
Department Of Civil Engineering Indian Institute

This is likewise one of the factors by obtaining the soft documents of this Department Of Civil Engineering Indian Institute by online. You might not require more era to spend to go to the book launch as capably as search for them. In some cases, you likewise complete not discover the proclamation Department Of Civil Engineering Indian Institute that you are looking for. It will enormously squander the time.

However below, in the manner of you visit this web page, it will be for that reason very easy to acquire as well as download lead Department Of Civil Engineering Indian Institute

It will not agree to many become old as we accustom before. You can realize it while put-on something else at home and even in your workplace. in view of that easy! So, are you question? Just exercise just what we provide under as without difficulty as evaluation Department Of Civil Engineering Indian Institute what you once to read!



Transportation Research in Remediation of

India Springer

This book is designed to serve as a comprehensive resource on cellular confinement systems or geocells, covering technologies and their applications in geotechnical engineering. The book discusses all aspects of geocells and related technologies, and covers the subjects from conceptual basics to recent advances. The chapters of this book are written by renowned international experts and its contents include detailed case studies from both academic and industry experts. This book is a one-stop reference work for academicians, students, and practicing engineers in the global geotechnical community.

Measurement, Analysis and

Environmental Pollutants

Springer Nature

This book presents mainly the geotechnical details of geomaterials (soils and rocks) found in all the 36 states and union territories of India.

There are 37 chapters in this book. Chapter 1 provides an overview of geomaterials, focusing on their engineering properties as determined based on the project site investigations and laboratory/field tests; this will help readers understand the technical details explained throughout the book, with each chapter dealing with geomaterials of one state/union territory only.

Each chapter, contributed by a team of authors, follows a common template with the following sections:

introduction, major types of soils and rocks, properties of soils and rocks, use of soils and rocks as construction materials, foundation and other geotechnical structures, other geomaterials, natural

hazards, case studies and field tests, geoenvironmental impact on soils and rocks, concluding remarks and references. All the chapters cover highly practical information and technical data for application in ground infrastructure projects, including foundations of structures (buildings, towers, tanks, machines and so on), highway, railway and airport pavements, embankments, retaining structures/walls, dams, reservoirs, canals and ponds, and landfills and tunnels. These details are also highly useful for professionals dealing with mining, oil and gas projects and agricultural and aquacultural engineering projects. Although this book covers the Indian ground characteristics, the information provided can be helpful in some suitable forms to the professionals of other countries having similar ground conditions and applications.

Pollutants from

Energy Sources

Elsevier

The book presents the select proceedings of the 2nd International Conference on Sustainable Construction Technologies and Advancements in Civil Engineering (ScTACE 2021). This book discusses the latest developments and contributions towards sustainable construction technologies and advances in civil engineering. Various topics covered in this book are construction technologies, geotechnical engineering, transportation and traffic engineering, structural

engineering, environmental engineering, remote sensing and GIS, geo-environmental engineering, water resources engineering and earthquake engineering. This book will be useful for students, researchers and professionals working in the area of civil engineering. Sustainability Issues in Civil Engineering Elsevier Basics of Computational Geophysics provides a one-stop, collective resource for practitioners on the different techniques and models in geoscience, their practical applications, and case studies. The reference provides the modeling theory in an easy-to-read format that is verified with onsite models for specific regions and scenarios, including the use of big data	and artificial intelligence. This book offers a platform whereby readers will learn theory, practical applications, and the comparison of real-world problems surrounding geomechanics, modeling and optimizations. Covers various advanced computational techniques for solving different problems in geophysics, including the use of Big Data and artificial intelligence Includes case studies that provide examples surrounding practical applications Provides an assessment of the capabilities of commercial software Biofuels and Bioenergy CRC Press Circular Bioeconomy: Technologies for Waste Remediation covers information about the strategies and approaches facilitating the integration of
---	--

technologies for wastewater and solid waste remediation. The book highlights the models developed to valorize wastes to produce biobased products. Various chapters presented in the book put a focus on sustainability approaches as a central theme in order to facilitate industries and policymakers to adopt circular economy goals. Since the principal idea of a circular bioeconomy is to transition from a linear economy, it involves advanced technological and designing breakthroughs to reduce waste with a closed looped system. Covers the integration of technologies and

processes for waste remediation Narrates recent developments and perspectives on value added products from wastes Summarizes recent developments in lifecycle assessment and techno economic analysis using wastes for sustainable development Offers academicians, engineers, researchers and stakeholders help in adapting suitable technologies for solid waste and wastewater management Contaminants in Drinking and Wastewater Sources Springer Nature New Materials in Civil Engineering Butterworth-Heinemann Sustainable Water Resources Management Springer Nature

