduction investigates the growing importance of data as a

technological, social, economic and scientific resource. It explains how data practices have come to underpin all aspects of human life and explores what this means for those directly involved in handling data. The book fosters informed debate over the role of data in contemporary society explains the significance of data as evidence beyond the "Big Data" hype spans the technical, sociological, philosophical and ethical dimensions of data provides guidance on how to use data responsibly includes data stories that provide concrete cases and discussion questions. Grounded in examples spanning genetics, sport and digital innovation, this book fosters insight into the deep interrelations between technical, social and ethical aspects of data work.

Remote Sensing of Plant Biodiversity - Jeannine Cavender-Bares 2020-01-01

This Open Access volume aims to methodologically improve our understanding of biodiversity by linking disciplines that incorporate remote sensing, and uniting data and perspectives in the fields of biology, landscape ecology, and geography. The book provides a framework for how biodiversity can be detected and evaluated--focusing particularly on plants--using proximal and remotely sensed hyperspectral data and other tools such as LiDAR. The volume, whose chapters bring together a large cross-section of the biodiversity community engaged in these methods, attempts to establish a common language across disciplines for understanding and implementing remote sensing of biodiversity across scales. The first part of the book offers a potential basis for remote detection of biodiversity. An overview of the nature of biodiversity is described, along with ways for determining traits of plant biodiversity through spectral analyses across spatial scales and linking spectral data to the tree of life. The second part details what can be detected spectrally and remotely. Specific instrumentation and technologies are described, as well as the technical challenges of detection and data synthesis, collection and processing. The third part discusses spatial resolution and integration across scales and ends with a vision for developing a global biodiversity monitoring system. Topics include spectral and functional variation across habitats and biomes,

biodiversity variables for global scale assessment, and the prospects and pitfalls in remote sensing of biodiversity at the global scale.

Remote Sensing of Urban Areas - Carsten Jürgens 2001

Methods in Human Geography - Robin Flowerdew 2013-10-08

First published in 2004. This text is an essential guide to current research approaches in human geography, covering all aspects of undertaking a geography research project, from the selection of an appropriate topic through to the organisation and writing of the final report.

Covering a wide range of contemporary research methods, the authors provide practical advice on how to actually undertake a project.

The SAGE Handbook of Remote Sensing - Timothy A Warner 2009-07-01

Remote sensing acquires and interprets small or large-scale data about the Earth from a distance. Using a wide range of spatial, spectral, temporal, and radiometric scales remote sensing is a large and diverse field for which this Handbook will be the key research reference. Illustrated throughout, an essential resource for the analysis of remotely sensed data, The SAGE Handbook of Remote Sensing provides researchers with a definitive statement of the core concepts and methodologies in the discipline.

The Essential Guide to Doing Your Research Project - Zina O'Leary 2013-11-18

The Essential Guide to Doing Your Research Project 2e is the ultimate companion to successfully completing your research project. Warm and pragmatic, it gives you the skills and the confidence needed to succeed no matter what happens along the way. The book guides you through every step of your research project, from getting started to analysing data and writing up. Each stage is clearly set out, highlighting best practice and providing practical tips and down-to-earth advice for actually doing research. Key features include: Fully developed companion website including podcasts, worksheets, examples of real projects and links to journal articles Chapter summaries Boxed definitions of key terms Full glossary Suggestions for further reading Bursting with

real world examples and multidisciplinary case studies, this book addresses the key questions posed by anyone hoping to complete a research project. It is the must-have textbook every student needs. Available with Perusall—an eBook that makes it easier to prepare for class Perusall is an award-winning eBook platform featuring social annotation tools that allow students and instructors to collaboratively mark up and discuss their SAGE textbook. Backed by research and supported by technological innovations developed at Harvard University, this process of learning through collaborative annotation keeps your students engaged and makes teaching easier and more effective. Learn more.

