

Motion Simulation And Mechanism Nong Lam University

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Introduction to Semi-supervised Learning -
Xiaojin Zhu 2009

Semi-supervised learning is a learning paradigm concerned with the study of how computers and

natural systems such as humans learn in the presence of both labeled and unlabeled data. Traditionally, learning has been studied either in the unsupervised paradigm (e.g., clustering, outlier detection) where all the data are unlabeled, or in the supervised paradigm (e.g., classification, regression) where all the data are labeled. The goal of semi-supervised learning is to understand how combining labeled and unlabeled data may change the learning behavior, and design algorithms that take advantage of such a combination. Semi-supervised learning is of great interest in machine learning and data mining because it can use readily available unlabeled data to improve supervised learning tasks when the labeled data are scarce or expensive. Semi-supervised learning also shows potential as a quantitative tool to understand human category learning, where most of the input is self-evidently unlabeled. In this introductory book, we present some popular semi-supervised learning models,

including self-training, mixture models, co-training and multiview learning, graph-based methods, and semi-supervised support vector machines. For each model, we discuss its basic mathematical formulation. The success of semi-supervised learning depends critically on some underlying assumptions. We emphasize the assumptions made by each model and give counterexamples when appropriate to demonstrate the limitations of the different models. In addition, we discuss semi-supervised learning for cognitive psychology. Finally, we give a computational learning theoretic perspective on semi-supervised learning, and we conclude the book with a brief discussion of open questions in the field. Table of Contents: Introduction to Statistical Machine Learning / Overview of Semi-Supervised Learning / Mixture Models and EM / Co-Training / Graph-Based Semi-Supervised Learning / Semi-Supervised Support Vector Machines / Human Semi-Supervised Learning / Theory and Outlook

Biotechnology and Innovation Systems - Bo
Göransson 2011-01-01

This book explores how policies targeting public research institutions, such as universities, contribute to the appropriation of biotechnology through national innovation systems. Around the world, biotechnology has become a driving force for dramatic change in systems and policies intended to spur innovation. The leading contributors expertly construct a detailed picture of policy approaches that support biotechnology and how such approaches work under different economic and social conditions. They also provide an insight into the role of universities in this process. Researchers, academics, students, policy advisors, decision-makers and other professionals involved, and working in, the fields of biotechnology, innovation systems, higher education and development will find this book an invaluable resource.

Building Soft Skills for Employability - Tran

Le Huu Nghia 2019-09-24

This book is among the first of its kind to comprehensively examine the implementation of soft skills in universities in the developing country, Vietnam. The context is unique as the implementation is taking place within the distinctive socio-economic, cultural and political characteristics of the country, amidst several simultaneously-executed educational reforms. Tran lays down the foundation for discussion by providing readers with a comprehensive review of how soft skills implementation has come into existence in higher education across the globe, before diving into the implementation of soft skills in Vietnamese universities. He goes on to highlight the interesting differences in the conceptualization of soft skills between Vietnamese universities and those in the West. The book depicts and compares how university leaders and managers tackle contextual factors, submit to constraints enforced by political forces, and how they use institutional

advantages available for implementation. It goes further to examine how personal and contextual factors affect teachers' and students' engagement with the implementation, and highlights the role of work-integrated learning and extra-curricular activities in developing soft skills for students. Finally, the book investigates the contribution of external stakeholders, such as alumni, employers, skills experts, and local authorities, to the implementation and obstacles that prevent their participation. This book will be a valuable reference for the implementation of soft skills in higher education around the world.

Dissertation Abstracts International - 2000

Small Firm Growth - Per Davidsson 2010
Small Firm Growth comprehensively reviews the empirical literature on small firm growth to highlight and integrate what is known about this phenomenon and take stock of what past experiences of researching this area implies for

how the phenomenon can or should be studied in future research.

Security and Privacy in Communication Networks - Songqing Chen 2019-12-12

This two-volume set LNICST 304-305 constitutes the post-conference proceedings of the 15th International Conference on Security and Privacy in Communication Networks, SecureComm 2019, held in Orlando, FL, USA, in October 2019. The 38 full and 18 short papers were carefully reviewed and selected from 149 submissions. The papers are organized in topical sections on blockchains, internet of things, machine learning, everything traffic security communicating covertly, let's talk privacy, deep analysis, systematic theory, bulletproof defenses, blockchains and IoT, security and analytics, machine learning, private, better clouds, ATCS workshop.

