Enginnering Science N3 April 2014 Question Paper

Images play a key role for scholarly work in many ways – they facilitate communication and support understanding or make research results look more appealing. At the same time powerful image-editing programs have profoundly changed how image manipulations are perceived today. This book explores how scholars from different domains conceive image manipulation. The study is based on research carried out at the Interdisciplinary Laboratory Image Knowledge Gestaltung at Humboldt University Berlin. Informants from the field of biology, computer science, art history and design explain how they differentiate between appropriate and inappropriate image manipulation. Furthermore these experts report on whether guidelines or practical logics shape their work with images.

This book constitutes the refereed proceedings of the First International Workshop on Bayesian and grAphical Models for Biomedical Imaging, BAMBI 2014, held in Cambridge, MA, USA, in September 2014 as a satellite event of the 17th International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI 2014. The 11 revised full papers presented were carefully reviewed and selected from numerous submissions with a key aspect on probabilistic modeling applied to medical image analysis. The objectives of this workshop compared to other workshops, e.g. machine learning in medical imaging, have a stronger mathematical focus on the foundations of probabilistic modeling and inference. The papers highlight the potential of using Bayesian or random field graphical models for advancing scientific research in biomedical image analysis or for the advancement of modeling and analysis of medical imaging data.

To continue providing people with safe, comfortable, and affordable places to live, cities must incorporate techniques and technologies to bring them into the future. The integration of big data and interconnected technology, along with the increasing population, will lead to the necessary creation of smart cities. Big Data Analytics for Smart and Connected Cities is a pivotal reference source that provides vital research on the application of the integration of interconnected technologies and big data analytics into the creation of smart cities. While highlighting topics such as energy conservation, public transit planning, and performance measurement, this publication explores technology integration in urban environments as well as the methods of planning cities to implement these new technologies. This book is ideally designed for engineers, professionals, researchers, and technology developers seeking current research on technology implementation in urban settings.

This two-volume set of LNCS 8572 and LNCS 8573 constitutes the refereed proceedings of the 41st International Colloquium on Automata, Languages and Programming, ICALP 2014, held in Copenhagen, Denmark, in July 2014. The total of 136 revised full papers presented together with 4 invited talks were carefully reviewed and selected from 484 submissions. The papers are organized in three tracks focussing on Algorithms, Complexity, and Games, Logic, Semantics, Automata, and Theory of Programming, Foundations of Networked Computation.

Reliability Analysis and Asset Management of Engineering Systems
Controversial Issues: Facts versus Perceptions
Identifying the Culprit
Recent Developments in Curriculum, Assessment and Practice
Secret History
3rd International Conference on Nanotechnologies and Biomedical Engineering
Using Neurophysiological Signals that Reflect Cognitive or Affective State

"Many researchers and software developers have put a lot of effort into finding solutions for automated code checking. This book is a good summary of these efforts and provides readers with a comprehensive understanding of the status of such technologies in the industry. It also guides readers on implementation of such techniques using the platforms and tools currently available in the industry." — Issa Ramaji, University of North Florida, USA Building Information Modeling: Automated Code Checking and Compliance Processes covers current and emerging trends in automating the processes of examining building design against codes and standards of practice. The role of Building Information Modeling (BIM) technologies in these processes is thoroughly analyzed and explains how this new technology is significantly transforming modern architecture, engineering, and construction (AEC) domains. The book also introduces the theoretical background of computerizing compliance verification, including domain knowledge representations, building model representations, and automated code checking systems. An underlying goal for the material covered is to present the use of BIM technology as an integral part of the automated auditing process that can lead to a more comprehensive, intelligent, and integrated building design– a design where an optimized solution can be achieved in harmony with the current codes and standards of practice. This new proposed BIM-based framework for automating code conformance checking is one of the most powerful methods presently available to reflect actual building code requirements, and the methods described in the book offer significant benefits to the AEC industry such as:? Providing consistency in interpretation of regulatory provisions Reducing code compliance validation errors, and the cost and time associated with compliance checking Allows for the ability to self-check required aspects before bidding Reduces the amount of time and resources required during design review Allows for optimal design, along with faster turnaround on feedback, and potentially faster approvals for construction permits by building and infrastructure authorities

This book constitutes the refereed proceedings of the 11th Latin American Symposium on Theoretical Informatics, LATIN 2014, held in Montevideo, Uruguay, in March/April 2014. The 65 papers presented together with 5 abstracts were carefully reviewed and selected from 192 submissions. The papers address a variety of topics in theoretical computer science with a certain focus on complexity, computational geometry, graph drawing, automata, computability, algorithms on graphs, algorithms, random structures, complexity on graphs,

analytic combinatorics, analytic and enumerative combinatorics, approximation algorithms, analysis of algorithms, computational algebra, applications to bioinformatics, budget problems and algorithms and data structures.

