Fuzzy Analytical Hierarchy Process Disposal Method

Volume is indexed by Thomson Reuters CPCI-S (WoS). This volume comprises a collection of the papers presented at the 2011 International Conference on Smart Materials and Nanotechnology in Engineering (SMNE2011), held on September 17~18th, 2011, in Wuhan, China. The aim was to provide a platform where researchers, engineers, academics and industrialists from all over the world could present research results and developments in Smart Materials and Nanotechnology in Engineering. This makes the work an eminently up-to-date guide to those fields.

This book offers a comprehensive reference guide to intelligence systems in environmental management. It provides readers with all the necessary tools for solving complex environmental problems, where classical techniques cannot be applied. The respective chapters, written by prominent researchers, explain a wealth of both basic and advanced concepts including ant colony, genetic algorithms, evolutionary algorithms, fuzzy multi-criteria decision making tools, particle swarm optimization, agent-based modelling, artificial neural networks, simulated annealing, Tabu search, fuzzy multi-objective optimization, fuzzy rules, support vector machines, fuzzy cognitive maps, cumulative belief degrees, and many others. To foster a better understanding, all the chapters include relevant numerical examples or case studies. Taken together, they form an excellent reference guide for researchers, lecturers and postgraduate students pursuing research on complex environmental problems. Moreover, by extending all the main aspects of classical environmental solution techniques to its intelligent counterpart, the book presents a dynamic snapshot on the field that is expected to stimulate new directions and stimulate new ideas and developments.

The analytic hierarchy process (AHP) is recognised as one of the most commonly applied methods in the multiple attribute decision-making (MADM) literature. In the AHP, encompassing uncertainty feature necessitates using suitable uncertainty theories, since dealing efficiently with uncertainty in subjective judgements is of great importance in real-world decision-making problems. The neutrosophic set (NS) theory and grey systems are two reliable uncertainty theories which can bring considerable benefits to uncertain decision-making. Thea im of this study is to improve uncertain decision-making by incorporating advantages of the NS and grey systems theories with the AHP in investigating sustainability through agility readiness evaluation in large manufacturing plants.

Sustainability is a fairly old concept, born in the 18th century in the field of forestry, within a mono-functionality perspective. The concept has considerably evolved in the last few years towards a multi-functionality context, with applications reported in practically all areas of economic interest. On the other hand, modern sustainability is a complex problem, for two reasons: a) The multiplicity of functions of a very different nature involved in the process and b) The manner in which different segments of the society or stakeholders perceive the relative importance of these functions. For the above reasons, a realistic approach for dealing with the sustainability issue requires taking into consideration multiple criteria of different nature (economic, environmental and social), and in many cases within a participatory decision making framework. This book presents a collection of papers, dealing with different theoretical and applied issues of sustainability, with the help of a modern multi-criteria decision-making theory, with a single as well as several stakeholders involved in the decision-making process. Hopefully, this material will encourage academics and practitioners to alter their research in this hot and vital topic. After all, the sustainable management of the environment and its embedded resources is one of the most important, if not the major challenge of the 21st century.

This book is the first in the literature to present the state of the art and some interesting and relevant applications of the Fuzzy Analytic Hierarchy Process (FAHP). The AHP is a conceptually and mathematically simple, easily implementable, yet extremely powerful tool for group decision making and is used around the world in a wide variety of decision situations, in fields such as government, business, industry, healthcare, and education. The aim of this book is to study various fuzzy methods for dealing with the imprecise and ambiguous data in AHP. Features: First book available on FAHP. Showcases state-of-the-art developments. Contains several novel real-life applications. Provides useful insights to both academics and practitioners in making group decisions under uncertainty This book provides the necessary background to work with existing fuzzy AHP models. Once the material in this book has been mastered, the reader will be able to apply fuzzy AHP models to his or her problems for making decisions with imprecise data.

Energy management problems associated with rapid institutional, political, technical, ecological, social and economic development have been of critical concern to both national and local governments worldwide for many decades; thus, addressing such issues is a global priority.

