

Geographic Information Systems Gis For Disaster Management

Sustainability has been increasingly embraced as an overarching policy goal, and communities have been called to be active participants on the path towards attaining a balance between fundamental human needs and ecological resilience. Community-based organizations (CBOs) can benefit from using GIS in building community assets and developing well-conceived sustainability initiatives, but GIS has not yet been widely used for those purposes in CBOs. This book illustrates how geographic information (such as maps) can be useful in community development drawing from service-learning GIS projects, and argue that economic theories of sustainability and spatial thinking can be of help in building sustainable community. It also discusses the application of vehicle routing problems for sustainable waste collection; spatio-temporal visualization and analysis techniques in GIS; GIS applications in modern crop protection; role of geographic information system for water quality evaluation; and the use of remote sensing and GIS for groundwater potential mapping in crystalline basement rocks. This second edition of Geographic Information Systems builds on the strengths of the first, and incorporates important recent advances in GIS development and major new socioeconomic datasets including new census data. Martin presents an accessible introduction to the history, principles and techniques of GIS, with a unique focus on socioeconomic applications. This non-technical volume addresses the needs of students and professionals who must understand and use GIS for the first time.

Geospatial technologies in general – and Geographic Information Systems (GIS) in particular – are becoming increasingly important in our society. GIS technology is used to identify the optimal routes for emergency vehicles, to determine the best locations for various businesses, schools, and facilities, to monitor the growth and expansion of urban areas as a way to manage natural resources, and much more. Principles of Geographic Information Systems by John Jensen and Ryan Jensen is an ideal introduction for those who know very little about geographic information systems and spatial analysis. Relatively complex GIS principles are introduced in basic terms, often using graphics to communicate principles rather than complex mathematical equations. Content is not geared toward any single commercial GIS software program, and the book's timely, practical examples and extensive visual format appeal to today's students. This text can be used at the undergraduate or graduate level in one or two semester courses in introductory and intermediate GIS, yet can also be useful for professionals looking to increase their knowledge in this subject area. Note: If you are purchasing the standalone text or electronic version, mygeoscienceplace does not come automatically packaged with the text. To purchase mygeoscienceplace, please visit www.mygeoscienceplace.com. The Third Edition of this bestselling textbook has been fully revised and updated to include the latest developments in the field and still retains its accessible format to appeal to a broad range of students. Now divided into five clear sections the book investigates the unique, complex and difficult problems that are posed by geographic information and together they build into a holistic understanding of the key principles of GIS. This is the most current, authoritative and comprehensive treatment of the field, that goes from fundamental principles to the big picture of: GIS and the New World Order security, health and well-being digital differentiation in GIS consumption the core organizing role of GIS in Geography the greening of GIS grand challenges of GIScience science and explanation Key features: Four-colour throughout Associated website with free online resources Teacher's manual available for lecturers A complete learning resource, with accompanying instructor links, free online lab resources and personal syllabi Includes learning objectives and review boxes throughout each chapter New in this edition: Completely revised with a new five part structure: Foundations; Principles; Techniques; Analysis; Management and Policy All new personality boxes of current GIS practitioners New chapters on Distributed GIS, Map Production, Geovisualization, Modeling, and Managing GIS

An Introductory Textbook

Geographic Information Systems in Oceanography and Fisheries

Introductory Geographic Information Systems

Applications in Natural Resource Management

Current Issues and Future Challenges

An Overview for Congress

Geographic Information Systems for Geoscientists: Modelling with GIS provides an introduction to the ideas and practice of GIS to students and professionals from a variety of geoscience backgrounds. The emphasis in the book is to show how spatial data from various sources (principally paper maps, digital images and tabular data from point samples) can be captured in a GIS database, manipulated, and transformed to extract particular features in the data, and combined together to produce new derived maps, that are useful for decision-making and for understanding spatial interrelationship. The book begins by defining the meaning, purpose, and functions of GIS. It then illustrates a typical GIS application. Subsequent chapters discuss methods for organizing spatial data in a GIS; data input and data visualization; transformation of spatial data from one data structure to another; and the combination, analysis, and modeling of maps in both raster and vector formats. This book is intended as both a textbook for a course on GIS, and also for those professional geoscientists who wish to understand something about the subject. Readers with a mathematical bent will get more out of the later chapters, but relatively non-numerate individuals will understand the general purpose and approach, and will be able to apply methods of map modeling to clearly-defined problems.

CD-ROM contains full text in searchable PDF format and color image gallery.

