

2015 Vol 14 S2 S1 S17 A Core Curriculum For The

These Proceedings represent the work of contributors to the 13th European Conference on Management Leadership and Governance, ECMLG 2017, hosted this year by the Cass Business School, City, University of London on 11-12 December 2017. The Conference Chair is Dr Martin Rich. The conference will be opened with a keynote address by Dr Helen Rothberg from Marist College, Poughkeepsie, USA with a speech entitled Everything I Know about Leadership I Learned as a Bartender. On the second day the keynote will be delivered by Dr Amanda Goodall from City, University of London on the topic of Why we need core business experts as leaders. ECMLG is a well established platform for individuals to present their research findings, display their work in progress and discuss conceptual advances in many different branches of Management, Leadership and Governance. At the same time it provides an important opportunity for members of the community to come together with peers, share knowledge and exchange ideas. With an initial submission of 160 abstracts, after the double blind, peer review process there are 61 academic papers, 8 PhD Papers and 2 Work in Progress papers in these Conference Proceedings. These papers reflect the truly global nature of research in the area with contributions from, Australia, Austria, Belgium, Brazil, Canada, Czech Republic, Finland, Germany, Hungary, Iran, Ireland, Israel, Kazakhstan, Kenya, Lithuania, Malaysia,

The world relies on very few crop and animal species for agriculture and to supply its food needs. In recent decades, there has been increased appreciation of the risk this implies for food security and quality, especially in times of environmental change. As a result, agricultural biodiversity has moved to the top of research and policy agendas. This Handbook presents a comprehensive overview of our current knowledge of agricultural biodiversity in a series of specially commissioned chapters. It draws on multiple disciplines including plant and animal genetics, ecology, crop and animal science, food studies and nutrition, as well as social science subjects which explore the socio-economic, cultural, institutional, legal and policy aspects of agricultural biodiversity. It focuses not only on the core requirements to deliver a sustainable agriculture and food supply, but also highlights the additional ecosystem services provided by a diverse and resilient agricultural landscape and farming practices. The book provides an indispensable reference textbook for a wide range of courses in agriculture, ecology, biodiversity conservation and environmental studies.

This volume is based on the research papers presented in the 4th Computer Science On-line Conference. The volume Software Engineering in Intelligent Systems presents new approaches and methods to real-world problems, and in particular, exploratory research that describes novel approaches in the field of Software Engineering. Particular emphasis is laid on modern trends in selected fields of interest. New algorithms or methods in a variety of fields are also presented. The Computer Science On-line Conference (CSOC 2015) is intended to provide an international forum for discussions on the latest high-quality research results in all areas related to Computer Science. The addressed topics are the theoretical aspects and applications of Computer Science, Artificial Intelligences, Cybernetics, Automation Control Theory and Software Engineering.

Rheology, defined as the science of deformation and flow of matter, is a multidisciplinary scientific field, covering both fundamental and applied approaches. The study of rheology includes both experimental and computational methods, which are not mutually exclusive. Its practical importance embraces many processes, from daily life, like preparing mayonnaise or spreading an ointment or shampooing, to industrial processes like polymer processing and oil extraction, among several others. Practical applications include also formulations and product development. Following a successful first volume, we are now launching this second volume to continue to present the latest advances in the fields of experimental and computational rheology applied to the most diverse classes of materials (foods, cosmetics, pharmaceuticals, polymers and biopolymers, multiphasic systems, and composites) and processes.

This volume contains the proceedings of 24 peer-reviewed papers presented at the 3rd International Gravity Field Service (IGFS) General Assembly, which was organized by the International Gravity Field Service (IGFS), Commission 2 of the International Association of Geodesy (IAG), and Shanghai Astronomical Observatory (SHAO), Chinese Academy of Sciences. The Assembly was successfully held in Shanghai, China from June 30th to July 6th, 2014 with over 130 participants from 25 countries. The focus of the Assembly is on methods for observing, estimating and interpreting the Earth gravity field as well as its applications, including 6 sessions: gravimetry and gravity networks, global geopotential models and vertical datum unification, local geoid/gravity modelling, satellite gravimetry, mass movements in the Earth system and solid Earth investigations.