This book offers a comprehensive reference guide to customer-oriented product design and intelligence. It provides readers with the necessary intelligent tools for designing customer-oriented products in contexts characterized by incomplete information or insufficient data, where classical product design approaches cannot be applied. The respective chapters, written by prominent researchers, explain a wealth of both basic and advanced concepts including fuzzy QFD, fuzzy FMEA, the fuzzy Kano model, fuzzy axiomatic design, fuzzy heuristics-based design, conjoint analysis-based design, and many others. To foster reader comprehension, all chapters include relevant numerical examples or case studies. Taken together, they form an excellent reference guide for researchers, lecturers, and postgraduate students pursuing research on customer-oriented product design. Moreover, by extending all the main aspects of classical customer-oriented product design to its intelligent and fuzzy counterparts, the book presents a dynamic snapshot of the field that is expected to stimulate new directions, ideas, and developments.

The 9th Multidisciplinary Academic Conference in Prague 2017, Czech Republic

The aim of this book is to cover various aspects of the Production and Operations Analysis. Apart from the introduction to basic understanding of each topic, the book will also provide insights to various conventional techniques as well as, various other mathematical and nature-based techniques extracted from the existing literature. Concepts like smart factories, intelligent manufacturing, and various techniques of manufacturing will also be included. Various types of numerical examples will also be presented in each chapter and the descriptions will be done in lucid style with figures, point-wise descriptions, tables, pictures to facilitate easy understanding of the subject.

Earthquakes are the leading natural disasters that seriously affect human life. Furthermore, earthquakes are natural disasters that have the ability to trigger a second disaster in addition to the damages they cause. From this point of view, post-earthquake fires are defined as the one of the most dangerous secondary disasters after an earthquake and often cause even more serious dangers. For this reason, government officials and relevant decision-makers should effectively determine post-earthquake fire risks and take necessary precautions. In this study, we consider the problem of determining the fire risk after an earthquake as a multi-criteria decision problem and present a two-level framework for risk assessment. The main and sub-criteria are determined by a detailed literature review and Modified Delphi method is employed to gain and consolidate expert opinions.

Solid Waste Management (SWM) is becoming serious problem in developing countries like India. It's not working accurately in India. There are several techniques that are used for solid waste treatment such as biological treatment, composting and recycling etc. But the landfill is considered to be the cheapest method of solid waste disposal. This work describes the use of Multi Criteria Decision Making (MCDM) tools for the selection of suitable site for the disposal of solid waste in Najaf governorate. Several criteria have been considered in each of these location (eg: legal impact, economic, environmental, social, monitoring quality) to select to select the best site. Different MCDM methods used in this work are Analytical Hierarchy Process (AHP), Technique Of Order Preference by Similarity to Ideal Solutions(TOPSIS) andPreference Ranking Organization Method for Enrichment Evaluation(PROMETHEE II). With the help of the proposed decision making frame work, the high and low suitable areas were determined.The basic concept of TOPSIS is to selects the alternative that is the closest to the ideal solution

and farthest from negative ideal alternative.TOPSIS assumes that we have m alternatives (options) and n criteria. Therefore, it is easy to define the ideal and negative-ideal solutions. The Euclidean distance approach is used to evaluate the relative closeness of the alternatives to the ideal solution. Thus, the preference order of the alternatives can be built by a series of comparison of these relative distances. Generally the decision maker wants to have a maximum value among the alternatives. In case of cost criteria, the decisionTo make the result more precise, another widely used MCDM tool is PROMETHEE II. It refers to Preference Ranking Organisation Method for Enrichment Evaluation. PROMETHEE II is not only used for picking the right alternative, rather helps decision makers find the alternative that best suits their goal. This makes use of point fuzzy scale to build the decision matrix. The PROMETHEE II methodology promotes and prioritizes alternatives based on pair wise comparisons. Then the preference function for each of the pairs is calculated and the deviation should be between the number 0 and 1. Then the positive and negative flow at each criteria has to be calculated which determines the net flow of the alternatives or criteria. The higher the value, the higher the preference and ranked accordingly, Based on that ranking for 5 different locations in Najaf governorate is carried out using combined AHP-PROMETHEE II method is briefly carried out.Similarly in order to rank the 4 different sites and to give the priority among these sites based on the constraint 'distance To wetland' criteria was carried out using fuzzy-AHP method. Here the pairwise comparison for one sit over other is calculated using triangular fuzzy scale comparison and the priority among these 4 sites is carried out in this work. Hence in this work the need of MCDM tools or the methods in addressing the issues of landfill site ranking is carried out briefly in this work.