Reliability Analysis and Asset Management of Engineering Systems explains methods that can be used to evaluate reliability and availability of complex systems, including simulation-based methods. The increasing digitization of mechanical processes driven by Industry 4.0 increases the interaction between machines and monitoring and control systems, leading to increases in system complexity. For those systems the reliability and availability analyses are increasingly challenging, as the interaction between machines has become more complex, and the analysis of the flexibility of the production systems to respond to machinery failure may require advanced simulation techniques. This book fills a gap on how to deal with such complex systems by linking the concepts of systems reliability and asset management, and then making these solutions more accessible to industry by explaining the availability analysis of complex systems based on simulation methods that emphasise Petri nets. Explains how to use a monitoring database to perform important tasks including an update of complex systems reliability Shows how to diagnose probable machinery-based causes of system performance degradation by using a monitoring database and reliability estimates in an integrated way Describes practical techniques for the application of AI and machine learning methods to fault detection and diagnosis problems

Introduces machine learning and its algorithmic paradigms, explaining the principles behind automated learning approaches and the considerations underlying their usage.

Computing with New Resources

Automated Code Checking and Compliance Processes

Computational Methods and Experimental Measurements XVII

Automata, Languages, and Programming

Assessing Eyewitness Identification

Proceedings of the 2014 International Conference on Engineering Technology, Engineering Education and Engineering Management (ETEEEM 2014), Hong Kong, 15-16 November 2014

China's Soft Power and Higher Education in South Asia

This book provides an introduction to the mathematical and algorithmic foundations of data science, including machine learning, high-dimensional geometry, and analysis of large networks. Topics include the counterintuitive nature of data in high dimensions, important linear algebraic techniques such as singular value decomposition, the theory of random walks and Markov chains, the fundamentals of and important algorithms for machine learning, algorithms and analysis for clustering, probabilistic models for large networks, representation learning including topic modelling and non-negative matrix factorization, wavelets and compressed sensing. Important probabilistic techniques are developed including the law of large numbers, tail inequalities, analysis of random projections, generalization guarantees in machine learning, and moment methods for analysis of phase transitions in large random graphs. Additionally, important structural and complexity measures are discussed such as matrix norms and VC-dimension. This book is suitable for both undergraduate and graduate courses in the design and analysis of algorithms for data.

Since the publication of the bestselling first edition, there have been numerous advances in the field of nuclear science. In medicine, accelerator based teletherapy and electron-beam therapy have become standard. New demands in national security have stimulated major advances in nuclear instrumentation.An ideal introduction to the fundamentals of nuclear science and engineering, this book presents the basic nuclear science needed to understand and quantify an extensive range of nuclear phenomena. New to the Second Edition— A chapter on radiation detection by Douglas McGregor Up-to-date coverage of radiation hazards, reactor designs, and medical applications Flexible organization of material that allows for quick reference This edition also takes an in-depth look at particle accelerators, nuclear fusion reactions and devices, and nuclear technology in medical diagnostics and treatment. In addition, the author discusses applications such as the direct conversion of nuclear energy into electricity. The breadth of coverage is unparalleled, ranging from the theory and design characteristics of nuclear reactors to the identification of biological risks associated with ionizing radiation. All topics are supplemented with extensive nuclear data compilations to perform a wealth of calculations. Providing extensive coverage of physics, nuclear science, and nuclear technology of all types, this up-to-date second edition of Fundamentals of Nuclear Science and Engineering is a key reference for any physicists or engineer.