One of the most efficient tools for modeling uncertainty in decision-making problems is the neutrosophic set (NS) and its extensions, such as complex NS (CNS), interval NS (INS), and interval complex NS (ICNS). Linguistic variables have been long recognized as a useful tool in decision-making problems for solving the problem of crisp neutrosophic membership degree. In this paper, we aim to introduce new concepts: single-valued linguistic complex neutrosophic set (SVLCNS-2) and interval linguistic complex neutrosophic set (ILCNS-2) that are more applicable and adjustable to real-world implementation than those of their previous counterparts. Some set-theoretic operations and the operational rules of SVLCNS-2 and ILCNS-2 are designed. Then, gather classifications of the candidate versus criteria, gather the significance weights, gather the weighted rankings of candidates versus criteria and a score function to arrange the candidates are determined. New TOPSIS decision-making procedures in SVLCNS-2 and ILCNS-2 are presented and applied to lecturer selection in the case study of the University of Economics and Business, Vietnam National University. The applications demonstrate the usefulness and efficiency of the proposal.

Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions contains invited, keynote and theme lectures and regular papers presented at the 7th International Conference on Earthquake Geotechnical Engineering (Rome, Italy, 17-20 June 2019). The contributions deal with recent developments and advancements as well as case histories, field monitoring, experimental characterization, physical and analytical modelling, and applications related to the variety of environmental phenomena induced by earthquakes in soils and their effects on engineered systems interacting with them. The book is divided in the sections below: Invited papers Keynote papers Theme lectures Special Session on Large Scale Testing

Special Session on Liquefact Projects Special Session on Lessons learned from recent earthquakes Special Session on the Central Italy earthquake Regular papers Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions provides a significant up-to-date collection of recent experiences and developments, and aims at engineers, geologists and seismologists, consultants, public and private contractors, local national and international authorities, and to all those involved in research and practice related to Earthquake Geotechnical Engineering.

Respiratory diseases are leading causes of death and disability globally, with about 65 million people suffering from COPD, and 334 million from asthma, the most common chronic disease. Each year, tens of millions of people develop and can die from from respiratory infections such as pneumonia and TB. Systemic inflammation may induce and exacerbate local inflammatory diseases in the lungs, and local inflammation can in turn cause systemic inflammation. There is increasing evidence of the coexistence of systemic and local inflammation in patients suffering from asthma, COPD, and other lung diseases, and the co-morbidity of two or more local inflammatory diseases often occurs. For example, rheumatoid arthritis frequently occurs together with, and promotes the development of, pulmonary hypertension. This co-morbidity significantly impacts quality of life, and can result in death for those affected. Current treatment options for lung disease are neither effective, nor condition-specific; there is a desperate need for novel therapeutics in the field. Additionally, the molecular and physiological significance of most major lung diseases is not well understood, which further impedes development of new treatments, especially in the case of coexistent lung diseases with other inflammatory diseases. Great progress has been made in recent years in many areas of the field, particularly in understanding the molecular geneses, regulatory mechanisms, signalling pathways, and cellular processes within lung disease, as well as basic and clinical technology, drug discovery, diagnoses, treatment options, and predictive prognoses. This is the first text to aggregate these developments. In two comprehensive volumes, experts from all over the world present state-of-the-art advances in the study of lung inflammation in health and disease. Contributing authors cover well-known as well as emerging topics in basic, translational, and clinical research, with the aim of providing researchers, clinicians, professionals, and students with new perspectives and concepts. The editors hope these books will also help to direct future research in lung disease and other inflammatory diseases, and result in the development of novel therapeutics.