Now in its second edition, Geographic Information Systems (GIS) for Disaster Management has been completely updated to take account of new developments in the field. Using a hands-on approach grounded in relevant GIS and disaster management theory and practice, this textbook continues the tradition of the benchmark first edition, providing coverage of GIS fundamentals applied to disaster management. Real-life case studies demonstrate GIS concepts and their applicability to the full disaster management cycle. The learning-by-example approach helps readers see how GIS for disaster management operates at local, state, national, and international scales through government, the private sector, non-governmental organizations, and volunteer groups. New in the second edition: a chapter on allied technologies that includes remote sensing, Global Positioning Systems (GPS), indoor navigation, and Unmanned Aerial Systems (UAS); thirteen new technical exercises that supplement theoretical and practical chapter discussions and fully reinforce concepts learned; enhanced boxed text and other pedagogical features to give readers even more practical advice; examination of new forms of world-wide disaster faced by society; discussion of new commercial and open-source GIS technology and techniques such as machine learning and the Internet of Things; new interviews with subject-matter and industry experts on GIS for disaster management in the US and abroad; new career advice on getting a first job in the industry. Learned yet accessible, Geographic Information Systems (GIS) for Disaster Management continues to be a valuable teaching tool for undergraduate and graduate instructors in the disaster management and GIS fields, as well as disaster management and humanitarian professionals. Please visit <http://gisfordisastermanagement.com> to view supplemental material such as slides and hands-on exercise video walkthroughs. This companion website offers valuable hands-on experience applying concepts to practice.

Developments in technologies have evolved in a much wider use of technology throughout science, government, and business; resulting in the expansion of geographic information systems. GIS is the academic study and practice of presenting geographical data through a system designed to capture, store, analyze, and manage geographic information. Geographic Information Systems: Concepts, Methodologies, Tools, and Applications is a collection of knowledge on the latest advancements and research of geographic information systems. This book aims to be useful for academics and practitioners involved in geographical data.

A Workbook Approach to Learning GIS

Geographic Information Systems

Comprehensive Geographic Information Systems

Getting to Know ArcView GIS

Geographic Information Systems, Spatial Modelling and Policy Evaluation

Ground Truth

Over the last two decades there has been increasing recognition that problems in oceanography and fisheries sciences and related marine areas are nearly all manifest in the spatio-temporal domain. Geographical Information Systems (GIS), the natural framework for spatial data handling, are being recognized as powerful tools with useful applications in marine sciences. Geographic Information Systems in Oceanography and Fisheries provides a thorough examination of marine GIS applications that include a wide variety of methods and sophisticated approaches in coastal, continental shelf, and deep ocean studies. It presents new innovative approaches of using GIS in the examination of the dynamic relations that characterize the marine world, including marine GIS macro routines for the development of oceanography and fisheries GIS tools and applications. This book is divided into four parts. The first gives an overview of marine GIS, including conceptual issues on marine spatial thinking and models of marine GIS development. The second and third parts examine the main sampling methods and online sources of spatially referenced data, and discuss application examples and innovative approaches in GIS developments for many oceanographic and fisheries tasks. The fourth part presents GIS technical issues by listing marine GIS routines for a wide array of GIS tasks. Anyone with interests in marine GIS development, physical and biological oceanography, fisheries and information based proposals for ocean and fisheries resource management will find this book useful.

Geographic Information Systems for the Social Sciences: Investigating Space and Place is the first book to take a cutting-edge approach to integrating spatial concepts into the social sciences. In this text, authors Steven J. Steinberg and Sheila L. Steinberg simplify GIS (Geographic Information Systems) for practitioners and students in the social sciences through the use of examples and actual program exercises so that they can become comfortable incorporating this research tool into their repertoire and scope of interest. The authors provide learning objectives for each chapter, chapter summaries, links to relevant Web sites, as well as suggestions for student research projects.

Discusses geospatial info. (GI, which is data referenced to a place – a set of geographic coordinates – which can be gathered, manipulated, and displayed in real time. A Geographic Info. System is a computer system capable of capturing, storing, analyzing, and displaying geographically referenced info. In 1990 the Fed. Geographic Data Comm. (FGDC) was estab. to promote the use, sharing, and dissemination of GI. There are questions about FGDC fulfilling its mission. Has this organizational structure worked? Can the fed. gov't account for the costs of acquiring, coordinating, and managing GI? How well is the fed. gov't coordinating with the state and local entities that have an increasing stake in GI? What is the role of the private sector?