This book presents real-world problems and exploratory research in computational statistics, mathematical modeling, artificial intelligence and software engineering in the context of the intelligent systems. This book constitutes the refereed proceedings of the 3rd Computational Methods in Systems and Software 2019 (CoMeSySo 2019), a groundbreaking online conference that provides an international forum for discussing the latest high-quality research results.

Latin America is a fast-growing market, but its poor infrastructure, explosive urbanization, expensive and inefficient logistics, and multiple social problems continue to pose major problems to logistics professionals and academics. Here leading scholars across Brazil, Colombia, Cuba, Ecuador, Peru, Panama, and the USA address these issues.

As the world's population continues to grow and economic conditions continue to improve, more solid and liquid waste is being generated by society. Improper disposal methods can not only lead to harmful environmental impacts but can also negatively affect human health. To prevent further harm to the world's ecosystems, there is a dire need for sustainable waste management practices that will safeguard the environment for future generations. Waste Management: Concepts, Methodologies, Tools, and Applications is a vital reference source that examines the management of different types of wastes and provides relevant theoretical frameworks about new waste management technologies for the control of air, water, and soil pollution. Highlighting a range of topics such as contaminant removal, landfill treatment, and recycling, this multi-volume book is ideally designed for environmental engineers, waste authorities, solid waste management companies, landfill operators, legislators, environmentalists, policymakers, government officials, academicians, researchers, and students.

International Academic Conferences: Management, Economics and Marketing (IAC-MEM) Teaching, Learning and E-learning (IAC-TLEI) Transport, Logistics, Tourism and Sport Science (IAC-TLTS) Engineering, Robotics, IT and Nanotechnology (IAC-ERITN)

IoT Based Data Analytics for the Healthcare Industry: Techniques and Applications explores recent advances in the analysis of healthcare industry data through IoT data analytics. The book covers the analysis of ubiquitous data generated by the healthcare industry, from a wide range of sources, including patients, doctors, hospitals, and health insurance companies. The book provides AI solutions and support for healthcare industry end-users who need to analyze and manipulate this vast amount of data. These solutions feature deep learning and a wide range of intelligent methods, including simulated annealing, tabu search, genetic algorithm, ant colony optimization, and particle swarm optimization. The book also explores challenges, opportunities, and future research directions, and discusses the data collection and pre-processing stages, challenges and issues in data collection, data handling, and data collection set-up. Healthcare industry data or streaming data generated by ubiquitous sensors cocooned into the IoT requires advanced analytics to transform data into information. With advances in computing power, communications, and techniques for data acquisition, the need for advanced data analytics is in high demand. Provides state-of-art methods and current trends in data analytics for the healthcare industry Addresses the top concerns in the healthcare industry using IoT and data analytics, and machine learning and deep learning techniques Discusses several potential AI techniques developed using IoT for the healthcare industry Explores challenges, opportunities, and future research directions, and discusses the data collection and pre-processing stages

The proceedings of the "Economics and Business Competitiveness International Conference" (EBCICON) provides a selection of papers, either research results or literature reviews, on business transformation in the digital era. Nine major subject areas, comprising accounting and governance, customer relations, entrepreneurship, environmental issues, finance and investment, human capital, industrial revolution 4.0, international issues, and operations and supply chain management are presented in the proceedings. These papers will provide new insights into the knowledge and practice of business and economics in the digital era. Therefore, parties involved in business and economics such as academics, practitioners, business leaders, and others will be interested in the contents of the proceedings.