This book comprises select proceedings of the First International Conference on Geomatics in Civil Engineering (ICGCE 2018). This book presents latest research on applications of geomatics engineering in different domains of civil engineering, like structural engineering, geotechnical engineering, hydraulic and water resources engineering, environmental engineering and transportation engineering. It also covers miscellaneous applications of geomatics in a wide range of technical and societal problems making use of geospatial information, engineering principles, and relational data structures involving measurement sciences. The book proves to be very useful for the scientific and engineering community working in the field of geomatics and geospatial technology.

Public Works Department, India Civil Engineer grievances in the Department, as set forth in the columns of the 'Engineer' and 'Engineering'; supported by extracts from official documents, etc

Butterworth-Heinemann Clean Energy and Resource Recovery: Wastewater Treatment Plants as Bio-refineries, Volume 2, summarizes the fundamentals of various treatment modes applied to the recovery of energy and value-added products from wastewater treatment plants. The book addresses the production of biofuel, heat, and electricity, chemicals, feed, and other products from municipal wastewater, industrial wastewater, and sludge. It intends to provide the

readers an account of up-to-date information on the recovery of biofuels and other value-added products using conventional and advanced technological developments. The book starts with identifying the key problems of the sectors and then provides solutions to them with step-by-step guidance on the implementation of processes and procedures. Titles compiled in this book further explore related issues like the safe disposal of leftovers, from a local to global scale. Finally, the book sheds light on how wastewater treatment facilities reduce stress on energy systems, decrease air and water pollution, build resiliency, and drive local economic activity. As a compliment to Volume 1: Biomass Waste Based Biorefineries, Clean Energy and Resource Recovery, Volume 2: Wastewater Treatment Plants as Bio-refineries is a comprehensive reference on all aspects of energy and resource recovery from wastewater. The book is going to be a handy reference tool for energy researchers, environmental scientists, and civil, chemical, and municipal engineers interested in waste-to-energy. Offers a comprehensive overview of the fundamental treatments and methods used in the recovery of energy and value-added products from wastewater. Identifies solutions to key problems related to wastewater to

energy/resource recovery through conventional and advanced technologies and explore the alternatives. Provides step-by-step guidance on procedures and calculations from practical field data. Includes successful case studies from both developing and developed countries.

Trends in Civil Engineering and Challenges for Sustainability Elsevier

This compilation on sustainability issues in civil engineering comprises contributions from international experts who have been working in the area of sustainability in civil engineering. Many of the contributions have been presented as keynote lectures at the International Conference on Sustainable Civil Infrastructure (ICSCI) held

in Hyderabad, India. The book has been divided into core themes of Sustainable Transportation Systems, Sustainable Geosystems, Sustainable Environmental and Water Resources and Sustainable Structural Systems. Use of sustainability principles in engineering has become an important component of the process of design and in this context, design and analysis approaches in civil engineering are being reexamined to incorporate the principles of sustainable designs and construction in practice. Developing economies are on the threshold of rapid infrastructure growth and there is a need to compile the developments in various branches of civil engineering and highlight the issues. It is this need that prompted the composition of this book. The contents of this book will be useful to students, professionals, and

researchers working on sustainability related problems in civil engineering. The book also provides a perspective on sustainability for practicing civil engineers who are not directly researching the problems but are affected by the concerns in the course of their profession. The book can also serve to highlight to policy makers and governing bodies the need to have a mandate for sustainable infrastructural development.