Geographical data are used in so many aspects of our lives today, from disaster relief operations to finding directions on our cellphones. Geographical Information Systems (GIS) are the software tools that turn raw data into useful information that can help us understand our world better.Principles of Geographic Information Systems presents a strong theoretical basis for GIS-often lacking in other texts-and an account of its practice. Through real-world examples, this text clearly explains the importance of spatial data and the information systems based upon them in solving arrange of practical problems.

Practices and Standards

Geographic Information Systems (GIS) for Disaster Management

(GIS) : the Spatial Dimension to Development Cooperation

Fundamentals of Geographic Information Systems (GIS), Exercises

Geographic Information Analysis

Socioeconomic Applications

Geographical Information Systems has moved from the domain of the computer specialist into the wider archaeological community, providing it with an exciting new research method. This clearly written but rigorous book provides a comprehensive guide to that use. Topics covered include: the theoretical context and the basics of GIS; data acquisition including database design; interpolation of elevation models; exploratory data analysis including spatial queries; statistical spatial analysis; map algebra; spatial operations including the calculation of slope and aspect, filtering and erosion modeling; methods for analysing regions; visibility analysis; network analysis including hydrological modeling; the production of high quality output for paper and electronic publication; and the use and production of metadata. Offering an extensive range of archaeological examples, it is an invaluable source of practical information for all archaeologists, whether engaged in cultural resource management or academic research. This is essential reading for both the novice and the advanced user.

"The second edition of this well-received text on principles of geographic information systems (GIS) continues the author's style of "straight talk" in its presentation. The writing is accessible and easy to follow. Unlike most other texts, this book covers GIS design and modeling, reflecting the author's belief that modeling and analysis are at the heart of GIS. This enables students to understand how to use a GIS and what it does."—Publisher description.

Geographic information systems (GIS) have been implemented in a variety of organizations around the world and are increasingly used as a spatial decision-making tool by a wide range of disciplines. This diffusion of GIS has been driven primarily by advancements in GIS-related technologies such as hardware and software. While introducing GIS, very few organizations have scrutinized the socio-cultural infrastructure of an organization such as data and user needs. This black-box approach to GIS implementation has often led to disappointing outcomes, contrary to organization's initial expectations. This book is based on the author's inexhaustible motive to help maximize the benefits from GIS in corporate settings by understanding better and sound GIS design that meets organizational missions, goals, and needs. This study is a compilation of the land information research undertaken during the 1990s. A model was conceptualized and applied to local organizations to help evaluate the implementation of organization-wide or corporate geospatial information systems (GIS) over time. A questionnaire was developed to assess values and perceptions associated with the model components. The evalua

This book shows how Global Information Systems (GIS) can be used for operations management in public institutions. It covers theory and practical applications, ranging from tracking public health trends to mapping transportation routes, to charting the safest handling of hazardous materials. Along with an expert line-up of contributors and case studies, the editors provide a complete overview of how to use GIS as part of a successful, collaborative data analysis, and how to translate the information into cost-saving decisions, or even life-saving ones.

The ArcGIS Book

Geographical Information Systems in Archaeology

Geospatial Information and Geographic Information Systems (GIS)

Principles of Geographic Information Systems

Geographic Information Systems for the Social Sciences

Getting Started with Geographic Information Systems

Geographical Information Systems (GIS) provide an enhanced environment for spatial data processing. The ability of geographic information systems to handle and analyse spatially referenced data may be seen as a major characteristic which distinguishes GIS from information systems developed to serve the needs of business data processing as well as from CAD systems or other systems whose primary objective is map production. This book, which contains contributions from a wide-ranging group of international scholars, demonstrates the progress which has been achieved so far at the interface of GIS technology and spatial analysis and planning. The various contributions bring together theoretical and conceptual, technical and applied issues. Topics covered include the design and use of GIS and spatial models, AI tools for spatial modelling in GIS, spatial statistical analysis and GIS, GIS and dynamic modeling, GIS in urban planning and policy making, information systems for policy evaluation, and spatial decision support systems.