Advances in Construction and Demolition Waste Recycling: Management, Processing and Environmental Assessment is divided over three parts. Part One focuses on the management of construction and demolition waste, including estimation of quantities and the use of BIM and GIS tools. Part Two reviews the processing of recycled aggregates, along with the performance of concrete mixtures using different types of recycled aggregates. Part Three looks at the environmental assessment of non-hazardous waste. This book will be a standard reference for civil engineers, structural engineers, architects and academic researchers working in the field of construction and demolition waste. Summarizes key recent research in recycling and reusing concrete and demolition waste to reduce environmental impacts Considers techniques for managing construction and demolition waste, including waste management plans, ways of estimating levels of waste, and the types and optimal location of waste recycling plants Reviews key steps in handling construction and demolition waste

In order to ensure environmentally responsible production and disposal of products, local governments are imposing stricter environmental regulations, some of which even require manufacturers to take back their products at the end of the product's useful life. These government regulations, together with increasing environmental awareness, have forced manufacturers to invest in environment-conscious manufacturing. The multiple Criteria Decision Making Techniques presented in this book can be employed to solve the problems of environment-conscious manufacturers in product design, logistics, disassembly and remanufacturing.

The continued growth of any nation depends largely on the development of their built infrastructures and communities. By

creating stable infrastructures, countries can more easily thrive in competitive international markets. Sustainable Infrastructure: Breakthroughs in Research and Practice examines sustainable development through the lens of transportation, waste management, land use planning, and governance. Highlighting a range of topics such as sustainable development, transportation planning, and regional and urban infrastructure planning, this publication is an ideal reference source for engineers, planners, government officials, developers, policymakers, legislators, researchers, academicians, and graduate-level students seeking current research on the latest trends in sustainable infrastructure. Municipal solid waste (MSW) disposal is an ever-increasing problem in many parts of the world, especially in developing countries. To date, landfilling is still the preferred option for the disposal and management of MSW due to its low-cost operation. While this solution is advantageous from a cost perspective, it introduces a high level of potential pollutants which can be detrimental to the local environment. Control and Treatment of Landfill Leachate for Sanitary Waste Disposal presents research-based insights and solutions for the proper management and treatment of landfill leachate. Highlighting relevant topics on emerging technologies and treatment innovations for minimizing the environmental hazards of waste disposal, this innovative publication contributes to filling in many of the gaps that exist in the current literature available on leachate treatment. Waste authorities, solid waste management companies, landfill operators, legislators, environmentalists, graduate students, and researchers will find this publication beneficial to their professional and academic interests in the area of waste treatment and management.

FLINS, originally an acronym for Fuzzy Logic and Intelligent Technologies in Nuclear Science, is now extended to include Computational Intelligence for applied research. The contributions of the FLINS conference cover state-of-the-art research, development, and technology for computational intelligence systems, with special focuses on data science and knowledge engineering for sensing decision support, both from the foundations and the applications points-of-view.

This book covers different geotechnical and structural engineering topics applied to buildings, power grid infrastructures, hydroelectric projects, bridges, and transport infrastructures. The book contains research data useful for researchers and practitioners to support the sustainable design, building, operation, and maintenance of civil infrastructures. The papers included in this book were selected from the 6th GeoChina International Conference on Civil & Transportation Infrastructures: From Engineering to Smart & Green Life Cycle Solutions.

Supply Chain Management (SCM) has always been an important aspect of an enterprise's business model and an effective supply chain network is essential to remaining competitive in a global environment. By properly managing the flow of goods and services, businesses can operate more efficiently while managing most of the workload behind-the-scenes. The Handbook of Research on Global Supply Chain Management is an in-depth reference source that covers emerging issues and relevant applications of information pertaining to supply chain management from an international perspective. Featuring coverage on topics such as the global importance of SCMs to strategies for producing an effective supply chain, this comprehensive publication is an essential resource for academics and business professionals alike interested in uncovering managerial insight and logistics solutions.