Nature-Inspired Methods for Metaheuristics Optimization Woodhead Publishing

The edited book comprises invited book chapter contributions from global experts in the field of sustainable materials and resilient infrastructure. The book covers the most critical and emerging topics for creating sustainable

solutions for the construction industry, promoting the technologies and monitoring methods for resilient infrastructure. It focuses on sustainable solutions and offers techniques and methodologies to deliver high-quality end solutions in civil engineering. In addition, the content provides knowledge-based information for the readers to assess, monitor, measure, and practice sustainability for resilient infrastructure. The contents of the volume are a blend of academic research work and industrial case studies. It covers the use of sustainable materials like Lime-Pozzolona Binders, biopolymers, lignosulphonate, lightweight aggregates made from fly ash,

calcinated clay, paper ash, efficiency, and waste and limestone as management. It is a amendments/ameliorators valuable reference for for soil remediation, faculty, researchers, field development of neo- experts, scientists, and construction materials and composites for civil practicing engineers. engineering applications. Urban Air Quality Monitoring, Modelling and Human Exposure Assessment Springer Nature Risk, Reliability and Sustainable Remediation in the Field of Civil and Environmental Engineering illustrates the concepts of risk, design of innovative pavements using alkali activation and pervious concrete for sustainable infrastructure is also discussed. The chapters also highlight the role of civil engineers in achieving UN Sustainable Development Goals, promoting climate change design for urban landscapes, and modelling building energy demand. This book is framed to address the principles and practice from the corners of geoenvironment, sustainable construction materials, low carbon materials, energy

failure and structural failures of all processes involved in civil and environmental systems, evaluates reliability, and discusses the implications of measurable indicators of sustainability in important aspects of multitude of civil engineering projects. It will help practitioners become familiar with tolerances in design parameters, uncertainties in the environment, and applications in civil and environmental systems. Furthermore, the book emphasizes the importance of risks involved in design and planning stages and covers reliability techniques to discover and remove the	potential failures to achieve a sustainable development. Contains relevant theory and practice related to risk, reliability and sustainability in the field of civil and environment engineering Gives firsthand experience of new tools to integrate existing artificial intelligence models with large information obtained from different sources Provides engineering solutions that have a positive impact on sustainability Applications of Geomatics in Civil Engineering William Andrew This book discusses different aspects of energy consumption and environmental pollution, describing in detail the various pollutants resulting
--	---

from the utilization of natural resources and their control techniques. It discusses diagnostic techniques in a simple and easy-to-understand manner. It will be useful for engineers, agriculturists, environmentalists, ecologists and policy makers involved in area of pollutants from energy, environmental safety, and health sectors.

Food Waste to

Valuable Resources

Springer Nature

The anaerobic process is considered to be a sustainable technology for organic waste treatment mainly due to its lower energy consumption and production of residual solids coupled with the prospect of energy recovery from the biogas generated. However, the

anaerobic process cannot be seen as providing the 'complete' solution as its treated effluents would typically not meet the desired discharge limits in terms of residual carbon, nutrients and pathogens. This has given impetus to subsequent post treatment in order to meet the environmental legislations and protect the receiving water bodies and environment. This book discusses anaerobic treatment from the perspective of organic wastes and wastewaters (municipal and industrial) followed by various post-treatment options for anaerobic effluent

polishing and resource recovery. Coverage will also be from the perspective of future trends and thoughts on anaerobic technologies being able to support meeting the increasingly stringent disposal standards. The resource recovery angle is particularly interesting as this can arguably help achieve the circular economy. It is intended the information can be used to identify appropriate solutions for anaerobic effluent treatment and possible alternative approaches to the commonly applied post-treatment techniques. The succeeding discussion is intended to lead on to identification of opportunities for further research and development. This book can be used as a standard reference book and textbook in universities for Master and Doctoral students. The academic community relevant to the subject, namely faculty, researchers, scientists, and practicing engineers, will find the book both informative and as a useful source of successful case studies.

New Materials in Civil Engineering

This contributed volume is primarily intended for graduate and professional audiences. The book provides a basic understanding of urban air quality issues, root causes for local and

urban air pollution, monitoring and modelling techniques, assessment, and control options to manage air quality at local and urban scale. The book also offers useful information on indoor air quality and smart sensors, which are gaining much importance in current times.

Flood Handbook

Springer Nature

This book gathers together a set of chapters covering recent development in optimization methods that are inspired by nature. The first group of chapters describes in detail different meta-heuristic algorithms, and shows their applicability using some test or real-world problems. The second part of the book

is especially focused on advanced applications and case studies. They span different engineering fields, including mechanical, electrical and civil engineering, and earth/environmental science, and covers topics such as robotics, water management, process optimization, among others. The book covers both basic concepts and advanced issues, offering a timely introduction to nature-inspired optimization method for newcomers and students, and a source of inspiration as well as important practical insights to engineers and researchers.