This book emphasizes how we already have the technologies available, including renewable energy and the ability to recycle most materials, to make ecological living possible and that perceived barriers to energy transitions can be overcome. Human life relies upon two systems: the biosphere and the system that produces our goods and services. Today, these two systems are in conflict, and we all face the question of whether we can stop damaging our environment while still supplying the essential goods and services we have come to depend on. Ecological Living presents an optimistic vision of our future by showing how decoupling the productive system from resource extraction is possible, and how this is a key means of achieving an equitable

world within environmental limits. For long-term sustainability, the book argues that we must become more efficient in the use of our resources so that resource extraction, and the accompanying environmental costs, can be reduced. Demonstrating the essential steps towards a just and sustainable world, Ecological Living will be of great interest to all students, academics, and policymakers working in the field of environment and sustainability. Containing papers presented at the seventeenth in a series of biennial meetings organised by the Wessex Institute and first held in 1984, this book includes the latest research from scientists who perform experiments, researchers who develop computer codes, and those who carry out measurements on prototypes and whose work may interact. Progress in the engineering sciences is dependent on the orderly and concurrent development of all three fields. Continuous improvement in computer efficiency, coupled with diminishing costs and rapid development of numerical procedures have generated an ever-increasing expansion of computational simulations that permeate all fields of science and technology. As these procedures continue to grow in magnitude and complexity, it is essential to be certain of their reliability, i.e. to validate their results. This can be achieved by performing dedicated and accurate experiments. At the same time, current experimental techniques have become more complex and sophisticated so that they require the exploitation of computers, both for running experiments as well as acquiring and processing the resulting data. The papers contained in the book address advances in the interaction between these three areas. They cover such topics as: Computational and Experimental Methods; Fluid Flow; Structural and Stress Analysis; Materials Characterisation; Heat Transfer and Thermal Processes; Advances in Computational Methods; Automotive Applications; Applications in Industry; Process Simulations; Environmental Modelling and Applications; Computer Modelling; Validation of Computer Modelling; Computation in Measurements; Data Processing of Experiments; Virtual Testing and Verification; Simulation and Forecasting; Measurements in Engineering.
Ecological Living
ICPMG2014 - Physical Modelling in Geotechnics
English Mechanic and World of Science
Big Data Analytics for Smart and Connected Cities
Rationale, Strategies, and Implications
Data Protection and Privacy
Genetically Modified and Irradiated Food

This empirical work illuminates how China uses the higher education mechanism in South Asia to advance its national interests and investigates the outcomes for China, including both challenges and opportunities. Using a soft power theoretical framework, this book employs the case study of Nepal, a South Asian country of profound geostrategic value for the two competing powers of China and India. Illustrating how higher education is the mechanism for achieving soft power goals, it draws on data analysis based on archival sources and interviews with China and South Asia experts, including academics and politico-bureaucratic elites, as well as interviews with Nepalese students and alumni. Importantly though, this book advances an innovative conceptual model of geointellect to trace the evolving dimensions of China's global dominance in higher education, research, and innovation paradigm, especially in the context of the Belt and Road Initiative and ultimately reveals how foreign policy and higher education policy reinforce each other in the context of China. China's Soft Power and Higher Education in South Asia provides an empirically rich resource for students and scholars of education, international relations, Asian studies, and China's soft power. This volume contains papers presented at the International Conference on Engineering Technologies, Engineering Education and Engineering Management (ETEEEM 2014, Hong Kong, 15-16 November 2014). A wide variety of topics is included in the book: - Engineering Education - Education Engineering and Technology - Methods and Learning Mechanism The 8th International Conference on Physical Modelling in Geotechnics (ICPMG2014) was organised by the Centre for Offshore Foundation Systems at the University of Western Australia under the auspices of the Technical Committee 104 for Physical Modelling in Geotechnics of the International Society of Soil Mechanics and Geotechnical Engineering. This quadrennial conference is the traditional focal point for the physical modelling community of academics, scientists and engineers to present and exchange the latest developments on a wide range of physical modelling aspects associated with geotechnical engineering. These proceedings, together with the seven previous proceedings dating from 1988, present an inestimable collection of the technical and scientific developments and breakthroughs established over the last 25 years. These proceedings include 10 keynote lectures from scientific leaders within the physical modelling community and 160 peer-reviewed papers from 26 countries. They are organised in 14 themes, presenting the latest developments in physical modelling technology, modelling techniques and sensors, through a wide range of soil-structure interaction problems, including shallow and deep foundations, offshore geotechnics, dams and embankments, excavations and retaining structures and slope stability. Fundamental aspects of earthquake engineering, geohazards, ground reinforcements and improvements, and soil properties and behaviour are also covered, demonstrating the increasing complexity of modelling arising from state-of-the-art technological developments and increased understanding of similitude principles. A special theme on education presents the latest developments in the use of physical modelling techniques for instructing undergraduate and postgraduate students in geotechnical engineering. This book constitutes the refereed proceedings of the 8th International Conference on Combinatorial Optimization and Applications, COCOA 2014, held on the island of Maui, Hawaii, USA, in December 2014. The 56 full papers included in the book were carefully reviewed and selected from 133 submissions. Topics covered include classic combinatorial optimization; geometric optimization; network optimization; optimization in graphs; applied optimization; CSoNet; and complexity, cryptography, and games. Helping Scientists to Communicate Well for All Considered: Strategic Science Communication in an Age of Environmental and Health Crises Understanding Machine Learning