Geographic Information Systems (GIS) provide essential disaster management decision support and analytical capabilities. As such, homeland security professionals would greatly benefit from an interdisciplinary understanding of GIS and how GIS relates to disaster management, policy, and practice. Assuming no prior knowledge in GIS and/or disaster management, Geographic Information Systems (GIS) for Disaster Management guides readers through the basics of GIS as it applies to disaster management practice. Using a hands-on approach grounded in relevant GIS and disaster management theory and practice, this textbook provides coverage of the basics of GIS. It examines what GIS can and can't do, GIS data formats (vector, raster, imagery), and basic GIS functions, including analysis, map production/cartography, and data modeling. It presents a series of real-life case studies that illustrate the GIS concepts discussed in each chapter. These case studies supply readers with an understanding of the applicability of GIS to the full disaster management cycle. Providing equal treatment to each disaster management cycle phase, the book supplies disaster management practitioners and students with coverage of the latest developments in GIS for disaster management and emerging trends. It takes a learning-by-examples approach to help readers apply what they have learned from the examples and disaster management scenarios to their specific situations. The book illustrates how GIS technology can help disaster management professionals, public policy makers, and decision-makers at the town, county, state, federal, and international levels. Offering software-neutral best practices, this book is suitable for use in undergraduate- or graduate-level disaster management courses. Offering extensive career advice on GIS for disaster management from working professionals, the book also includes a GIS for disaster management research agenda and ideas for staying current in the field.

An integrated approach that combines essential GIS background with a practical workbook on applying the principles in ArcGIS 10.0 and 10.1 Introducing Geographic Information Systems with ArcGISIntegrates a broad introduction to GIS with a software-specific workbook for Esri's ArcGIS. Where most courses make do using two separate texts, one covering GIS and another the software, this book enables students and instructors to use a single text with an integrated approach covering both in one volume with a common vocabulary and instructional style. This revised edition focuses on the latest software updates—ArcGIS 10.0 and 10.1. In addition to its already successful coverage, the book allows students to experience publishing maps on the Internet through new exercises, and introduces the idea of programming in the language Esri has chosen for applications (i.e., Python). A DVD is packaged with the book, as in prior editions, containing data for working out all of the exercises. This complete, user-friendly coursebook: Is updated for the latest ArcGIS releases—ArcGIS 10.0 and 10.1 Introduces the central concepts of GIS and topics needed to understand spatial information analysis Provides a considerable ability to operate important tools in ArcGIS Demonstrates new capabilities of ArcGIS 10.0 and 10.1 Provides a basis for the advanced study of GIS and the study of the newly emerging field of GIScience Introducing Geographic Information Systems with ArcGIS, Third Edition is the ideal guide for undergraduate students taking courses such as Introduction to GIS, Fundamentals of GIS, and Introduction to ArcGIS Desktop. It is also an important guide for professionals looking to update their skills for ArcGIS 10.0 and 10.1.

As the use of geographical information systems develops apace, a significant strand of research activity is being directed to the fundamental nature of geographic information. This volume contains a collection of essays and discussions on this theme. What is geographic information? What fundamental principles are associated with it? How can

Essentials of Geographic Information Systems

Introducing Geographic Information Systems with ArcGIS

The Social Implications of Geographic Information Systems

Maximizing the Power of Geographical Information Systems (GIS) in Applied Land Informatics

Geographic Information Systems in Business

Geospatial Information System Use in Public Organizations

An introduction to natural resource management, Geographic Information Systems provides students with a look at Geographic Information Systems (GIS) and the GIS applications they are likely to encounter in the field. Covering topics such as querying, buffering, clipping, and overlay analysis, Geographic Information Systems also delivers background information on the history of GIS, database creation, editing and acquisition, and map development. It is important to note that this text is not about how to do GIS, but is instead about the potential application of GIS to natural resources management. The applications provided can be extended to any region of the world, although the primary emphasis is on the U.S. and Canada.

New and updated Sixth Edition of GIS Fundamentals, 6th Edition - the bestselling GIS textbook by Paul Bolstad. Geographic Information Systems (GIS) are computer-based tools for the entry, maintenance, and analysis of spatial data. GIS are critical for effective resource management, and have been applied across a wide range of science, business, and government endeavours. This book provides an introduction to the theory and application of GIS. It is written for use in a first-year GIS class and as a reference for the GIS practitioner. This sixth edition balances theoretical and practical material, so that students may apply knowledge of GIS in the solution of real-world problems. Improvements over the previous editions are included in each chapter. Topics treated include an introduction to GIS, spatial data models, map projections, data entry, image data, GPS, digital data, database systems in GIS, general spatial analysis, raster analysis, terrain modeling, metadata, standards, and accuracy assessments.