Remote Sensing Handbook - Three Volume Set - Prasad Thenkabail 2018-10-03

A volume in the three-volume Remote Sensing Handbook series, Remote Sensing of Water Resources, Disasters, and Urban Studies documents the scientific and methodological advances that have taken place during the last 50 years. The other two volumes in the series are Remotely Sensed Data Characterization, Classification, and Accuracies, and Land Reso **The SAGE Handbook of Spatial Analysis** - A Stewart Fotheringham 2008-12-22

The widespread use of Geographical Information Systems (GIS) has significantly increased the demand for knowledge about spatial analytical techniques across a range of disciplines. As growing numbers of researchers realise they are dealing with spatial data, the demand for specialised statistical and mathematical methods designed to deal with spatial data is undergoing a rapid increase. Responding to this demand, The Handbook of Spatial Analysis is a comprehensive and authoritative discussion of issues and techniques in the field of Spatial Data Analysis. Its principal focus is on:

- why the analysis of spatial data needs separate treatment
- the main areas of spatial analysis
- the key debates within spatial analysis
- examples of the application of various spatial analytical techniques
- problems in spatial analysis
- areas for future research

Aimed at an international audience of academics, The Handbook of Spatial Analysis will also prove essential to graduate level students and researchers in government agencies and the private sector.

Advances in Quantitative Remote Sensing in China - In Memory of Prof. Xiaowen Li -

Shunlin Liang 2019-03-07

Quantitative land remote sensing has recently advanced dramatically, particularly in China. It has been largely driven by vast governmental investment, the availability of a huge amount of Chinese satellite data, geospatial information requirements for addressing pressing environmental issues and other societal benefits. Many individuals have also fostered and made great contributions to its development, and Prof. Xiaowen Li was one of these leading figures. This book is published in memory of Prof. Li. The papers collected in this book cover topics from surface reflectance simulation, inversion algorithm and estimation of variables, to applications in optical, thermal, Lidar and microwave remote sensing. The wide range of variables include directional reflectance, chlorophyll fluorescence, aerosol optical depth, incident solar radiation, albedo, surface temperature, upward longwave radiation, leaf area index, fractional vegetation cover, forest biomass, precipitation, evapotranspiration, freeze/thaw snow cover, vegetation productivity, phenology and biodiversity indicators. They clearly reflect the current level of research in this area. This book constitutes an excellent reference suitable for upper-level undergraduate students, graduate students and professionals in remote sensing.

Remotely Sensed Data Characterization, Classification, and Accuracies - Ph.D., Prasad S. Thenkabail 2015-10-02

A volume in the Remote Sensing Handbook series, *Remotely Sensed Data Characterization, Classification, and Accuracies* documents the scientific and methodological advances that have taken place during the last 50 years. The other two volumes in the series are *Land Resources Monitoring, Modeling, and Mapping with Remote Sensing*, and *Remote Sensing of [Encyclopedia of Geographic Information Science](#)* - Karen Kemp 2008

Geographic information science (GIScience) is an emerging field that combines aspects of many different disciplines. Spatial literacy is rapidly becoming recognized as a new, essential pier of basic education, alongside grammatical, logical and mathematical literacy. By incorporating

location as an essential but often overlooked characteristic of what we seek to understand in the natural and built environment, geographic information science (GIScience) and systems (GISystems) provide the conceptual foundation and tools to explore this new frontier. The *Encyclopedia of Geographic Information Science* covers the essence of this exciting, new, and expanding field in an easily understood but richly detailed style. In addition to contributions from some of the best recognized scholars in GIScience, this volume contains contributions from experts in GIS' supporting disciplines who explore how their disciplinary perspectives are expanded within the context of GIScience—what changes when consideration of location is added, what complexities in analytical procedures are added when we consider objects in 2, 3 or even 4 dimensions, what can we gain by visualizing our analytical results on a map or 3D display? Key Features Brings together GIScience literature that is spread widely across the academic spectrum Offers details about the key foundations of GIScience, no matter what their disciplinary origins Elucidates vocabulary that is an amalgam of all of these fields Key Themes Conceptual Foundations Cartography and Visualization Design Aspects Data Manipulation Data Modeling Geocomputation Geospatial Data Societal Issues Spatial Analysis Organizational and Institutional Aspects The *Encyclopedia of Geographic Information Science* is an important resource for academic and corporate libraries.

The SAGE Handbook of Geographical Knowledge - John A Agnew 2011-03-04

Broad in scope and edited by two massive names in geography, this is a critical exploration of how the field has emerged and fared over the course of its modern institutionalization.