Electronic Engineering and Information Science
Technolife 2035
Paradigms in Cryptology – Mycrypt 2016. Malicious and Exploratory Cryptology
A Quarterly International Journal in Information Science and Engineering
ICNBME-2015, September 23-26, 2015, Chisinau, Republic of Moldova

This book constitutes the full papers and short monographs developed on the base of the refereed proceedings of the International Conference on Information Technologies: Information and Communication Technologies for Research and Industry (ICIT-2019), held in Saratov, Russia in February 2019. The book brings accepted papers which present new approaches and methods of solving problems in the sphere of control engineering and decision making for the various fields of studies: industry and research, ontology-based data simulation, smart city technologies, theory and use of digital signal processing, cognitive systems, robotics, cybernetics, automation control theory, image recognition technologies, and computer vision. Particular emphasis is laid on modern trends, new approaches, algorithms and methods in selected fields of interest. The presented papers were accepted after careful reviews made by at least three independent reviewers in a double-blind way. The acceptance level was about 60%. The chapters are organized thematically in several areas within the following tracks: • Models, Methods & Approaches in Decision Making Systems • Mathematical Modelling for Industry & Research • Smart City Technologies The conference is focused on development and globalization of information and communication technologies (ICT), methods of control engineering and decision making along with innovations and networking, ICT for sustainable development and technological change, and global challenges. Moreover, the ICIT-2019 served as a discussion area for the actual above-mentioned topics. The editors believe that the readers will find the proceedings interesting and useful for their own research work.

This book comprises high-quality refereed research papers presented at the Third International Conference on Computer Science, Engineering and Education Applications (ICCSEEA2020), held in Kyiv, Ukraine, on 21–22 January 2020, organized jointly by National Technical University of Ukraine " Igor Sikorsky Kyiv Polytechnic Institute" , National Aviation University, and the International Research Association of Modern Education and Computer Science. The topics discussed in the book include state-of-the-art papers in computer science, artificial intelligence, engineering techniques, genetic coding systems, deep learning with its medical applications, and knowledge representation with its applications in education. It is an excellent source of references for researchers, graduate students, engineers, management practitioners, and undergraduate students interested in computer science and their applications in engineering and education. History is written by the winners—and the powerful—but how much of it is fiction? And who is really in control today? From the dawn of civilization to the 21st century, from ancient aliens to the New World Order, Secret History: Conspiracies from Ancient Aliens to the New World Order examines, explores, and uncovers the hidden, overlooked, and buried history of mankind. The book moves from biblical, Egyptian, Mayan, Greek, and early mysteries of antiquity to the clandestine doings of the Nazis and the Masons and assassination plots of the more recent past to the surveillance, monitoring, mind-control, and secret schemes of today. Researcher Nick Redfern investigates the stories, mythologies, lore behind incredible events and clandestine groups of yesterday and today. More than 60 entries dig deep into the manipulation of events by influential groups, including … • Historical riddles—alien visitations, space gods, and human–alien crossbreeding. • Government cover ups—mind control, murders, scientists, and secret agents. • Powerful groups and intended consequences—9-11, new world order, bird-flu, and chemtrails. Tracing the chilling and lasting effects of conspiracies, cabals, and plots, Secret History: Conspiracies from Ancient Aliens to the New World Order exposes their deep reach in shaping today's world.