INTERNATIONAL WORKSHOPS (at IAREC'17) (This book inclueds English (main) and Turkish languages) International Workshop on Mechanical Engineering International Workshop on Mechatronics Engineering International Workshop on Energy Systems Engineering International Workshop on Automotive Engineering and Aerospace Engineering International Workshop on Material Engineering International Workshop on Manufacturing Engineering International Workshop on Physics Engineering International Workshop on Electrical and Electronics Engineering International Workshop on Computer Engineering and Software Engineering International Workshop on Chemical Engineering International Workshop on Textile Engineering International Workshop on Architecture International Workshop on Civil Engineering International Workshop on Geomatics Engineering International Workshop on Industrial Engineering International Workshop on Food Engineering International Workshop on Aquaculture Engineering International Workshop on Agriculture Engineering International Workshop on Mathematics Engineering International Workshop on Bioengineering Engineering International Workshop on Biomedical Engineering International Workshop on Genetic Engineering International Workshop on Environmental Engineering International Workshop on Other Engineering Science

Best Practices in Green Supply Chain Management uses present case studies from the Indian and Mexican manufacturing industries to offer new insights on the challenges of integrating environmental awareness into supply chain management operations in developing countries. These four volumes (CCIS 297, 298, 299, 300) constitute the proceedings of the 14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, held in Catania, Italy, in July 2012. The 258 revised full papers presented together with six invited talks were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on fuzzy machine learning and on-line modeling; computing with words and decision making; soft computing in computer vision; rough sets and complex data analysis: theory and applications; intelligent databases and information system; information fusion systems; philosophical and methodological aspects of soft computing; basic issues in rough sets; 40th anniversary of the measures of fuziness; SPS11 uncertainty in profiling systems and applications; handling uncertainty with copulas; formal methods to deal with uncertainty of many-valued events; linguistic summarization and description of data; fuzzy implications: theory and applications; sensing and data mining for teaching and learning; theory and applications of intuitionistic fuzzy sets; approximate aspects of data mining and database analytics; fuzzy numbers and their applications; information processing and management of uncertainty in knowledge-based systems; aggregation functions; imprecise probabilities; probabilistic graphical models with imprecision: theory and applications; belief function theory: basics and/or applications; fuzzy uncertainty in economics and business; new trends in De Finetti's approach; fuzzy measures and integrals; multi criteria decision making; uncertainty in privacy and security; uncertainty in the spirit of Pietro Benvenuti; coopetition; game theory; probabilistic approach.

Industrial revolutions have impacted both, manufacturing and service. From the steam engine to digital automated production, the industrial revolutions have conduced significant changes in operations and supply chain management (SCM) processes. Swift changes in manufacturing and service systems have led to phenomenal improvements in productivity. The fast-paced environment brings new challenges and opportunities for the companies that are associated with the adaptation to the new concepts such as Internet of Things (IoT) and Cyber Physical Systems, artificial intelligence (AI), robotics, cyber security, data analytics, block chain and cloud technology. These emerging technologies facilitated and expedited the birth of Logistics 4.0. Industrial Revolution 4.0 initiatives in SCM has attracted stakeholders' attentions due to it is ability to empower using a set of technologies together that helps to execute more efficient production and distribution systems. This initiative has been called Logistics 4.0 of the fourth Industrial Revolution in SCM due to its high potential.

Connecting entities, machines, physical items and enterprise resources to each other by using sensors, devices and the internet along the supply chains are the main attributes of Logistics 4.0. IoT enables customers to make more suitable and valuable decisions due to the data-driven structure of the Industry 4.0 paradigm. Besides that, the system's ability of gathering and analyzing information about the environment at any given time and adapting itself to the rapid changes add significant value to the SCM processes. In this peer-reviewed book, experts from all over the world, in the field present a conceptual framework for Logistics 4.0 and provide examples for usage of Industry 4.0 tools in SCM. This book is a work that will be beneficial for both practitioners and students and academicians, as it covers the theoretical framework, on the one hand, and includes examples of practice and real world.

This text details the plant-assisted remediation method, "phytoremediation," which involves the interaction of plant roots and associated rhizospheric microorganisms for the remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants. Each chapter highlights and compares the beneficial and economical alternatives of phytoremediation to currently practiced soil removal and burial practices.