Applied Demography for Biologists - James R. Carey 1993-02-04

This is the first book to comprehensively apply

the fundamental tools and concepts of demography to a nonhuman species. It provides clear and concise treatment of standard demographic techniques such as life table analysis and population projection; introduces models that have seldom appeared outside of the demographic literature including the multiple decrement life table, the intrinsic sex ratio, and multiregional demography; and addresses demographic problems that are unique to nonhuman organisms such as the demographic theory of social insects and harvesting techniques applied to insect mass rearing. The book also contains a synthesis of fundamental properties of population such as momentum and convergence to the stable age distribution, with a section on the unity of demographic models, and appendices detailing analytical methods used to quantify and model the data gathered in a ground-breaking study on the mortality experience of 1.2 million medflies. Based on an insect demography course at the University of

California, Davis, the book is intended for practicing entomologists, population biologists, and ecologists for use in research or as a graduate text.

Medical Biosensors for Point of Care (POC)

Applications - Roger J Narayan 2016-08-21

Medical Biosensors for Point of Care (POC)

Applications discusses advances in this important and emerging field which has the potential to transform patient diagnosis and care. Part 1 covers the fundamentals of medical biosensors for point-of-care applications. Chapters in part 2 go on to look at materials and fabrication of medical biosensors while the next part looks at different technologies and operational techniques. The final set of chapters provide an overview of the current applications of this technology. Traditionally medical diagnostics have been dependent on sophisticated technologies which only trained professionals were able to operate. Recent research has focused on creating point-of-care

diagnostic tools. These biosensors are miniaturised, portable, and are designed to be used at the point-of-care by untrained individuals, providing real-time and remote health monitoring. Provides essential knowledge for designers and manufacturers of biosensors for point-of-care applications Provides comprehensive coverage of the fundamentals, materials, technologies, and applications of medical biosensors for point-of-care applications Includes contributions from leading international researchers with extensive experience in developing medical biosensors Discusses advances in this important and emerging field which has the potential to transform patient diagnosis and care

Families Caring for an Aging America - National Academies of Sciences, Engineering, and Medicine 2016-11-08

Family caregiving affects millions of Americans every day, in all walks of life. At least 17.7 million individuals in the United States are

caregivers of an older adult with a health or functional limitation. The nation's family caregivers provide the lion's share of long-term care for our older adult population. They are also central to older adults' access to and receipt of health care and community-based social services. Yet the need to recognize and support caregivers is among the least appreciated challenges facing the aging U.S. population. Families Caring for an Aging America examines the prevalence and nature of family caregiving of older adults and the available evidence on the effectiveness of programs, supports, and other interventions designed to support family caregivers. This report also assesses and recommends policies to address the needs of family caregivers and to minimize the barriers that they encounter in trying to meet the needs of older adults.

Physics and Technology of Silicon Carbide Devices - George Gibbs 2016-10-01
Silicon (Si) is by far the most widely used

semiconductor material for power devices. On the other hand, Si-based power devices are approaching their material limits, which has provoked a lot of efforts to find alternatives to Si-based power devices for better performance. With the rapid innovations and developments in the semiconductor industry, Silicon Carbide (SiC) power devices have progressed from immature prototypes in laboratories to a viable alternative to Si-based power devices in high-efficiency and high-power density applications. SiC devices have numerous persuasive advantages--high-breakdown voltage, high-operating electric field, high-operating temperature, high-switching frequency and low losses. Silicon Carbide (SiC) devices belong to the so-called wide band gap semiconductor group, which offers a number of attractive characteristics for high voltage power semiconductors when compared to commonly used silicon (Si). Recently, some SiC power devices, for example, Schottky-barrier diodes

(SBDs), metal-oxide-semiconductor field-effect transistors (MOSFETs), junction FETs (JFETs), and their integrated modules have come onto the market. Physics and Technology of Silicon Carbide Devices abundantly describes recent technologies on manufacturing, processing, characterization, modeling, etc. for SiC devices.

Rice in Human Nutrition - Bienvenido O. Juliano 1993

On title page & cover: International Rice Research Institute

Rice - Bienvenido O. Juliano 1985

Pesticide Formulations and Application Systems - G. C. Volgas 2003-12

"This book represents the work that was presented at the 23rd Symposium on Pesticide Formulations and Application Systems, Oct. 15 & 16, 2002 in Norfolk, VA. The ASTM E35.22 Subcommittee sponsors this symposium annually in an attempt to deliver pertinent and updated

information to agrochemical formulators. The work of several authors from private industry, government and academia is well represented here in an overview of recent pesticide technology."