With stories by comic-book titans Bernie Wrightson, Richard Corben, Howard Chaykin, John Severin, and Archie Goodwin, this is one terrifying tome that you DO NOT want to miss out on! This volume also features an enlightening foreword by horror comics writer Joshua Hale Fialkov (I, Vampire; Echoes) and reprints all Dear Uncle Creepy and Creepy's Catacombs text pieces and all color stories that appeared in this stellar 1970s run! Collects the original Creepy

issues #64-#68.

This second one of a two volume set will be of interest to medical microbiologists, practitioners, medical students and other health care providers who are engaged in management and treatment of pediatric viral infections. New evidence on topics related to better clinical management of patients is presented. The book may double as a clinical guide to care with algorithms, Practice Points and photographs and therefore aid the clinical decision making in management of sick children.

Proceedings of ELM-2015 Volume 1 Theory, Algorithms and Applications (I) Springer

James Stewart's CALCULUS: EARLY TRANSCENDENTALS texts are widely renowned for their mathematical precision and accuracy, clarity of exposition, and outstanding examples and problem sets. Millions of students worldwide have explored calculus through Stewart's trademark style, while instructors have turned to his approach time and time again. In the Eighth Edition of SINGLE VARIABLE CALCULUS: EARLY TRANSCENDENTALS, Stewart continues to set the standard for the course while adding carefully revised content. The patient explanations, superb exercises, focus on problem solving, and carefully graded problem sets that have made Stewart's texts best-sellers continue to provide a strong foundation for the Eighth Edition. From the most unprepared student to the most mathematically gifted, Stewart's writing and presentation serve to enhance understanding and build confidence. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book presents comprehensive reviews on the latest developments of nanotechnologies to detect and remove pollutants in water, air and food. Polymer nanocomposites, nanoparticles from microbes and application of nanotechnologies for desalination and agriculture are also addressed. Pollution of water and air by contaminants and diseases is a major health issue leading globally to millions of deaths yearly, according to the World Health Organization, and such an issue requires advanced methods to clean environmental media.

Since its invention in the 1920s, particle accelerators have made tremendous progress in accelerator science, technology and applications. However, the fundamental acceleration principle, namely, to apply an external radiofrequency (RF) electric field to accelerate charged particles, remains unchanged. As this method (either room temperature RF or superconducting RF) is approaching its intrinsic limitation in acceleration gradient (measured in MeV/m), it becomes apparent that new methods with much higher acceleration gradient (measured in GeV/m) must be found for future very high energy accelerators as well as future compact (table-top or room-size) accelerators. This volume introduces a number of advanced accelerator concepts (AAC) — their principles, technologies and potential applications. For the time being, none of them stands out as a definitive direction in which to go. But these novel ideas are in hot pursuit and look

promising. Furthermore, some AAC requires a high power laser system. This has the implication of bringing two different communities — accelerator and laser — to join forces and work together. It will have profound impact on the future of our field. Also included are two special articles, one on "Particle Accelerators in China" which gives a comprehensive overview of the rapidly growing accelerator community in China. The other features the person-of-the-issue who was well-known nuclear physicist Jerome Lewis Duggan, a pioneer and founder of a huge community of industrial and medical accelerators in the US.

