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PROCEEDINGS OF 17TH ALL INDIA MANUFACTURING TECHNOLOGY

Allied Publishers

SURFACE WEAR

ANALYSIS, TREATMENT, AND PREVENTION

ASM International Annotation Describes the surface properties controlling the wear processes in different environments, and presents techniques for reducing specific type of wear through modification of surface properties. The author characterizes the energy, morphology, and composition of surfaces, then identifies the mechanisms of wear caused by adhesion, abrasion, erosion, corrosion, and heat. The main section of the book discusses the various surface protection technologies: strain hardening, thermally assisted diffusion processes, hardening by thermal treatment, thin film coatings, and thick film overlays. The final chapters address metal, plastic and ceramic composites that resist wear, and provide a wear diagnosis methodology. Annotation copyrighted by Book News Inc., Portland, OR

SCIENCE ABSTRACTS

ELECTRICAL & ELECTRONICS ABSTRACTS. SERIES B

AN INTRODUCTION TO ASTROPHYSICS

PHI Learning Pvt. Ltd. This invaluable book, now in its second edition, covers a wide range of topics appropriate for both undergraduate and postgraduate courses in astrophysics. The book conveys a deep and coherent understanding of the stellar phenomena, and basic astrophysics of stars, galaxies, clusters of galaxies and other heavenly bodies of interest. Since the first appearance of the book in 1997, significant progress has been made in different branches of Astronomy and Astrophysics. The second edition takes into account the developments of the subject which have taken place in the last decade. It discusses the latest introduction of L and T dwarfs in the Hertzsprung-Russel diagram (or H-R diagram). Other developments discussed pertain to standard solar model, solar neutrino puzzle, cosmic microwave background radiation, Drake equation, dwarf galaxies, ultra compact dwarf galaxies, compact groups and cluster of galaxies. Problems at the end of each chapter motivate the students to go deeper into the topics. Suggested readings at the end of each chapter have been complemented.

TRANSACTIONS OF THE NORTH AMERICAN MANUFACTURING RESEARCH INSTITUTION OF SME.

HIGH-LEVEL ESTIMATION AND EXPLORATION OF RELIABILITY FOR MULTI-PROCESSOR SYSTEM-ON-CHIP

Springer This book introduces a novel framework for accurately modeling the errors in nanoscale CMOS technology and developing a smooth tool flow at high-level design abstractions to estimate and mitigate the effects of errors. The book presents novel techniques for high-level fault simulation and reliability estimation as well as architecture-level and system-level fault tolerant designs. It also presents a survey of state-of-the-art problems and solutions, offering insights into reliability issues in digital design and their cross-layer countermeasures.

HANDBOOK OF ADVANCED PERFORMABILITY ENGINEERING

Springer Nature This book considers all aspects of performability engineering, providing a holistic view of the activities associated with a product throughout its entire life cycle of the product, as well as the cost of minimizing the environmental impact at each stage, while maximizing the performance. Building on the editor's previous Handbook of Performability Engineering, it explains how performability engineering provides us with a framework to consider both dependability and sustainability in the optimal design of products, systems and services, and explores the role of performability in energy and waste minimization, raw material selection, increased production volume, and many other areas of engineering and production. The book discusses a range of new ideas, concepts, disciplines, and applications in performability, including smart manufacturing and Industry 4.0; cyber-physical systems and artificial intelligence; digital transformation of railways; and asset management. Given its broad scope, it will appeal to researchers, academics, industrial practitioners and postgraduate students involved in manufacturing, engineering, and system and product development.

THE GAZETTE OF INDIA

5G AND BEYOND

THE FUTURE OF IOT

CRC Press The Internet of Things (IoT) has seen the eventual shift to the "Internet of Everything" in the recent years, unveiling its ubiquitous presence spanning from smart transports to smart healthcare, from smart education to smart shopping. With the 5G rollouts across the different countries of the world, it raises newer perspectives toward the integration of 5G in IoT. For IoT-based smart devices, 5G not only means speed, but also better stability, efficiency, and more secure connectivity. The reach of 5G in IoT is extending in multifarious areas like self-driving vehicles, smart grids for renewable energy, AI-enabled robots on factory floors, intelligent healthcare services . . . The endless list is the real future of 5G in IoT. Features: Fundamental and applied perspectives to 5G integration in IoT Transdisciplinary vision with aspects of Artificial Intelligence, Industry 4.0, and hands-on practice tools Discussion of trending research issues in 5G and IoT As 5G technologies catalyze a paradigm shift in the domain of IoT, this book serves as a reference for the researchers in the field of IoT and 5G, proffering the landscape to the trending aspects as well as the key topics of discussion in the years to come.

TOOL STEELS, 5TH EDITION

ASM International

BIOMEDICAL INSTRUMENTATION SYSTEMS

Cengage Learning Learn to maintain and repair the high tech hospital equipment with this practical, straightforward, and thorough new book. Biomedical Instrumentation Systems uses practical medical scenarios to illustrate effective equipment maintenance and repair procedures. Additional coverage includes basic electronics principles, as well as medical device and safety standards. Designed to provide readers with the most current industry information, the latest medical websites are referenced, and today's most popular software simulation packages like MATLAB and MultiSIM are utilized.

Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

GEOMETRY OF SINGLE-POINT TURNING TOOLS AND DRILLS

FUNDAMENTALS AND PRACTICAL APPLICATIONS

Springer Science & Business Media Geometry of Single-Point Turning Tools and Drills outlines clear objectives of cutting tool geometry selection and optimization, using multiple examples to provide a thorough explanation. It addresses several urgent problems that many present-day tool manufacturers, tool application specialists, and tool users, are facing. It is both a practical guide, offering useful, practical suggestions for the solution of common problems, and a useful reference on the most important aspects of cutting tool design, application, and troubleshooting practices. Covering emerging trends in cutting tool design, cutting tool geometry, machining regimes, and optimization of machining operations, Geometry of Single-Point Turning Tools and Drills is an indispensable source of information for tool designers, manufacturing engineers, research workers, and students.

PROCEEDINGS OF THE 36TH INTERNATIONAL MATADOR CONFERENCE

Springer Science & Business Media Presented here are 130 refereed papers given at the 36th MATADOR Conference held at The University of Manchester in July 2010. The MATADOR series of conferences covers the topics of Manufacturing Automation and Systems Technology, Applications, Design, Organisation and Management, and Research. The proceedings of this Conference contain original papers contributed by researchers from many countries on different continents. The papers cover the principles, techniques and applications in aerospace, automotive, biomedical, energy, consumable goods and process industries. The papers in this volume reflect: • the importance of manufacturing to international wealth creation; • the emerging fields of micro- and nano-manufacture; • the increasing trend towards the fabrication of parts using lasers; • the growing demand for precision engineering and part inspection techniques; and • the changing trends in manufacturing within a global environment.

COMMONWEALTH UNIVERSITIES YEARBOOK

A directory to the universities of the Commonwealth and the handbook of their association.

MACHINE TOOLS FOR HIGH PERFORMANCE MACHINING

Springer Science & Business Media Machine tools are the main production factor for many industrial applications in many important sectors. Recent developments in new motion devices and numerical control have lead to considerable technological improvements in machine tools. The use of five-axis machining centers has also spread, resulting in reductions in set-up and lead times. As a consequence, feed rates, cutting speed and chip section increased, whilst accuracy and precision have improved as well. Additionally, new cutting tools have been developed, combining tough substrates, optimal geometries and wear resistant coatings. "Machine Tools for High Performance Machining" describes in depth several aspects of machine structures, machine elements and control, and application. The basics, models and functions of each aspect are explained by experts from both academia and industry. Postgraduates, researchers and end users will all find this book an essential reference.

MACHINE LEARNING WITH HEALTH CARE PERSPECTIVE

MACHINE LEARNING AND HEALTHCARE

Springer Nature This unique book introduces a variety of techniques designed to represent, enhance and empower multi-disciplinary and multi-institutional machine learning research in healthcare informatics. Providing a unique compendium of current and emerging machine learning paradigms for healthcare informatics, it reflects the diversity, complexity, and the depth and breadth of this multi-disciplinary area. Further, it describes techniques for applying machine learning within organizations and explains how to evaluate the efficacy, suitability, and efficiency of such applications. Featuring illustrative case studies, including how chronic disease is being redefined through patient-led data learning, the book offers a guided tour of machine learning algorithms, architecture design, and applications of learning in healthcare challenges.

RECOMMENDER SYSTEM WITH MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

PRACTICAL TOOLS AND APPLICATIONS IN MEDICAL, AGRICULTURAL AND OTHER INDUSTRIES

John Wiley & Sons This book is a multi-disciplinary effort that involves world-wide experts from diverse fields, such as artificial intelligence, human computer interaction, information technology, data mining, statistics, adaptive user interfaces, decision support systems, marketing, and consumer behavior. It comprehensively covers the topic of recommender systems, which provide personalized recommendations of items or services to the new users based on their past behavior. Recommender system methods have been adapted to diverse applications including social networking, movie recommendation, query log mining, news recommendations, and computational advertising. This book synthesizes both fundamental and advanced topics of a research area that has now reached maturity. Recommendations in agricultural or healthcare domains and contexts, the context of a recommendation can be viewed as important side information that affects the recommendation goals. Different types of context such as temporal data, spatial data, social data, tagging data, and trustworthiness are explored. This book illustrates how this technology can support the user in decision-making, planning and purchasing processes in agricultural & healthcare sectors.