The SAGE Handbook of Geomorphology - Kenneth J Gregory 2011-06-22

Geomorphology is the study of the Earth's diverse physical land surface features and the dynamic processes that shape these features. Examining natural and anthropogenic processes, *The SAGE Handbook of Geomorphology* is a comprehensive exposition of the fundamentals of geomorphology that examines form, process, and history in the discipline. Organized into four sections, the Handbook is an overview of

foundations and relevance, including the nature and scope of geomorphology, the origins and development of geomorphology, the role and character of theory in geomorphology, the significance of models and abstractions to geomorphology; techniques and approaches, including geomorphological mapping, field observations and experimental design, remote sensing in geomorphology, quantifying rates of erosion, measuring fluid flows and sediment fluxes, dating surfaces and sediment, GIS in geomorphology, and modelling landforms and processes; process and environment, including rock weathering, the evolution of regolith, hill slopes, riverine environments, glacial environments, periglacial environments, coastal environments, desert environments, karst landscapes, environmental change and anthropogenic activity; and environmental change, including geomorphology and environmental management, geomorphology and society, and planetary geomorphology.

An Introduction to R for Spatial Analysis and Mapping - Chris Brunsdon 2014-04-30

"In an age of big data, data journalism and with a wealth of quantitative information around us, it is not enough for students to be taught only 100 year old statistical methods using 'out of the box' software. They need to have 21st-century analytical skills too. This is an excellent and student-friendly text from two of the world leaders in the teaching and development of spatial analysis. It shows clearly why the open source software R is not just an alternative to commercial GIS, it may actually be the better choice for mapping, analysis and for replicable research. Providing practical tips as well as fully working code, this is a practical 'how to' guide ideal for undergraduates as well as those using R for the first time. It will be required reading on my own courses." - Richard Harris, Professor of Quantitative Social Science, University of Bristol R is a powerful open source computing tool that supports geographical analysis and mapping for the many geography and 'non-geography' students and researchers interested in spatial analysis and mapping. This book provides an introduction to the use of R for spatial statistical analysis, geocomputation and the analysis of geographical information for researchers collecting and using data with

location attached, largely through increased GPS functionality. Brunsdon and Comber take readers from 'zero to hero' in spatial analysis and mapping through functions they have developed and compiled into R packages. This enables practical R applications in GIS, spatial analyses, spatial statistics, mapping, and web-scraping. Each chapter includes: Example data and commands for exploring it Scripts and coding to exemplify specific functionality Advice for developing greater understanding - through functions such as locator(), View(), and alternative coding to achieve the same ends Self-contained exercises for students to work through Embedded code within the descriptive text. This is a definitive 'how to' that takes students - of any discipline - from coding to actual applications and uses of R.

Encyclopedia of Geography - Barney Warf
2010-09-21

Simply stated, geography studies the locations of things and the explanations that underlie spatial distributions. Profound forces at work throughout the world have made geographical knowledge increasingly important for understanding numerous human dilemmas and our capacities to address them. With more than 1,200 entries, the Encyclopedia of Geography reflects how the growth of geography has propelled a demand for intermediaries between the abstract language of academia and the ordinary language of everyday life. The six volumes of this encyclopedia encapsulate a diverse array of topics to offer a comprehensive and useful summary of the state of the discipline in the early 21st century. Key Features Gives a concise historical sketch of geography's long, rich, and fascinating history, including human geography, physical geography, and GIS Provides succinct summaries of trends such as globalization, environmental destruction, new geospatial technologies, and cyberspace Decomposes geography into the six broad subject areas: physical geography; human geography; nature and society; methods, models, and GIS; history of geography; and geographer biographies, geographic organizations, and important social movements Provides hundreds of color illustrations and images that lend depth and realism to the text Includes a special map section Key Themes Physical Geography Human

Geography Nature and Society Methods, Models, and GIS People, Organizations, and Movements History of Geography This encyclopedia strategically reflects the enormous diversity of the discipline, the multiple meanings of space itself, and the diverse views of geographers. It brings together the diversity of geographical knowledge, making it an invaluable resource for any academic library.

Introducing Intercultural Communication - Shuang Liu 2010-11-09

Books on intercultural communication are rarely written with an intercultural readership in mind. In contrast, this multinational team of authors has put together an introduction to communicating across cultures that uses examples and case studies from around the world. The book further covers essential new topics, including international conflict, social networking, migration, and the effects technology and mass media play in the globalization of communication. Written to be accessible for international students too, this text situates communication theory in a truly global perspective. Each chapter brings to life the links between theory and practice and between the global and the local, introducing key theories and their practical applications. Along the way, you will be supported with first-rate learning resources, including:

- theory corners with concise, boxed-out digests of key theoretical concepts
- case illustrations putting the main points of each chapter into context
- learning objectives, discussion questions, key terms and further reading framing each chapter and stimulating further discussion
- a companion website containing resources for instructors, including multiple choice questions, presentation slides, exercises and activities, and teaching notes.