Part of the practical, highly illustrated Operative Techniques series, this fully revised book from Drs. Emil H. Schemitsch and Michael D. McKee brings you up to speed with must-know surgical techniques in today's technically demanding orthopaedic trauma surgery. Step-by-step, evidence-based guidance walks you through both common and unique cases you're likely to see in your practice, including upper extremity, lower extremity, spine, pelvis, and acetabulum trauma. Practical features such as pearls of wisdom, key points, and potential pitfalls detailed by the authors in order to successfully manage patients with complex fracture patterns have all been reinforced in this new edition. Includes all-new chapters on Acromioclavicular Joint Injuries, Sternoclavicular Joint Open Reduction and Internal Fixation, Intramedullary Fixation of Clavicle Shaft Fractures, Use of the Reamer Irrigator Aspirator (RIA) for Bone Graft Harvesting, Fractures of the Posterior Tibial Plateau, Reverse Total Shoulder Arthroplasty for Proximal Humerus Fractures, and many more. Features high-quality line drawings, diagnostic and intraoperative images, and radiographs alongside expert technical guidance on instrumentation, placement, step-by-step instructions and more – all supported by best evidence. A bulleted, highly templated format allows for quick understanding of surgical techniques. Outlines positioning, exposures, instrumentation, and implants to equip you to be more thoroughly prepared for every procedure. Offers post-operative management guidelines and discussions of expected outcomes to help you avoid mistakes and offer quality, patient-focused care.

Digital forensics deals with the acquisition, preservation, examination, analysis and presentation of electronic evidence. Computer networks, cloud computing, smartphones, embedded devices and the Internet of Things have expanded the role of digital forensics beyond traditional computer crime investigations. Practically every crime now involves some aspect of digital evidence; digital forensics provides the techniques and tools to articulate this evidence in legal proceedings. Digital forensics also has myriad intelligence applications; furthermore, it has a vital role in cyber security -- investigations of security breaches yield valuable information that can be used to design more secure and resilient systems. Advances in Digital Forensics XVI describes original research results and innovative applications in the discipline of digital forensics. In addition, it highlights some of the major technical and legal issues related to digital evidence and electronic crime investigations. The areas of coverage include: themes and issues, forensic techniques, filesystem forensics, cloud forensics, social media forensics, multimedia forensics, and novel applications. This book is the sixteenth volume in the annual series produced by the International Federation for Information

Processing (IFIP) Working Group 11.9 on Digital Forensics, an international community of scientists, engineers and practitioners dedicated to advancing the state of the art of research and practice in digital forensics. The book contains a selection of sixteen edited papers from the Sixteenth Annual IFIP WG 11.9 International Conference on Digital Forensics, held in New Delhi, India, in the winter of 2020. *Advances in Digital Forensics XVI* is an important resource for researchers, faculty members and graduate students, as well as for practitioners and individuals engaged in research and development efforts for the law enforcement and intelligence communities.

Sulfur has many redox states and is a major metabolite in suboxic and anaerobic environments including, but not restricted to, marine and marginal marine sediments, the water column of oxygen minimum zones, salt marshes and oil wells. Microbially mediated redox cycling of sulfur typically comprises dissimilatory sulfate reduction (MSR), sulfide reoxidation, disproportionation and the oxidation and reduction of sulfur redox intermediates. These processes contribute to the degradation of organic matter, link the cycles of sulfur and carbon, control the production and consumption of methane and are critical for the long term budget of O₂ in the atmosphere. Microbial and abiotic processes at redox interfaces also connect the sulfur cycle to the redox cycles of nitrogen, iron and other elements, producing distinctive geochemical and molecular signatures. Studies that couple microbiology with stable isotope geochemistry have informed interpretations of microbial sulfur cycling in modern and past environments. Laboratory-based studies and models of MSR have sought to understand the physiological and environmental controls of the magnitude of sulfur isotope fractionation. The fractionations of stable sulfur and oxygen isotopes during MSR are also used to track enzymatic activity during MSR and processes that oxidize sulfide in the presence of environmental oxidants. Outstanding questions in the field concern the importance of oxidative processes within the natural environment, the delivery of oxidants and carbon sources to the zones of sulfate reduction and the ability to detect or reconstruct oxidative processes from the chemical, isotopic, metagenomic, transcriptomic, proteomic and metabolomics profiles in the environment. Recent studies have emphasized the complex connections between sulfur and methane, iron, nitrogen and other elements. These links may involve the redox cycling of species that occur at concentrations difficult to detect by standard geochemical techniques or that are cycled at very rapid rates (cryptic cycles). Of particular interest is the use of isotope geochemistry to quantify links among various electron acceptors, including sulfate, ferric iron, and nitrate, during the anaerobic methane oxidation. For example, recent geochemical measurements have hinted that microbial sulfate reduction coupled to organic matter oxidation is mechanistically different to when sulfate reduction is coupled to methane oxidation. Recent studies have also suggested a possible contribution of a number of previously uncultured microbial groups in sulfur cycling in sulfidic environments, inspiring further studies of these organisms and their partnerships in anaerobic environments. This Research Topic highlights studies of microbial interactions, processes and communities that couple the sulfur cycle to the cycles of other elements in aphotic environments.