Multi-disciplinary Trends in Artificial Intelligence - Somnuk Phon-Amnuaisuk
2017-10-20

This book constitutes the refereed conference proceedings of the 11th International Conference on Multi-disciplinary Trends in Artificial Intelligence, MIWAI 2017, held in Gadong, Brunei, in November 2017. The 40 revised full papers presented were carefully reviewed and selected from 82 submissions. They are organized in the following topical sections: knowledge representation and reasoning; data mining and machine learning; deep learning and its applications; document analysis; intelligent information systems; swarm intelligence.

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.

Geophysical Framework of the Continental United States - Louis Charles Pakiser 1989

Web Mining - Anthony Scime 2005-01-01
Web Mining is moving the World Wide Web toward a more useful environment in which users can quickly and easily find the information they need. Web Mining uses document content, hyperlink structure, and usage statistics to assist users in meeting their needed information. This book provides a record of current research and practical applications in Web searching. It

includes techniques that will improve the utilization of the Web by the design of Web sites, as well as the design and application of search agents. This book presents research and related applications in a manner that encourages additional work toward improving the reduction of information overflow, which is so common today in Web search results.

Blended Learning. Enhancing Learning Success - Simon K.S. Cheung 2018-07-21

This book constitutes the refereed proceedings of the 11th International Conference on Blended Learning, ICBL 2018, held in Osaka, Japan, in July/ August 2018. The 35 papers presented were carefully reviewed and selected from 94 submissions. The papers are organized in topical sections named: Experiences in Blended Learning, Content Development for Blended Learning, Assessment for Blended Learning, Computer-Support Collaborative Learning, Improved Flexibility of Learning Processes, Open Educational Resources, and Pedagogical

and Psychological Issues.

Autonomous Ground Vehicles - Umit Ozguner
2011

In the near future, we will witness vehicles with the ability to provide drivers with several advanced safety and performance assistance features. Autonomous technology in ground vehicles will afford us capabilities like intersection collision warning, lane change warning, backup parking, parallel parking aids, and bus precision parking. Providing you with a practical understanding of this technology area, this innovative resource focuses on basic autonomous control and feedback for stopping and steering ground vehicles. Covering sensors, estimation, and sensor fusion to percept the vehicle motion and surrounding objects, this unique book explains the key aspects that makes autonomous vehicle behavior possible. Moreover, you find detailed examples of fusion and Kalman filtering. From maps, path planning, and obstacle avoidance scenarios...to

cooperative mobility among autonomous vehicles, vehicle-to-vehicle communication, and vehicle-to-infrastructure communication, this forward-looking book presents the most critical topics in the field today.

The Science of String Instruments - Thomas D. Rossing 2010-12-15

Thomas D. Rossing String instruments are found in almost all musical cultures. Bowed string instruments form the backbone of symphony orchestras, and they are used widely as solo instruments and in chamber music as well. Guitars are used universally in pop music as well as in classical music. The piano is probably the most versatile of all musical instruments, used widely not only in ensemble with other musical instruments but also as a solo instrument and to accompany solo instruments and the human voice. In this book, various authors will discuss the science of plucked, bowed, and hammered string instruments as well as their electronic counterparts. We have tried to tell the

fascinating story of scientific research with a minimum of mathematics to maximize the usefulness of the book to performers and instrument builders as well as to students and researchers in musical acoustics. Sometimes, however, it is difficult to “translate” ideas from the exact mathematical language of science into words alone, so we include some basic mathematical equations to express these ideas. It is impossible to discuss all families of string instruments. Some instruments have been researched much more than others. Hopefully, the discussions in this book will help to encourage further scientific research by both musicians and scientists alike.

1.1 A Brief History of the Science of String Instruments

Quite a number of good histories of acoustics have been written (Lindsay 1966, 1973; Hunt 1992; Beyer 1999), and these histories include musical acoustics.