This best-selling non-technical, reader-friendly introduction to GIS makes the complexity of this rapidly growing high-tech field accessible to beginners. It uses a "learn-by-seeing" approach that features clear, simple explanations, an abundance of illustrations and photos, and generic practice labs for use with any GIS software. What Is a GIS? GIS's Roots in Cartography. Maps as Numbers. Getting the Map into the Computer. What Is Where? Why Is It There? Making Maps with GIS. How to Pick a GIS. GIS in Action. The Future of GIS. For anyone interested in a hands-on introduction to Geographic Information Systems.

Discusses geographic information systems, covering topics including classifying and displaying themes, measuring distance in a view, managing scale, creating map layouts, and address geocoding.

Principles, Techniques, Management and Applications

10 Big Ideas about Applying the Science of where

Geographic Information Systems (GIS)

The Geographic Information System (GIS) for Everyone

Techniques, Applications and Technologies

Modelling with GIS

Clear, up-to-date coverage of methods for analyzing geographical information in a GIS context Geographic Information Analysis, Second Edition is fully updated to keep pace with the most recent developments of spatial analysis in a geographic information systems (GIS) environment. Still focusing on the universal aspects of this science, this revised edition includes new coverage on geovisualization and mapping as well as recent developments using local statistics. Building on the fundamentals, this book explores such key concepts as spatial processes, point patterns, and autocorrelation in area data, as well as in continuous fields. Also addressed are methods for combining maps and performing computationally intensive analysis. New chapters tackle mapping, geovisualization, and local statistics, including the Moran Scatterplot and Geographically Weighted Regression (GWR). An appendix provides a primer on linear algebra using matrices. Complete with chapter objectives, summaries, "thought exercises," explanatory diagrams, and a chapter-by-chapter bibliography, Geographic Information Analysis is a practical book for students, as well as a valuable resource for researchers and professionals in the industry.

Spatial analysis assists theoretical understanding and empirical testing in the social sciences, and rapidly expanding applications of geographic information technologies have advanced the spatial data-gathering needed for spatial analysis and model making. This much-needed volume covers outstanding examples of spatial thinking in the social sciences, with each chapter showing some aspect of how certain social processes can be understood by analyzing their spatial context. The audience for this work is as trans-disciplinary as its authorship because it contains approaches and methodologies useful to geography, anthropology, history, political science, economics, criminology, sociology, and statistics.

Provides a collection of more than 1000 GIS terms and illustrations.

Locate your place in the exciting field of GIS in existence since 1962. Geographical Information Systems (GIS) are really coming into their own today. And not just in your car's GPS system or your cell phone's tracking capabilities. GIS is finding applications throughout science, government, business, and industry, from regional and community planning, architecture, and transportation to public health, crime mapping and national defense. Michael DeMers's Fundamentals of Geographic Information, Fourth Edition brings an already essential text up to date, capturing the significant developments in the field and responding to the needs of a diverse set of readers, from geographers to students in a host of other fields. If you are a non-geographer or new to GIS, get a quick introduction to the "lay of the land" of GIS through the new "Spatial Learner's Permit" section.

Then join in the excitement of discovery with GIS databases as you absorb the such concepts and skills as digital geographic data and maps, GIS data models, spatial analysis, measurement and classification, cartographic modeling, and GIS design. Responding to both the needs and technical skills of today's students, this Fourth Edition: * Makes concepts accessible to students from a wide range of backgrounds * Offers more practical and relevant coverage of GIS design and implementation * Reflects the latest changes in GIS applications * Examines in greater depth the underlying computer science behind GIS * Uncovers the most recent developments on GIS research * Expands coverage of the increasingly robust literature on cartographic visualization * Includes Web-based labs and links to current and updated dataset resources Taking an open-ended, hands-on approach that gets you to ask your own questions about the underlying concepts, the Fourth Edition helps you not only master the basics but acquire the active problem-solving skills that are a key component of success in the GIS industry.

A First Text on Geographic Information Systems

Fundamentals of Geographic Information Systems

An Illustrated Dictionary of Geographic Information Systems

Concepts, Methodologies, Tools, and Applications

Spatially Integrated Social Science

Principles of Geographical Information Systems

Professionals who work with grieving families, including psychiatrists, psychologists, social workers, family therapists, physicians and nurses who work with dying patients and their families, hospice and patient home-care workers, clergy. The book also serves as a text in courses on bereavement, family development, family and child therapy, and child developmental psychopathology.