The 2016 International Conference on Energy Science and Applied Technology (ESAT 2016) held on June 25-26 in Wuhan, China aimed to provide a platform for researchers, engineers, and academicians, as well as industrial professionals, to present their

research results and development activities in energy science and engineering and its applied technology. The themes presented in Energy Science and Applied Technology ESAT 2016 are: Technologies in Geology, Mining, Oil and Gas; Renewable Energy, Bio-Energy and Cell Technologies; Energy Transfer and Conversion, Materials and Chemical Technologies; Environmental Engineering and Sustainable Development; Electrical and Electronic Technology, Power System Engineering; Mechanical, Manufacturing, Process Engineering; Control and Automation; Communications and Applied Information Technologies; Applied and Computational Mathematics; Methods and Algorithms Optimization; Network Technology and Application; System Test, Diagnosis, Detection and Monitoring; Recognition, Video and Image Processing.

This Volume consists last 3 Units 1. Information & Communication Technology (ICT) 2. People, Development and Environment 3. Higher Education System

The three volume-set, LNCS 9814, LNCS 9815, and LNCS 9816, constitutes the refereed proceedings of the 36th Annual International Cryptology Conference, CRYPTO 2016, held in Santa Barbara, CA, USA, in August 2016. The 70 revised full papers presented were carefully reviewed and selected from 274 submissions. The papers are organized in the following topical sections: provable security for symmetric cryptography; asymmetric cryptography and cryptanalysis; cryptography in theory and practice; compromised systems; symmetric cryptanalysis; algorithmic number theory; symmetric primitives; asymmetric cryptography; symmetric cryptography; cryptanalytic tools; hardware-oriented cryptography; secure computation and protocols; obfuscation; quantum techniques; spooky encryption; IBE, ABE, and functional encryption; automated tools and synthesis; zero knowledge; theory.

This book constitutes the proceedings of the 11th International Conference on Security and Cryptography for Networks, SCN 2018, held in Amalfi, Italy, in September 2018. The 30 papers presented in this volume were carefully reviewed and selected from 66 submissions. They are organized in topical sections on signatures and watermarking; composability; encryption; multiparty computation; anonymity and zero knowledge; secret sharing and oblivious transfer; lattices and post quantum cryptography; obfuscation; two-party computation; and protocols.

The increasing demand for energy worldwide, currently evaluated at 13 terawatts per year, has triggered a surge in research on alternative energy sources more sustainable and environmentally friendly. Bio-catalyzed electrochemical systems (BESs) are a rapidly growing biotechnology for sustainable production of bioenergy and/or value-added bioproducts using microorganisms as catalysts for bioelectrochemical reactions at the electrode surface. In the last decades, this biotechnology has been intensively studied and developed as a flexible and practical platform for multiple applications such as electricity production, wastewater treatment, pollutants remediation, desalination and production of biogas, biofuels, or other commodities. BESs could have a critical impact on societies in many spheres of activity and become one of the solutions to reform our petroleum-based economy. However, BESs research has so far been limited to lab scale with the notable exceptions of pilot scale microbial fuel cells for brewery and winery wastewater treatment coupled with electricity generation. In general, more knowledge has to be acquired to overcome the issues that are stymieing BESs development and commercialization. For example, it is critical to understand better microbial physiology including the mechanisms responsible for the transfer