Analysis and Design of
Plated Structures CRC

Press

This book brings high-quality selected research articles from the international conference on Sustainable Water Resources Management (SWARM 2020), held at Assam Engineering College, Guwahati, Assam, India, during 19 – 21 June 2020. The book focuses on water management and planning, urban water management, climate change and global warming, management of groundwater and aquifer remediation, water conservation, water quality, pollution control, management of trans-boundary rivers, advanced hydrological modelling and hydro-disaster risk management of sustainable water management.

Current Developments in Biotechnology and Bioengineering CRC Press

p="" This monograph is based on pollution control technologies available to deal with water and air pollution. It includes removal of variety of pollutants including arsenic, chromium, uranium, pesticides and arsenic from water using adsorption technique. In addition, this book deals with the sampling and removal of microplastics using various techniques. The contents also focus on the role of membrane technology in water and wastewater treatment, and particulate matter air pollution and its control techniques. This volume will be a useful guide for researchers, academics and scientists. ^

Smart Technologies for Energy, Environment and Sustainable Development, Vol 1 Elsevier	availability (specifically in arid and semi-arid regions such as India and Africa). Incorporating
Your Guide to Effective Groundwater Management	management with science and modeling, the book covers all areas of
Groundwater Assessment, Modeling, and Management	groundwater resource assessment, modeling, and management, and combines hands-on
discusses a variety of groundwater problems and outlines the solutions needed to sustain surface and ground water resources on a global scale.	applications with relevant theory. For Water Resource Managers and Decision Makers The
Contributors from around the world lend their expertise and provide an international perspective on groundwater management. They address the management of groundwater resources and pollution, waste water treatment methods, and the impact of climate change on groundwater and water	book describes techniques for the assessment of groundwater potential, pollution, prevention, and remedial measures, and includes a new approach for groundwater modeling based on connections (network theory). Approximately 30 case studies and six hypothetical studies are introduced reflecting a range of themes that

include: groundwater basics and the derivation of groundwater flow equations, exploration and assessment, aquifer parameterization, augmentation of aquifer, water and environment, water and agriculture, the role of models and their application, and water management policies and issues. The book describes remote sensing (RS) applications, geographical information systems (GIS), and electrical resistivity methods to delineate groundwater potential zones. It also takes a look at: Inverse modeling (pilot-points method) Simulation optimization models Radionuclide migration studies through mass transport modeling Modeling for mapping groundwater potential Modeling for vertical 2-D and 3-D groundwater flow Groundwater Assessment, Modeling, and Management explores the management of water resources and the impact of climate change on groundwater. Expert contributors provide practical information on hydrologic engineering and groundwater resources management for students, researchers, scientists, and other practicing professionals in environmental engineering, hydrogeology, irrigation, geophysics, and environmental science. Fracture Failure Analysis of Fiber Reinforced Polymer Matrix Composites Springer This book contains select proceedings of the International Conference

on Smart Technologies for Energy, Environment, and Sustainable Development (ICSTEESD 2020). The book is broadly divided into the themes of energy, environment, and sustainable development; and discusses the significance and solicitations of intelligent technologies in the domain of energy and environmental systems engineering. Topics covered in this book include sustainable energy systems including renewable technologies, energy efficiency, techno-economics of energy system and policies, integrated energy system planning, environmental management, energy efficient buildings and communities, sustainable transportation, smart manufacturing processes, etc. The book will be a valuable reference for young researchers, professionals, and policy makers working in the areas of energy, environment and sustainable development.

Pollution Control Technologies Springer Nature

This volume takes a multidisciplinary approach to study and evaluate the global human vulnerability to the exposure of contaminants of emerging concern (CECs) in the natural environment. It provides a comprehensive resource on structurally diverse groups of chemical compounds that have adverse effects on the

aquatic environment. It explores the global strength, environmental status, chemical risk assessment and management strategies of CECs with relevant modern techniques. The principle focus is on concurrent emerging water quality issues. It defines the impacts of the environmental exposure of trace concentrations of CECs and/or their metabolites and discusses possible technological advances to combat the emerging pollutants. It will be useful to researchers, multi-stakeholder expert groups, policymakers, and graduate students.