The International Conference of Electronic Engineering and Information Science 2015 (ICEEIS 2015) was held on January 17-18, 2015, Harbin, China. This proceedings volume assembles papers from various researchers, engineers and educators engaged in the fields of electronic engineering and information science.The papers in this proceedings

First International Workshop, BAMBI 2014, Cambridge, MA, USA, September 18, 2014, Revised Selected Papers
11th Latin American Symposium, Montevideo, Uruguay, March 31 -- April 4, 2014. Proceedings
The Dragon Takes Flight
Neutrosophic Sets and Systems, vol. 3/2014
8th International Conference, COCOA 2014, Wailea, Maui, HI, USA, December 19-21, 2014, Proceedings
Conspiracies from Ancient Aliens to the New World Order
The Closing of the Liberal Mind

Global food insecurity is a growing issue. At a time when the world's population is increasing and agricultural production is challenged by climate change, it is estimated that around a third of the food produced globally is lost or wasted. This book examines the problem of food loss and waste (FLW) and the policies that could be enacted to remedy this fundamental global concern.

This book constitutes the refereed post-conference proceedings of the Second International Conference on Cryptology and Malicious Security, held in Kuala Lumpur, Malaysia, December 1-2, 2016. The 26 revised full papers, two short papers and two keynotes presented were carefully reviewed and selected from 51 submissions. The papers are organized in topical sections on revisiting tradition; different paradigms; cryptofication; malicious cryptography; advances in cryptanalysis; primitives and features; cryptanalysis correspondence.

PAAMS, the International Conference on Practical Applications of Agents and Multi-Agent Systems is an evolution of the International Workshop on Practical Applications of Agents and Multi-Agent Systems. PAAMS is an international yearly tribune to present, to discuss, and to disseminate the latest developments and the most important outcomes related to real-world applications. It provides a unique opportunity to bring multi-disciplinary experts, academics and practitioners together to exchange their experience in the development of Agents and Multi-Agent Systems. This volume presents the papers that have been accepted for the 2017 in the special sessions: Agent-Based Social Simulation, Modelling and Big-Data Analytics (ABM); Advances on Demand Response and Renewable Energy Sources in Agent Based Smart Grids (ADRESS); Agents and Mobile Devices (AM); Computer vision in Multi-Agent Robotics (RV); Persuasive Technologies (PT); Web and Social Media Mining (WASMM). The volume also includes the papers accepted for publication in the Doctoral Consortium (DCAI, DCAI-DECON, ISAMI, MIS4TEL, PAAMS, PACBB 2017 conferences).

Eyewitnesses play an important role in criminal cases when they can identify culprits. Estimates suggest that tens of thousands of eyewitnesses make identifications in criminal investigations each year. Research on factors that affect the accuracy of eyewitness identification procedures has given us an increasingly clear picture of how identifications are made, and more importantly, an improved understanding of the principled limits on vision and memory that can lead to failure of identification. Factors such as viewing conditions, duress, elevated emotions, and biases influence the visual