of electrons between the microbes and the electrodes to start optimizing the systems in a more rational manner. There are many BES processes and for each one of them there is a multitude of biological and electrochemical specifications to investigate and adjust such as the nature of the microbial platform, electrode materials, the reactor design, the substrate, the medium composition, and the operating conditions. The ultimate goal is to develop highly energy efficient BESs with a positive footprint on the environment while maintaining low cost and generating opportunities to create value. BESs are complex systems developed with elements found in multiple fields of science such as microbiology, molecular biology, bioinformatics, biochemistry, electrochemistry, material science and environmental engineering. Given the high volume of research activities going on in the field of BESs today, this e-book explores the current challenges, the more recent progresses, and the future perspectives of BESs technologies. The BESs discussed here include microbial fuel cells, microbial electrolysis cells, microbial electrosynthesis cells, microbial electroremediation cells, etc.

This volume combines reviews on the latest advances in photochemical research with specific topical highlights in the field. Starting with periodical reports of the recent literature on organic and computational aspects including reports on computational photochemistry and chemiluminescence of biological and nanotechnological molecules, photochemistry of alkenes, dienes and polyenes, aromatic compounds and oxygen-containing functions. The final chapter of this section is a review of industrial application of photochemistry from 2014 to 2019. Coverage continues with highlighted topics, in the second part, from ruthenium-caged bioactive compounds, advances in logically and light induced systems, developments of metal-free photocatalysts, photoresponsive organophosphorus materials and applications of photo-fragmentation in synthesis, photo-click chemistry and azo-based molecular photoswitches. This volume will again include a section entitled 'SPR Lectures on Photochemistry', a collection of examples for academic readers to introduce a photochemistry topic and precious help for students in photochemistry. Providing critical analysis of the topics, this book is essential reading for anyone wanting to keep up to date with the literature on photochemistry and its applications. "A certain amount of energy destroys the same amount of CO₂ according to the whether it is administered continuously or intermittently. In order to rationalize this result there are two possibilities, either the destruction of CO₂ further occurred in the dark periods, which would lead to the same form of energy storing form, or in the illuminated period the reaction goes at twice the rate." O. Warburg, *Biochem. Z.*, 1919, 100, 230-270.

This volume is based on the research papers presented in the 4th Computer Science On-line Conference. The volume *Artificial Intelligence Perspectives and Applications* presents new approaches and methods to real-world problems, and in particular, exploratory research that describes novel approaches in the field of artificial intelligence. Particular emphasis is laid on modern trends in selected fields of interest. New algorithms or methods in a variety of fields are also presented. The Computer Science On-line Conference (CSOC 2015) is intended to provide an international forum for discussions on the latest high-quality research results in all areas related to Computer Science. The addressed topics are the theoretical aspects and applications of Computer Science, Artificial Intelligences, Cybernetics, Automation Control Theory and Software Engineering.

This book presents the proceedings of the 13th International Conference on Application of Fuzzy Systems and Soft Computing (ICAFFS 2018), held in Warsaw, Poland on August 27–28, 2018. It includes contributions from diverse areas of soft computing such as uncertain computation, Z-information processing, neuro-fuzzy approaches, evolutionary computing and others. The topics of the papers include theory of uncertainty computation; theory and application of soft computing; decision theory with imperfect information; neuro-fuzzy technology; image processing with soft computing; intelligent control; machine learning; fuzzy logic in data analytics and data mining; evolutionary

computing; chaotic systems; soft computing in business, economics and finance; fuzzy logic and soft computing in the earth sciences; fuzzy logic and soft computing in engineering; soft computing in medicine, biomedical engineering and the pharmaceutical sciences; and probabilistic and statistical reasoning in the social and educational sciences. The book covers new ideas from theoretical and practical perspectives in economics, business, industry, education, medicine, the earth sciences and other fields. In addition to promoting the development and application of soft computing methods in various real-life fields, it offers a useful guide for academics, practitioners, and graduates in fuzzy logic and soft computing fields.