The Phenomenology of Traffic - Glenn Wyatt
2020-09-10

The book delves into the affective, embodied, and sensory dimensions of traffic and urban mobility. It brings together key phenomenological and post-phenomenological readings to challenge taken-for-granted assumptions of urban traffic. Through the experiences of traffic users in Ho Chi Minh City, Vietnam, the book provides fascinating pathways into structures and processes that make up phenomenal traffic worlds. It explores the nature of the traffic experience, modalities of existence within it, and the wide spectrum of awarenesses involved in making sense from non-sense. The book offers rich theoretical insights on how we feel our way through our affect-laden worlds. Through empirical examples from the urban traffic in Ho Chi Minh City, the book explores this fluid, constantly changing complex collective of ongoing negotiations we call ‘traffic,’ often emotional, involving and producing all kinds of entities. It develops a range of philosophical concepts in order to

better understand the complex relationships between humans and non-humans in everyday settings. Offering innovative insights into the structures, authorities, materialities and forms of power that shape our experiences of traffic, this book will be of interest to students, scholars and practitioners interested in philosophy, cultural geography, mobilities, transport studies, cultural studies, and urban studies.

Emerging Technologies for Education -

Weijia Jia 2022-01-28

This book constitutes the refereed conference proceedings of the 6th International Symposium on Emerging Technologies for Education, SETE 2021, held in Zhuhai, China in November 2021. 35 full papers were accepted together with 8 short papers out of 58 submissions. The papers focus on the following subjects: Emerging Technologies for Education, Digital Technology, Creativity, and Education; Education Technology (Edtech) and ICT for Education; Education + AI; Adaptive Learning, Emotion and Behaviour

Recognition and Understanding in Education; as well as papers from the International Symposium on User Modeling and Language Learning (UMLL2021) and the International Workshop on Educational Technology for Language Learning (ETLL 2021).

Contemporary Computing - Sanjay Ranka
2010-08-12

This book constitutes the second part of the refereed proceedings of the Third International Conference, IC3 2010, held in Noida, India, in August 2010. The 23 revised full papers presented were carefully reviewed and selected from numerous submissions.

Solar-to-Chemical Conversion - Hongqi Sun
2021-04-29

This comprehensive book systematically covers the fundamentals in solar energy conversion to chemicals, either fuels or chemical products. It includes natural photosynthesis with emphasis on artificial processes for solar energy conversion and utilization. The chemical

processes of solar energy conversion via homogeneous and/or heterogeneous photocatalysis has been described with the mechanistic insights. It also consists of reaction systems toward a variety of applications, such as water splitting for hydrogen or oxygen evolution, photocatalytic CO₂ reduction to fuels, and light driven N₂ fixation, etc. This unique book offers the readers a broad view of solar energy utilization based on chemical processes and their perspectives for future sustainability.

Sustainable Rice Straw Management -

Martin Gummert 2020-01-01

This open access book on straw management aims to provide a wide array of options for rice straw management that are potentially more sustainable, environmental, and profitable compared to current practice. The book is authored by expert researchers, engineers and innovators working on a range of straw management options with case studies from Vietnam, the Philippines and Cambodia. The

book is written for engineers and researchers in order to provide them information on current good practice and the gaps and constraints that require further research and innovation. The book is also aimed at extension workers and farmers to help them decide on the best alternative straw management options in their area by presenting both the technological options as well as the value chains and business models required to make them work. The book will also be useful for policy makers, required by public opinion to reduce greenhouse gas emissions and air pollution, looking for research-based evidence to guide the policies they develop and implement.

International Conference on Cognitive based Information Processing and

Applications (CIPA 2021) - Bernard J. Jansen
2021-10-28

This book contains papers presented at the International Conference on Cognitive based Information Processing and Applications (CIPA)

held during August 21, 2021, online conference (since COVID 19), which is divided into a 2-volume book. The papers in the second volume represent the various technological advancements in network information processing, graphics and image processing, medical care, machine learning, smart cities. It caters to postgraduate students, researchers, and practitioners specializing and working in the area of cognitive-inspired computing and information processing.

World Agroforestry Into the Future - Dennis P. Garrity 2006

Mendel's Principles of Heredity - William Bateson 1902

Bateson named the science "genetics" in 1905-1906. This is the first textbook in English on the subject of genetics.

Narrative Discourse - Gérard Genette 1983
Genette uses Proust's Remembrance of Things Past as a work to identify and name the basic

constituents and techniques of narrative. Genette illustrates the examples by referring to other literary works. His systemic theory of narrative deals with the structure of fiction, including fictional devices that go unnoticed and whose implications fulfill the Western narrative tradition.