perception experience. Perceptual experiences are stored by a system of memory that is highly malleable and continuously evolving, neither retaining nor divulging content in an informational vacuum. As such, the fidelity of our memories to actual events may be compromised by many factors at all stages of processing, from encoding to storage and retrieval. Unknown to the individual, memories are forgotten, reconstructed, updated, and distorted. Complicating the process further, policies governing law enforcement procedures for conducting and recording identifications are not standard, and policies and practices to address the issue of misidentification vary widely. These limitations can produce mistaken identifications with significant consequences. What can we do to make certain that eyewitness identification convicts the guilty and exonerates the innocent? Identifying the Culprit makes the case that better data collection and research on eyewitness identification, new law enforcement training protocols, standardized procedures for administering line-ups, and improvements in the handling of eyewitness identification in court can increase the chances that accurate identifications are made. This report explains the science that has emerged during the past 30 years on eyewitness identifications and identifies best practices in eyewitness procedures for the law enforcement community and in the presentation of eyewitness evidence in the courtroom. In order to continue the advancement of eyewitness identification research, the report recommends a focused research agenda. Identifying the Culprit will be an essential resource to assist the law enforcement and legal communities as they seek to understand the value and the limitations of eyewitness identification and make improvements to procedures.
Scholarly Perspectives on Image Manipulation
Engineering Technology, Engineering Education and Engineering Management
Second International Conference, Mycrypt 2016, Kuala Lumpur, Malaysia, December 1-2, 2016, Revised Selected Papers
Fundamentals of Nuclear Science and Engineering Second Edition
China's Aviation Policy, Achievements, and International Implications
IRC-SET 2020
From Theory to Algorithms
This book presents innovative research works to demonstrate the potential and the advancements of computing approaches to utilize healthcare centric and medical datasets in solving complex healthcare problems. Computing technique is one of the key technologies that are being currently used to perform medical diagnostics in the healthcare domain, thanks to the abundance of medical data being generated and collected. Nowadays, medical data is available in many different forms like MRI images, CT scan images, EHR data, test reports, histopathological data and doctor patient conversation data. This opens up huge opportunities for the application of computing techniques, to derive data-driven models that can be of very high utility, in terms of providing effective treatment to patients. Moreover, machine learning algorithms can uncover hidden patterns and relationships present in medical datasets, which are too complex to uncover, if a data-driven approach is not taken. With the help of computing systems, today, it is possible for researchers to predict an accurate medical diagnosis for new patients, using models built from previous patient data. Apart from automatic diagnostic tasks, computing techniques have also been applied in the process of drug discovery, by which a lot of time and money can be saved. Utilization of genomic data using various computing techniques is another emerging area, which may in fact be the key to fulfilling the dream of personalized medications. Medical prognostics is another area in which machine learning has shown great promise recently, where automatic prognostic models are being built that can predict the progress of the disease, as well as can suggest the potential treatment paths to get ahead of the disease progression.
The subjects of this volume are more relevant than ever, especially in light of the raft of electoral scandals concerning voter profiling. This volume brings together papers that offer conceptual analyses, highlight issues, propose solutions, and discuss practices regarding privacy and data protection. It is one of the results of the twelfth annual International Conference on Computers, Privacy and Data Protection, CPDP, held in Brussels in January 2019. The book explores the following topics: dataset nutrition labels, lifelogging and privacy by design, data protection iconography, the substance and essence of the right to data protection, public registers and data protection, modelling and verification in data protection impact assessments, examination scripts and data protection law in Cameroon, the protection of children's digital rights in the GDPR, the concept of the scope of risk in the GDPR and the ePrivacy Regulation. This interdisciplinary book has been written at a time when the scale and impact of data processing on society — not only on individuals, but also on social systems — is becoming ever starker. It discusses open issues as well as daring and prospective approaches, and will serve as an insightful resource for readers with an interest in computers, privacy and data protection.
This book highlights leading-edge research in multi-disciplinary areas in Physics, Engineering, Medicine, and Health care, from the 6th IRC Conference on Science, Engineering and Technology (IRC-SET 2020) held in July 2020 at Singapore. The papers were shortlisted after extensive rounds of reviews by a panel of esteemed individuals who are pioneers in their domains. The book also contains excerpts of the speeches by eminent personalities who graced the occasion, thereby providing written documentation of the event.
Technology constantly evolves, usually slowly and insidiously — but always just as surely. Things that are currently being developed in laboratories will be in the public domain as different products and applications perhaps as soon as in a few years' time, and as more refined versions in around ten years' time. This book deals with the future of technology, and explores the influence new technologies may have on life within the next twenty years. It is divided into three parts, the first of which discusses technological development and the forces and counter-forces related to it. This section also reviews how advances in technology are forecasted, and what kinds of parties make these predictions, and provides examples of forecasts for the next couple of decades. The second part of the book investigates

the various areas of technology and their related trends. This section discusses current technological studies which may have concrete impacts in everyday life in a few decades, such as those in the fields of energy, transportation, biotechnology, materials, ICT, robotics, medical technology and space technology. The third part of the book introduces the authors' visions of how technology may develop by 2035, and presents three different scenarios, or future worlds. These will demonstrate the possible directions in which technological development can take us. The scenarios are introduced through two main characters, Romeo and Juliet (adapted from Shakespeare's play) in the year 2035. Even though technology is constantly changing, the writers believe that, even years into the future, the significance of human relations will remain the greatest influence on human life.

Proceedings of the 8th International Conference on Physical Modelling in Geotechnics 2014 (ICPMG2014), Perth, Australia, 14-17 January 2014

Essays Dedicated to Jozef Gruska on the Occasion of His 80th Birthday

Recent Research in Control Engineering and Decision Making

Proceedings of the International Conference of Electronic Engineering and Information Science 2015 (ICEEIS 2015), January 17-18, 2015, Harbin, China

Health Informatics: A Computational Perspective in Healthcare

LATIN 2014: Theoretical Informatics

How Will Technology Change Our Future?