Kickstart ketosis, lose weight, gain energy and transform your health in just five days Pioneering research has shown that a diet that is low in carbs and calories and high in good fats that trigger ketosis can counteract many diseases and boost wellbeing better than water fasts. In *The 5-Day Diet*, nutrition expert and co-author of *The Hybrid Diet* Patrick Holford provides you with a tried and tested plan to trigger a self-repair process, called autophagy, which renews and rejuvenates your cells, reboots your metabolism and detoxifies your body. This book breaks down the science and how it works while giving you daily meal plans, recipes and exercises. Whether you are after a quick fix with lasting results or looking to improve overall wellbeing, *The 5-Day Diet* is a springboard to better health.

Full coverage of electronics, MEMS, and instrumentation and control in mechanical engineering This second volume of *Mechanical Engineers' Handbook* covers electronics, MEMS, and instrumentation and control, giving you accessible and in-depth access to the topics you'll encounter in the discipline: computer-aided design, product design for manufacturing and assembly, design optimization, total quality management in mechanical system design, reliability in the mechanical design process for sustainability, life-cycle design, design for remanufacturing processes, signal processing, data acquisition and display systems, and much more. The book provides a quick guide to specialized areas you may encounter in your work, giving you access to the basics of each and pointing you toward trusted resources for further reading, if needed. The accessible information inside offers discussions, examples, and analyses of the topics covered, rather than the straight data, formulas, and calculations you'll find in other handbooks. Presents the most comprehensive coverage of the entire discipline of Mechanical Engineering anywhere in four interrelated books Offers the option of being purchased as a four-book set or as single books Comes in a subscription format through the Wiley Online Library and in electronic and custom formats Engineers at all levels will find *Mechanical Engineers' Handbook, Volume 2* an excellent resource they can turn to for the basics of electronics, MEMS, and instrumentation and control.

The proceedings of SocProS 2015 will serve as an academic bonanza for scientists and researchers working in the field of Soft Computing. This book contains theoretical as well as practical aspects using fuzzy logic, neural networks, evolutionary algorithms, swarm intelligence algorithms, etc., with many applications under the umbrella of 'Soft Computing'. The book will be beneficial for young as well as experienced researchers dealing across complex and intricate real world problems for which finding a solution by traditional methods is a difficult task. The different application areas covered in the proceedings are: Image Processing, Cryptanalysis, Industrial Optimization, Supply Chain Management, Newly Proposed Nature Inspired Algorithms, Signal Processing, Problems related to Medical and Health Care, Networking Optimization Problems, etc.

This book contains some selected papers from the International Conference on Extreme Learning Machine 2015, which was held in Hangzhou, China, December 15-17, 2015. This conference brought together researchers and engineers to

share and exchange R&D experience on both theoretical studies and practical applications of the Extreme Learning Machine (ELM) technique and brain learning. This book covers theories, algorithms and applications of ELM. It gives readers a glance of the most recent advances of ELM.

This two-volume set LNCS 11581 and 11582 constitutes the thoroughly refereed proceedings of the 10th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, DHM 2019, which was held as part of the 21st HCI International Conference, HCII 2019, in Orlando, FL, USA, in July 2019. The total of 1275 papers and 209 posters included in the 35 HCII 2019 proceedings volumes were carefully reviewed and selected from 5029 submissions. DHM 2019 includes a total of 77 papers; they were organized in topical sections named: Part I, Human Body and Motion: Anthropometry and computer aided ergonomics; motion prediction and motion capture; work modelling and industrial applications; risk assessment and safety. Part II, Healthcare Applications: Models in healthcare; quality of life technologies; health dialogues; health games and social communities.