Waste Products—Advances in Research and Application: 2012 Edition is a ScholarlyPaper™ that delivers timely, authoritative, and intensively focused information about Waste Products in a compact format. The editors have built Waste Products—Advances in Research and Application: 2012 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Waste Products in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Waste Products—Advances in Research and Application: 2012 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

The author is glad to present to the readers, the book titled "Fuzzy Decision Making Tools to Sieve out the Poor in Nalanda District, Bihar". The book is all about 'how to identify and how to aggregate the poor' in any given socio-economic context or condition, using the concept of Fuzzy Logic and Fuzzy Sets. This book will serve research students in applied mathematics and it will also be helpful to those who are involved in making socio-economic decision to distribute the resources available at their disposal. Why and How this book came into Being Decision making over the issue of 'how to measure poverty' has always been the subject of contentious debate for an economist, for a government, for a statistician, for a mathematician, or for any socio-economic plan. Several Decision Methods have been adopted to decide who would be considered poor or who would not. For examples: (i) Absolute and Relative Poverty Line Method, (ii) Uni- dimension poverty Method (iii) Income-Expenditure Method (iv) Head Count Ratio (HCR), (v) Income Gap Ratio (IGR) (vi) Poverty Gap Ratio (PGR), (vii) Advance Measure Method: – Foster-Greer-Thorbecke Measure, Sen – Shorrocks – Thon measure (SST), and Sen Index (viii) Multi-dimensional Poverty Approach :- (i) Counting Multi-dimensional Poverty (ii) Multi-dimensional Poverty Index (MPI) , and (iii) Capability Approach. These above mentioned methods were used at the global level. Identification of poor and non-poor in India is done based on Uni-dimensional model that is to say Income-consumption and expenditure model using following experts committee reports: (i) Dandekar and Rath (ii) Y.K. Alagh (iii) Lakdawala (iii) Suresh Tendulkar Committee (iv) C. Rangarajan Committee:- Modified Mixed Reference Period (MMRP), Poverty Line Basket (PLB), and Socio-Economic and Caste Census (SECC) 2011: BPL Identification in 2015. Nevertheless, every state in India is free to set its own standard of method to scale out the poor. The state of Bihar adopted the method of A Score Based Ranking Methodology to identify the poor. In Mathematical Modelling context all the above mentioned methods of making decisions fall under Crisp Decision Approach based on Aristotelian logic and Crisp Sets. In response to this method of decision making approach, fuzzy decision making approach was suggested as a better alternative to the process of poverty measurement method. Andrea Cerioli and Sergio Zani were the first one to apply fuzzy logic to poverty assessment in the year 1990. Later, Chiappero Martinetti and Qizilbash added the intrinsic vagueness of being poor by using so – called membership function for the identification of the poor. As the research continued further some more methods were addressed such as Totally Fuzzy (TF), Totally Fuzzy and Relative (TFR), Integrated Fuzzy Approach (Multidimensional and Longitudinal) to apply to identify and aggregate the poor. Key Concepts and Techniques This book further develops and introduces a new approach suggesting Multi-Criteria Fuzzy Decision-making Tools and Fuzzy Set Theory to capture the extent of poverty of households accommodating both the quantitative and qualitative factors such as Roti (Food), Kapda (Clothing), Makaan (Housing), Kaam (Job), and Samman (Social Status) and their fourteen respective sub-criteria. The fuzzification process is carried out by using Pentagonal Fuzzy Numbers (PFNs) and by introducing Stratified Fuzzy Analytical Hierarchy Process (SFAHP). Fuzzy poverty categorization is carried out by introducing Fuzzy Sieve Technique (FST). The judgment and scaling of the criteria and sub-criteria are done by adopting participative decision making method (interview method based on questionnaires). Stratified Fuzzy Analytical Hierarchy Process (SFAHP) categorizes the group of the poor into five subgroups such as (i) very poor, (ii) almost very poor (iii) poor, (iv) rather poor and (v) non-poor. Our fuzzy tools and methods are applied to the case study in Nalanda District, Bihar, India. The book also highlights the comparative studies between three models such as Analytical Hierarchy Process (AHP), Fuzzy Analytical Hierarchy Process (FAHP) and Stratified Fuzzy Analytical Hierarchy Process (SFAHP). The final results justify that Stratified Fuzzy Analytical Hierarchy Process (SFAHP) gives better results in identifying the Poverty Status. Special Features Computer Algorithmic approach via MATLAB: (Programme for 5 X 5 Matrix) is given to calculate the fuzzy centre value by using Matlab m-file which will minimize the time in carrying out the fuzzification and normalization process to measure poverty status. At the end the author shall ever be grateful to the inquisitive researchers and socio-economic planners for their valuable suggestions for further improvement of this book. DR. RAJ KUMAR St. Xavier's College of Management and Technology, Patna Digha Ashiyan Road -11. Affliated to AKU, Patna, Bihar, India