Ultrasound: Advances in Food Processing and Preservation - Daniela Bermudez-Aguirre
2017-08-11

Ultrasound is an emerging technology that has been widely explored in food science and technology since the late 1990s. The book is divided into three main areas. Chapters 1 to 5 focus on the basic principles of ultrasound and how the technology works on microbial cells, enzymes, and the chemistry behind the process. Chapters 6 to 15 cover the application of ultrasound in specific food products and processes, discussing changes on food quality and presenting some innovations in food ingredients and enhancement of unit operations.

Finally, Chapters 16 to 20 present some topics about manufacture of ultrasound equipment and simulation of the process, the use of the technology to treat food industry wastewater, and an industry perspective. The laws and regulations concerning emerging technologies, such as ultrasound, are also discussed, including the new Food Safety Modernization Act.

Provides a clear and comprehensive panorama of ultrasound technology
Contains updated research behind this technology
Brings the current tested product and future uses
Explores potential future use within the food industry

Bioreactors for Waste Gas Treatment - C.

Kennes 2013-03-14

Air pollution, a major concern at the end of the 20th century, still remains a significant problem to be solved today. Traditionally, industrial waste gases have primarily been treated through physical or chemical methods. The search for new, efficient, and cost-effective alternative technologies has led to the development and,

more recently, the improvement of gas phase bioreactors. This book is the first single text to provide a complete, comprehensive picture of all major biological reactors suitable for solving air pollution problems. The text describes the main features and covers the major aspects, from microbiological to engineering, as well as economic aspects, of the different types of bioreactors. The book also presents an in-depth review of the subject, from fundamental bench-scale research to industrial field applications related to the operation of full-scale systems successfully treating polluted air in Europe and the United States. Material dedicated to more conventional non-biological technologies has also been included, to provide a complete overview of the different alternative treatment processes. Audience: The different chapters have been written by international experts, as a result of a fruitful collaboration between European and American scientists and engineers. The resulting text is a high quality,

valuable reference tool for a variety of readers, including graduate and postgraduate students, researchers, professors, engineers, and those professionals who are interested in environmental engineering and, more specifically, in innovative air pollution control technologies.

Health and Animal Agriculture in Developing Countries - David Zilberman
2011-12-10

This book provides an overview of the state of animal agriculture and present methodologies and proposals to develop policies that result in sustainable and profitable animal production that will protect human and environmental health, enhance livelihood of smallholders and meet consumer needs. The book combines lessons of the past, factual foundation to understand the present, analytical tools to design and improve policies, case studies that provide both empirical grounding and applications of some of the strategies suggested

in this book, and finally, a proposal for the way forward.

Fundamentals of Vehicle Dynamics - Thomas Gillespie 1992-02-01

This book attempts to find a middle ground by balancing engineering principles and equations of use to every automotive engineer with practical explanations of the mechanics involved, so that those without a formal engineering degree can still comprehend and use most of the principles discussed. Either as an introductory text or a practical professional overview, this book is an ideal reference.

Size Enlargement by Agglomeration - Wolfgang Pietsch 1991-09-27

Although agglomeration has long been used in the making of bricks and the recovery of coal particles, scientific investigation in this area only began in the 1950s. Presents for the first time the fundamentals of agglomeration science, the technology related to it and its various applications in modern industry. There is a

thorough review of methods of experimental investigation and analysis and a detailed section on industrial size enlargement equipment and processes.

Food Product-Package Compatibility - Bruce R. Harte 1987-07-01

Metaphor and Metonymy across Time and Cultures - Javier E. Díaz-Vera 2014-12-11

This volume offers new insights into figurative language and its pervasive role as a factor of linguistic change. The case studies included in this book explore some of the different ways new metaphoric and metonymic expressions emerge and spread among speech communities, and how these changes can be related to the need to encode ongoing social and cultural processes in the language. They cover a wide series of languages and historical stages.

The Vietnamese City in Transition - Patrick Gubry 2010

Since the Doi Moi policy of economic renovation

was introduced in 1986, Vietnam has undergone deep transformations as a result of the transition to a socialist-oriented market economy. Social and urban transition has taken place in parallel, as urban dynamics were spurred on by Vietnamese public and private stakeholders, and by external agents such as international organizations and international solidarity organizations, experts, consultants and bilateral aid organizations. Here are the resu...