Geographic information systems (GIS)—a central repository of geographic data collected from various sources, including satellites and GPS—is emerging as one of the most intriguing and promising high-tech fields. This easy-to-understand resource provides technical and nontechnical professionals, regardless of their background, with an accessible and practical guide to important GIS know-how.

Capable of acquiring large volumes of data through sensors deployed in air, land, and sea, and making this information readily available in a continuous time frame, the science of geographical information system (GIS) is rapidly evolving. This popular information system is emerging as a platform for scientific visualization, simulation, and computation of spatio-temporal data. New computing techniques are being researched and implemented to match the increasing capability of modern-day computing platforms and easy availability of spatio-temporal data. This has led to the need for the design, analysis, development, and optimization of new algorithms for extracting spatio-temporal patterns from a large volume of spatial data. Computing in Geographic Information Systems considers the computational aspects, and helps students understand the mathematical principles of GIS. It provides a deeper understanding of the algorithms and mathematical methods inherent in the process of designing and developing GIS functions. It examines the associated scientific computations along with the applications of computational geometry, differential geometry, and affine geometry in processing spatial data. It also covers the mathematical aspects of geodesy, cartography, map projection, spatial interpolation, spatial statistics, and coordinate transformation. The book discusses the principles of bathymetry and generation of electronic navigation charts. The book consists of 12 chapters. Chapters one through four delve into the modeling and preprocessing of spatial data and prepares the spatial data as input to the GIS system. Chapters five through eight describe the various techniques of computing the spatial data using different geometric and statically techniques. Chapters nine through eleven define the technique of image registration computation and measurements of spatial objects and phenomenon. Examines cartographic modeling and map projection Covers the mathematical aspects of different map projections Explores some of the spatial analysis techniques and applications of GIS Introduces the bathymetric principles and systems generated using bathymetric charts

Explains concepts of differential geometry, affine geometry, and computational geometry Discusses popular analysis and measurement methods used in GIS This text outlines the key concepts encompassing GIS and spatio-temporal information, and is intended for students, researchers, and professionals engaged in analysis, visualization, and estimation of spatio-temporal events.

This is a hands-on book about ArcGIS that you work with as much as read. By the end, using Learn ArcGIS lessons, you'll be able to say you made a story map, conducted geographic analysis, edited geographic data, worked in a 3D web scene, built a 3D model of Venice, and more.

Computing in Geographic Information Systems

Geographic Information Systems for Geoscientists

Investigating Space and Place

Geographic Information Systems and Science

A to Z GIS

Geographic Information Systems Demystified

This book contains state-of-the-art research studies on the concepts, theory, processes, and real world applications of geographical information systems (GIS) in business. Its chapters are authored by many of the leading experts in applying GIS and geospatial science to business. This book utilizes a wide variety of approaches and methodologies including conceptual theory development, research frameworks, quantitative and qualitative methods, case studies, systems design, DSS theory, and geospatial analysis combined with point-of-sale. Since relatively little research has been published on GIS in business, this volume is pioneering and is the principal compendium of the latest research in this area. Geographic Information Systems in Business will impact not only the underlying definitions, concepts, and theories of GIS in business and industry, but its practice as well.

Geographical Information Systems is a computer system used to capture, store, analyze and display information related to positions on the Earth's surface. It has the ability to show multiple types of information on multiple geographical locations in a single map, enabling users to assess patterns and relationships between different information points, a crucial component for multiple aspects of modern life and industry. This 3-volumes reference provides an up-to-date account of this growing discipline through in-depth reviews authored by leading experts in the field. VOLUME EDITORS Thomas J. Cova The University of Utah, Salt Lake City, UT, United States Ming-Hsiang Tsou San Diego State University, San Diego, CA, United States Georg Bareth University of Cologne, Cologne, Germany Chunqiao Song University of California, Los Angeles, CA, United States Yan Song University of North Carolina at Chapel Hill, Chapel Hill, NC, United States Kai Cao National University of Singapore, Singapore Elisabete A. Silva University of Cambridge, Cambridge, United Kingdom Covers a rapidly expanding discipline, providing readers with a detailed overview of all aspects of geographic information systems, principles and applications Emphasizes the practical, socioeconomic applications of GIS Provides readers with a reliable, one-stop comprehensive guide, saving them time in searching for the information they need from different sources

Geographic Information Systems: Concepts, Methodologies, Tools, and Applications

Geographical Information Systems

Foundations of Geographic Information Science

Geographic Information Systems (GIS) and Mapping

GIS Fundamentals