This book comprises select proceedings of the annual conference of the Indian Geotechnical Society. The conference brings together research and case histories on various aspects of geotechnical and geoenvironmental engineering. The book presents papers on geotechnical applications and case histories, covering topics such as (i) Characterization of Geomaterials and Physical Modelling; (ii) Foundations and Deep Excavations; (iii) Soil Stabilization and Ground Improvement; (iv) Geoenvironmental Engineering and Waste Material Utilization; (v) Soil Dynamics and Earthquake Geotechnical Engineering; (vi) Earth Retaining Structures, Dams and Embankments; (vii) Slope Stability and Landslides; (viii) Transportation Geotechnics; (ix) Geosynthetics Applications; (x) Computational, Analytical and Numerical Modelling; (xi) Rock Engineering, Tunnelling and Underground Constructions; (xii) Forensic Geotechnical Engineering and Case Studies; and (xiii) Others Topics: Behaviour of Unsaturated Soils, Offshore and Marine Geotechnics, Remote Sensing and GIS, Field Investigations, Instrumentation and Monitoring, Retrofitting of Geotechnical Structures, Reliability in Geotechnical Engineering, Geotechnical Education, Codes and Standards, and other relevant topics. The contents of this book are of interest to researchers and practicing engineers alike.

The purpose of this book is to provide an introduction to the theory and applications in the field of decision making, especially focused on Analytic Hierarchy Process, a structured technique for organizing and analyzing complex decisions, based on mathematics and psychology. It was developed by Prof. Thomas L. Saaty in the 1970s and has been extensively studied and refined since then. The idea of the book is to expand the reader's consciousness to deal with problems regarding the decision making. This book presents some application examples of Analytic Hierarchy. It contains original research and application chapters from different perspectives, and covers different areas such as supply

chain, environmental engineering, safety, and social issues. This book is intended to be a useful resource for anyone who deals with decision making problems.

In this era of globalization, entrepreneurship and its implications on international trade and supply chain management are becoming more critical. In today's change-oriented and complex business environment, both entrepreneurs and managers need to keep up with the latest developments around them. With the help of globalization, it is getting more attractive for entrepreneurs to generate innovative ideas to run business both nationally and internationally. Competitive advantages and the key for sustainable growth for globally founded institutions lies behind effective supply chain management originating from a single idea about establishing a company and the process to the end goal of reaching consumers. This focus on entrepreneurship, business, and supply chain comes at a time when rapid technological advances are continually being made. The Handbook of Research on Recent Perspectives on Management, International Trade, and Logistics reveals the latest data based on research on the issues of entrepreneurship, innovation, contemporary management techniques, and global supply chain management. Chapters include topics such as the effective management of the supply chain, supply chain modeling, e-business solutions, digitalizing the supply chain process, e-business applications, and more. This book is ideal for managers, executives, supply chain specialists, entrepreneurs, business professionals, researchers, academicians, and students interested in the latest findings in international trade, management, logistics, and business.

Waste Products—Advances in Research and Application: 2012 EditionScholarlyPaperScholarlyEditions

Advances in Conservation Research and Application / 2012 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Conservation. The editors have built Advances in Conservation Research and Application / 2012 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Conservation in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Advances in Conservation Research and Application / 2012 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

This proceedings volume brings together selected peer-reviewed papers presented at the 2015 International Conference on Architectural, Energy and Information Engineering (AEIE 2015), held July 15-16, 2015 in Hong Kong, China. The proceedings are divided into two parts, Architectural, Energy and Environmental Engineering and Information Enginee

Copyright: d1f26524a06574768e6e4347b0dc07b6