This book will not merely guide you to success in your studies, but will teach you to become a more critical consumer of information and understand the influence of your own culture on how you view yourself and others.

The SAGE Handbook of Remote Sensing - Timothy A Warner 2009-06-18

'A magnificent achievement. A who's who of contemporary remote sensing have produced an engaging, wide-ranging and scholarly review of the field in just one volume' - Professor Paul

Curran, Vice-Chancellor, Bournemouth University Remote Sensing acquires and interprets small or large-scale data about the Earth from a distance. Using a wide range of spatial, spectral, temporal, and radiometric scales Remote Sensing is a large and diverse field for which this Handbook will be the key research reference. Organized in four key sections:

- Interactions of Electromagnetic Radiation with the Terrestrial Environment: chapters on Visible, Near-IR and Shortwave IR; Middle IR (3-5 micrometers); Thermal IR ; Microwave
- Digital sensors and Image Characteristics: chapters on Sensor Technology; Coarse Spatial Resolution Optical Sensors ; Medium Spatial Resolution Optical Sensors; Fine Spatial Resolution Optical Sensors; Video Imaging and Multispectral Digital Photography; Hyperspectral Sensors; Radar and Passive Microwave Sensors; Lidar
- Remote Sensing Analysis - Design and Implementation: chapters on Image Pre-Processing; Ground Data Collection; Integration with GIS; Quantitative Models in Remote Sensing; Validation and accuracy assessment;
- Remote Sensing Analysis - Applications: LITHOSPHERIC SCIENCES: chapters on Topography; Geology; Soils; PLANT SCIENCES: Vegetation; Agriculture; HYDROSPHERIC and CRYOSPHERIC SCIENCES: Hydrosphere: Fresh and Ocean Water; Cryosphere; GLOBAL CHANGE AND HUMAN ENVIRONMENTS: Earth Systems; Human Environments & Links to the Social Sciences; Real Time Monitoring Systems and Disaster Management; Land Cover Change

Illustrated throughout, an essential resource for the analysis of remotely sensed data, the SAGE Handbook of Remote Sensing provides researchers with a definitive statement of the core concepts and methodologies in the discipline.

Recent Advances in Lichenology - Dalip Kumar Upreti 2014-12-18

This book discusses in detail molecular, mycobiont culture, biomonitoring and bioprospection of lichens, providing insights into advances in different fields of lichenology by applying modern techniques and approaches and examining how their application has enhanced or changed classical approaches. It offers a valuable resource, especially for beginners,

students and researchers from different academic backgrounds interested in the study of lichens. In recent years, the introduction of modern analytical techniques and approaches has significantly improved our understanding of the environment, including lichens. Lichens are unique organisms which possess untapped potential as effective and reliable bioindicators, sources of therapeutic phytochemicals, and as excellent extremophiles. The unique and peculiar characteristics of lichens underline the need for a multidimensional approach to explore their potential in various fields of environment science, botany and chemistry. Modern techniques, especially molecular techniques, have greatly enriched the field of lichen taxonomy and its position in the plant kingdom, revealing little-known species and exploring their evolutionary history, while multivariate analysis and GIS approaches have established lichens as an ideal and reliable tool for monitoring air pollution. Advanced culture techniques have expanded the pharmacological applications of lichens, which was formerly restricted due to their small biomass. The advent of sophisticated analytical instrumentation has now facilitated the isolation and characterization of lichens' bioactive constituents, even in lower concentrations, as well as the estimation of their stress responses at different levels of pollution. As lichen diversity is adversely affected by increasing air pollution, there is a pressing need to develop effective management practices to conserve, restore and document lichen diversity.