Professor Jozef Gruska is a well known computer scientist for his many and broad results. He was the father of theoretical computer science research in Czechoslovakia and among the first Slovak programmers in the early 1960s. Jozef Gruska introduced the descriptional complexity of grammars, automata, and languages, and is one of the pioneers of parallel (systolic) automata. His other main research interests include parallel systems and automata, as well as quantum information processing, transmission, and cryptography. He is co-founder of four regular series of conferences in informatics and two in quantum information processing and the Founding Chair (1989-96) of the IFIP Specialist Group on Foundations of Computer Science.

Elements of probability; Random variables and expectation; Special; random variables; Sampling; Parameter estimation; Hypothesis testing; Regression; Analysis of variance; Goodness of fit and nonparametric testing; Life testing; Quality control; Simulation.

A former U.S. Assistant Secretary of State and currently Acting Senior Vice President for Research at The Heritage Foundation, Kim R. Holmes surveys the state of liberalism in America today and finds that it is becoming its opposite—illiberalism—abandoning the precepts of open-mindedness and respect for individual rights, liberties, and the rule of law upon which the country was founded, and becoming instead an intolerant, rigidly dogmatic ideology that abhors dissent and stifles free speech. Tracing the new illiberalism historically to the radical Enlightenment, a movement that rejected the classic liberal ideas of the moderate Enlightenment that were prominent in the American Founding, Holmes argues that today's liberalism has forsaken its American roots, incorporating instead the authoritarian, anti-clerical, and anti-capitalist prejudices of the radical and largely European Left. The result is a closing of the American liberal mind. Where once freedom of speech and expression were sacrosanct, today liberalism employs speech codes, trigger warnings, boycotts, and shaming rituals to stifle freedom of thought, expression, and action. It is no longer appropriate to call it liberalism at all, but illiberalism—a set of ideas in politics, government, and popular culture that increasingly reflects authoritarian and even anti-democratic values, and which is devising new strategies of exclusiveness to eliminate certain ideas and people from the political process. Although illiberalism has always been a temptation for American liberals, lurking in the radical fringes of the Left, it is today the dominant ideology of progressive liberal circles. This makes it a new danger not only to the once venerable tradition of liberalism, but to the American nation itself, which needs a viable liberal tradition that pursues social and economic equality while respecting individual liberties.

This volume presents the proceedings of the 3rd International Conference on Nanotechnologies and Biomedical Engineering which was held on September 23-26, 2015 in Chisinau, Republic of Moldova. ICNBME-2015 continues the series of International Conferences in the field of nanotechnologies and biomedical engineering. It aims at bringing together scientists and engineers dealing with fundamental and applied research for reporting on the latest theoretical developments and applications involved in the fields. Topics include Nanotechnologies and nanomaterials Plasmonics and metamaterials Bio-micro/nano technologies Biomaterials Biosensors and sensors systems Biomedical instrumentation Biomedical signal processing Biomedical imaging and image processing Molecular, cellular and tissue engineering Clinical engineering, health technology management and assessment; Health informatics, e-health and telemedicine Biomedical engineering education Nuclear and radiation safety and security Innovations and

technology transfer
Foundations of Data Science
Bayesian and grAphical Models for Biomedical Imaging
Advances in Computer Science for Engineering and Education III
41st International Colloquium, ICALP 2014, Copenhagen, Denmark, July 8-11, 2014,
Proceedings, Part I
Blended Learning in Engineering Education
How Groupthink and Intolerance Define the Left
Building Information Modeling

"Neutrosophic Sets and Systems" has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.