These are the proceedings of the 2nd International Conference on Engineering Sciences and Technologies (ESaT 2016), held from 29th of June until the 1st of July 2016 in the scenic High Tatras Mountains, Tatranské Matliare, Slovak Republic. After the successful implementation and excellent feedback of the first international conference ESaT 2015, ESaT 2016 was organized under the auspices of the Faculty of Civil Engineering, Technical University of Košice, Slovak Republic in collaboration with the University of Miskolc, Hungary. The conference focused on a wide spectrum of topics and subject areas in civil engineering sciences. The proceedings bringing new and original advances and trends in various fields of engineering sciences and technologies that attract a wide range of academics, scientists, researchers and professionals from universities and practice. The authors of the articles originate from different countries around the world guaranteeing the importance, topicality, quality and level of presented results.

Hassler Whitney was a giant of twentieth-century mathematics. This biography paints a picture of him and includes dozens of revealing anecdotes. Mathematically, he had a rare detector that went off whenever he spotted a piece of mathematical gold, and he would then draw countless pictures, gradually forging a path from hunch to proof. This geometric path is seldom reflected in the rigor of his formal papers, but thanks to a close friendship and many conversations over decades, author Kendig was able to see how he actually worked. This book shows this through accessible accounts of his major mathematical contributions, with figures copiously supplied. Whitney is probably best known for introducing the grandfather of today's innumerable embedding theorems--his strong embedding theorem stating that any smooth manifold can be smoothly embedded in a Euclidean space of twice the manifold's dimension. This in turn led to several standard techniques used every day in algebraic topology. Whitney also established the

fundamentals of graph theory, the four-color problem, matroids, extending smooth functions, and singularities of smooth functions. He almost never used complicated technical machinery, so most of his work is accessible to a general reader with a modest mathematical background. His math-music connection was intense: He played piano, violin, and viola and won "best composition of the year" while earning a Bachelor's degree in music at Yale. He was an accomplished mountain climber, and as a tinkerer, at age sixteen he built the large-format camera used to take this book's cover photograph. Whitney's family generously provided dozens of photographs appearing here for the very first time. This biography is a revealing portrait of a fascinating personality and a titan of twentieth-century mathematics.

This book covers the study of electromagnetic wave theory and describes how electromagnetic technologies affect our daily lives. From ER to ET: How Electromagnetic Technologies Are Changing Our Lives explores electromagnetic wave theory including its founders, scientific underpinnings, ethical issues, and applications through history. Utilizing a format of short essays, this book explains in a balanced, and direct style how electromagnetic technologies are changing the world we live in and the future they may create for us. Quizzes at the end of each chapter provide the reader with a deeper understanding of the material. This book is a valuable resource for microwave engineers of varying levels of experience, and for instructors to motivate their students and add depth to their assignments. In addition, this book: Presents topics that investigate all aspects of electromagnetic technology throughout history Explores societal and global issues that relate to the field of electrical engineering (emphasized in current ABET accreditation criteria) Includes quizzes relevant to every essay and answers which explain technical perspectives Rajeev Bansal, PhD, is a professor of Electrical and Computer Engineering at the University of Connecticut. He is a member of IEEE and the Connecticut Academy of Science and Engineering. He is a Fellow of the Electromagnetics Academy. His editing credits include Fundamentals of Engineering Electromagnetics and Engineering Electromagnetics: Applications. Dr. Bansal contributes regular columns to IEEE Antennas and Propagation Magazine and IEEE Microwave Magazine.

The use of biocontrol agents and beneficial organisms for management of plant and pest diseases appears as an environment-friendly and economic procedure. However, this option is not always available, depending on the lack of knowledge on the mechanisms of natural regulation, locally effective. In this view, this eBook considers studies and experimental works illustrating a range of problems and solutions based on microbial resources, suitable for management of biotic stress factors. These examples show how detailed data and knowledge on the organisms involved are of paramount importance to achieve a sustainable and durable management capability.

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