21st Century Geography - Joseph P. Stoltman
2011-10-20

Via approximately 80 entries or "mini-chapters," the SAGE 21st Century Reference Series volumes on geography will highlight the most important topics, issues, questions, and debates any student obtaining a degree in this field ought to have mastered for effectiveness in the 21st century. The purpose is to provide undergraduate majors with an authoritative reference source that will serve their research needs with more detailed information than encyclopedia entries but not so much jargon, detail, or density as a journal article or a research handbook chapter. Features & Benefits: Curricular-driven to provide students with initial footholds on topics of interest in

writing research term papers, in preparing for GREs, in consulting to determine directions to take in pursuing a senior thesis, graduate degree, etc. Comprehensive to offer full coverage of major subthemes and subfields within the discipline of geography, including regional geography, physical geography, global change, human and cultural geography, economic geography and locational analysis, political geography, geospatial technology, cartography, spatial thinking, research methodology, geographical education, and more. Uniform in chapter structure to make it easy for students to locate key information, with a more-or-less common chapter format of Introduction, Theory, Methods, Applications, Comparison, Future Directions, Summary, Bibliography & Suggestions for Further Reading, and Cross References. Available in print and electronic formats to provide students with convenient, easy access.

Cloud IoT Systems for Smart Agricultural Engineering - Saravanan Krishnan 2022-02-14
Agriculture plays a vital role in a country's growth. Modern-day technologies drive every domain toward smart systems. The use of traditional agricultural procedures to satisfy modern-day requirements is a challenging task. Cloud IoT Systems for Smart Agricultural Engineering provides substantial coverage of various challenges of the agriculture domain through modern technologies such as the Internet of Things (IoT), cloud computing, and many more. This book offers various state-of-the-art procedures to be deployed in a wide range of agricultural activities. The concepts are discussed with the necessary implementations and clear examples. Necessary illustrations are depicted in the chapters to ensure the effective delivery of the proposed concepts. It presents the rapid advancement of the technologies in the existing agricultural model by applying the cloud IoT techniques. A wide variety of novel architectural solutions are discussed in various chapters of this book. This book provides comprehensive coverage of the most essential topics, including: New approaches on urban and vertical farming Smart crop management for Indian farmers Smart livestock management Precision agriculture using geographical information systems Machine learning

techniques combined with IoT for smart agriculture Effective use of drones in smart agriculture This book provides solutions for the diverse domain of problems in agricultural engineering. It can be used at the basic and intermediary levels for agricultural science and engineering graduate students, researchers, and practitioners.

Global Perspectives on Sustainable Forest

Management - Dr. Clement A. Okia 2012-04-25

This book is dedicated to global perspectives on sustainable forest management. It focuses on a need to move away from purely protective management of forests to innovative approaches for multiple use and management of forest resources. The book is divided into two sections; the first section, with thirteen chapters deals with the forest management aspects while the second section, with five chapters is dedicated to forest utilization. This book will fill the existing gaps in the knowledge about emerging perspectives on sustainable forest management. It will be an interesting and helpful resource to managers, specialists and students in the field of forestry and natural resources management.

Encyclopedia of Communication Theory -

Stephen W. Littlejohn 2009-08-18

With more than 300 entries, these two volumes provide a one-stop source for a comprehensive overview of communication theory, offering current descriptions of theories as well as the background issues and concepts that comprise these theories. This is the first resource to summarize, in one place, the diversity of theory in the communication field. Key Themes Applications and Contexts Critical Orientations Cultural Orientations Cybernetic and Systems Orientations Feminist Orientations Group and Organizational Concepts Information, Media,

and Communication Technology International and Global Concepts Interpersonal Concepts Non-Western Orientations Paradigms, Traditions, and Schools Philosophical Orientations Psycho-Cognitive Orientations Rhetorical Orientations Semiotic, Linguistic, and Discursive Orientations Social/Interactional Orientations Theory, Metatheory, Methodology, and Inquiry

Comprehensive Remote Sensing - 2017-11-08

Comprehensive Remote Sensing covers all aspects of the topic, with each volume edited by well-known scientists and contributed to by frontier researchers. It is a comprehensive resource that will benefit both students and researchers who want to further their understanding in this discipline. The field of remote sensing has quadrupled in size in the past two decades, and increasingly draws in individuals working in a diverse set of disciplines ranging from geographers, oceanographers, and meteorologists, to physicists and computer scientists. Researchers from a variety of backgrounds are now accessing remote sensing data, creating an urgent need for a one-stop reference work that can comprehensively document the development of remote sensing, from the basic principles, modeling and practical algorithms, to various applications. Fully comprehensive coverage of this rapidly growing discipline, giving readers a detailed overview of all aspects of Remote Sensing principles and applications Contains 'Layered content', with each article beginning with the basics and then moving on to more complex concepts Ideal for advanced undergraduates and academic researchers Includes case studies that illustrate the practical application of remote sensing principles, further enhancing understanding