NMR in Glycoscience and Glycotechnology - Koichi Kato 2017-05-15

This volume focuses on solution and solid-state NMR of carbohydrates, glycoproteins, glyco-technologies, biomass and related topics. It is estimated that at least 80% of all proteins are glycoproteins. Because of the complexity, heterogeneity and flexibility of the sugar chains, the structural biology approaches for glycoconjugates have been generally avoided. NMR techniques although well established for structural analyses of proteins and nucleic acids,

cannot be simply applied to this complex class of biomolecules. Nonetheless, recently developed NMR techniques for carbohydrates open the door to conformational studies of a variety of sugar chains of biological interest. NMR studies on glycans will have significant impact on the development of vaccines, adjuvants, therapeutics, biomarkers and on biomass regeneration. In this volume, the Editors have collected the most up-to-date NMR applications from experts in the field of carbohydrate NMR spectroscopy. Timely and useful, not only for NMR specialists, it will appeal to researchers in the general field of structural biology, biochemistry and biophysics, molecular and cellular biology and material science.

Contested Waterscapes in the Mekong Region -
Franois Molle 2012-05-04

The catchment area of the Mekong River and its tributaries extends from China, through Burma/Myanmar, Thailand, Laos, Cambodia and to Vietnam. The water resources of the Mekong

region - from the Irrawaddy and Nu-Salween in the west, across the Chao Phraya to the Lancang-Mekong and Red River in the east- are increasingly contested. Governments, companies, and banks are driving new investments in roads, dams, diversions, irrigation schemes, navigation facilities, power plants and other emblems of conventional 'development'. Their plans and interventions should provide some benefits, but also pose multiple burdens and risks to millions of people dependent on wetlands, floodplains and aquatic resources, in particular, the wild capture fisheries of rivers and lakes. This book examines how large-scale projects are being proposed, justified, and built. How are such projects contested and how do specific governance regimes influence decision making? The book also highlights the emergence of new actors, rights and trade-off debates, and the social and environmental consequences of 'water resources development'. This book shows how diverse, and

often antagonistic, ideologies and interests are contesting for legitimacy. It argues that the distribution of decision-making, political, and discursive power influences how the waterscapes of the region will ultimately look and how benefits, costs and risks will be distributed. These issues are crucial for the transformation of waterscapes and the prospects for democratizing water governance in the Mekong region. The book is part of the action-research of the M-POWER (Mekong Program on Water, Environment and Resilience) knowledge network. Published with IFAD, CG|AR Challenge Program on Water & Food, M-POWER, Project ECHEL-EAU and HEINRICH BOLL STIFTUNG **Agent-Based Modeling of Environmental Conflict and Cooperation** - Todd K. BenDor 2018-10-12

Conflict is a major facet of many environmental challenges of our time. However, growing conflict complexity makes it more difficult to identify win-win strategies for sustainable

conflict resolution. Innovative methods are needed to help predict, understand, and resolve conflicts in cooperative ways. Agent-Based Modeling of Environmental Conflict and Cooperation examines computer modeling techniques as an important set of tools for assessing environmental and resource-based conflicts and, ultimately, for finding pathways to conflict resolution and cooperation. This book has two major goals. First, it argues that complexity science can be a unifying framework for professions engaged in conflict studies and resolution, including anthropology, law, management, peace studies, urban planning, and geography. Second, this book presents an innovative framework for approaching conflicts as complex adaptive systems by using many forms of environmental analysis, including system dynamics modeling, agent-based modeling, evolutionary game theory, viability theory, and network analysis. Known as VIABLE (Values and Investments from Agent-Based

interaction and Learning in Environmental systems), this framework allows users to model advanced facets of conflicts—including institution building, coalition formation, adaptive learning, and the potential for future conflict—and conflict resolution based on the long-term viability of the actors' strategies. Written for scholars, students, practitioners, and policy makers alike, this book offers readers an extensive introduction to environmental conflict research and resolution techniques. As the result of decades of research, the text presents a

strong argument for conflict modeling and reviews the most popular and advanced techniques, including system dynamics modeling, agent-based modeling, and participatory modeling methods. This indispensable guide uses NetLogo, a widely used and free modeling software package, to implement the VIABLE modeling approach in three case study applications around the world. Readers are invited to explore, adapt, modify, and expand these models to conflicts they hope to better understand and resolve.