Genetically Modified and Irradiated Food: Controversial Issues: Facts versus Perceptions explains the technologies used in these processes so they can be understood by those in general public health, scientific organizations, politicians and opinion makers/policymakers. The facts presented include a massive amount of scientific evidence that these technologies are safe and can be beneficial. Because the world is facing a future with an increasing number of people, new technologies are needed to ensure enough safe and healthy food, thus technologies that have the potential to dramatically increase the availability of safe and healthy food should be welcomed by everybody. Includes references to science based research on GMOs Explains the technologies in a clear way that can be understood by the general public Includes a massive amount of scientific evidence that these technologies are safe and can be beneficial

The book aims to advance global knowledge and practice in applying data science to transform higher education learning and teaching to improve personalization, access and effectiveness of education for all. Currently, higher education institutions and involved stakeholders can derive multiple benefits from educational data mining and learning analytics by using different data analytics strategies to produce summative, real-time, and predictive or prescriptive insights and recommendations. Educational data mining refers to the process of extracting useful information out of a large collection of complex educational datasets while learning analytics emphasizes insights and responses to real-time learning processes based on educational information from digital learning environments, administrative systems, and social platforms. This volume provides insight into the emerging paradigms, frameworks, methods and processes of managing change to better facilitate organizational transformation toward implementation of educational data mining and learning analytics. It features current research exploring the (a) theoretical foundation and empirical evidence of the adoption of learning analytics, (b) technological infrastructure and staff capabilities required, as well as (c) case studies that describe current practices and experiences in the use of data analytics in higher education.

The Dragon Takes Flight: China's Aviation Policy, Achievements, and International Implications analyzes China's journey toward the development of its C-919 large passenger aircraft and how Boeing and Airbus can meet the challenges they may face from its success.
Data Protection and Democracy

Introduction to Probability and Statistics for Engineers and Scientists
Food Loss and Food Waste
Trends in Cyber-Physical Multi-Agent Systems. The PAAMS Collection - 15th International Conference, PAAMS 2017
Causes and Solutions
Proceedings of the 6th IRC Conference on Science, Engineering and Technology, July 2020, Singapore

Blended Learning combines the conventional face-to-face course delivery with an online component. The synergetic effect of the two modalities has proved to be of superior didactic value to each modality on its own. The highly improved interaction it offers to students, as well as direct accessibility to the lecturer, adds to the hitherto unparalleled learning outcomes. "Blended Learning in Engineering Education: Recent Developments in Curriculum, Assessment and Practice" highlights current trends in Engineering Education involving face-to-face and online curriculum delivery. This book will be especially useful to lecturers and postgraduate/undergraduate students as well as university administrators who would like to not only get an up-to-date overview of contemporary developments in this field, but also help enhance academic performance at all levels.

What can we learn from spontaneously occurring brain and other physiological signals about an individual's cognitive and affective state and how can we make use of this information? One line of research that is actively involved with this question is Passive Brain-Computer-Interfaces (BCI). To date most BCIs are aimed at assisting patients for whom brain signals could form an alternative output channel as opposed to more common human output channels, like speech and moving the hands. However, brain signals (possibly in combination with other physiological signals) also form an output channel above and beyond the more usual ones: they can potentially provide continuous, online information about an individual's cognitive and affective state without the need of conscious or effortful communication. The provided information could be used in a number of ways. Examples include monitoring cognitive workload through EEG and skin conductance for adaptive automation or using ERPs in response to errors to correct for a behavioral response. While Passive BCIs make use of online (neuro)physiological responses and close the interaction cycle between a user and a computer system, (neuro)physiological responses can also be used in an offline fashion. Examples of this include detecting amygdala responses for neuromarketing, and measuring EEG and pupil dilation as indicators of mental effort for optimizing information systems. The described field of applied (neuro)physiology can strongly benefit from high quality scientific studies that control for confounding factors and use proper comparison conditions. Another area of relevance is ethics, ranging from dubious product claims, acceptance of the technology by the general public, privacy of users, to possible effects that these kinds of applications may have on society as a whole. In this Research Topic we aimed to publish studies of the highest scientific quality that are directed towards applications that utilize spontaneously, effortlessly generated neurophysiological signals (brain and/or other physiological signals) reflecting cognitive or affective state. We especially welcomed studies that describe specific real world applications demonstrating a significant benefit compared to standard applications. We also invited original, new kinds of (proposed) applications in this area as well as comprehensive review articles that point out what is and what is not possible (according to scientific standards) in this field. Finally, we welcomed manuscripts on the ethical issues that are involved. Connected to the Research Topic was a workshop (held on June 6, during the Fifth International Brain-Computer Interface Meeting, June 3-7, 2013, Asilomar, California) that brought together a diverse group of people who were working in this field. We discussed the state of the art and formulated major challenges, as reflected in the first paper of the Research Topic.
Shaping Images
Combinatorial Optimization and Applications

Adoption of Data Analytics in Higher Education Learning and Teaching

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