REMOTE SENSING APPLICATIONS IN MONITORING OF PROTECTED AREAS

MDPI Remote sensing has been successfully applied in monitoring of protected areas around the world. With intensified impacts of climate and environmental change, protected areas become increasingly important to serve as indicators of and buffers against the impacts of the disturbances. Remote sensing plays an irreplaceable role in this frontline of challenges. The subjects and contents of the articles collected in this book reflect the state-of-the-art applications of remote sensing for capturing dynamics of environmental and ecological variations of the protected areas. The examples include revealing the level, growth rate, trend, and distribution pattern of the night-time light of global protected areas; quantifying the energy budget, water cycle, and carbon sink over the Three-River Headwaters Region in the hinterland of the Tibetan Plateau; monitoring wetland change in a cross-boundary zone between Northeast China and the Russian Far East; and monitoring applications and change analyses in protected areas of boreal forests, dryland shrubs, coastal salt marshes, large lakes, and temperate semi-humid to semi-arid transitional agricultural regions, using a variety of sensor data with innovative approaches. Also included in this collection is a bibliometric analysis that suggests the intellectual structure in remote sensing of protected areas from the perspective of journal publications.

DESIGNING DATA-INTENSIVE APPLICATIONS

THE BIG IDEAS BEHIND RELIABLE, SCALABLE, AND MAINTAINABLE SYSTEMS

"O'Reilly Media, Inc." Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed

systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

IRON MAKING AND STEELMAKING

THEORY AND PRACTICE

PHI Learning Pvt. Ltd. This authoritative account covers the entire spectrum from iron ore to finished steel. It begins by tracing the history of iron and steel production, right from the earlier days to today's world of oxygen steelmaking, electric steelmaking, secondary steelmaking and continuous casting. The physicochemical fundamental concepts of chemical equilibrium, activity-composition relationships, and structure-properties of molten metals are introduced before going into details of transport phenomena, i.e. kinetics, mixing and mass transfer in ironmaking and steelmaking processes. Particular emphasis is laid on the understanding of the fundamental principles of the processes and their application to the optimisation of actual processes. Modern developments in blast furnaces, including modelling and process control are discussed along with an introduction to the alternative methods of ironmaking. In the area of steelmaking, BOF plant practice including pre-treatment of hot metal, metallurgical features of oxygen steelmaking processes, and their control form part of the book. It also covers basic open hearth, electric arc furnace and stainless steelmaking, before discussing the area of casting of liquid steel—ingot casting, continuous casting and near net shape casting. The book concludes with a chapter on the status of the ironmaking and steelmaking in India. In line with the application of theoretical principles, several worked-out examples dealing with fundamental principles as applied to actual plant situations are presented. The book is primarily intended for undergraduate and postgraduate students of metallurgical engineering. It would also be immensely useful to researchers in the area of iron and steel.

UNIVERSITIES HANDBOOK

INDIA

INDEX TO IEEE PUBLICATIONS

Issues for 1973- cover the entire IEEE technical literature.

MACHINING AND MACHINE TOOLS (WITH CD)

John Wiley & Sons Market_Desc: Primary MarketMechanical Engineering students. UG students of the allied disciplines like Manufacturing Engineering, Production Engineering, Industrial Engineering, Aero. Engg, Automobile Engg, Manuf. Sc. & Engg. Students in PG and Dual Degree.Secondary MarketStudents and young professionals trying for AMIE certificate from the Institution of Engineers where also machining and machine tools is a compulsory subject for the Mechanical Engineering stream. The candidates preparing for the competitive examinations like IES, IRSE, IFS, etc. will also be benefited by this book. Special Features: · Comprehensive coverage from basic to advanced topics· Lucid and simple-to-understand style of explanation· Key concepts are driven home with apt examples and solved problems· Visual recall is enhanced by the clear artwork accompanying all the concepts· Solved and unsolved problems are included to inculcate problem-solving abilities in the reader· This book has been pedagogically enriched with: ü 600 line diagrams and photographs of all types of machine tools and instruments used in manufacturing processesü 100+ solved problems and examplesü 120+ unsolved problemsü 430+ objective type questions, with special focus on competitive examsü Nearly 600 review questions (long and short answer) covering all topics for university examsCD Companion:· Answers to multiple-choice questions· Chapters wise References· Bibliography · Two Model Question Papers About The Book: Machining and machine tools is a text targeted towards the students and teachers for the undergraduate Manufacturing Processes course in the Mechanical Engineering discipline. Post graduate students in the production and manufacturing streams will also find this book a good reference.This book brings a holistic approach to the understanding of machine tools and manufacturing processes, giving equal emphasis to historical background and chronological development, and to modern developments in manufacturing and contemporary machining processes. With the help of lucid explanations coupled with striking examples and accompanying visual aids, the book begins from the very basics and gradually builds reader understanding up to the advanced topics in this field.This is also a handy text for practising professionals as it contains all the relevant tables, data and figures, and can act as a quick reference.

FOSSIL ENERGY UPDATE

SYSTEMS BIOMEDICINE APPROACHES IN CANCER RESEARCH

Springer Nature This book presents the applications of systems biology and synthetic biology in cancer medicine. It highlights the use of computational and mathematical models to decipher the complexity of cancer heterogeneity. The book emphasizes the modeling approaches for predicting behavior of cancer cells, tissues in context of drug response, and angiogenesis. It introduces cell-based therapies for the treatment of various cancers and reviews the role of neural networks for drug response prediction. Further, it examines the system biology approaches for the identification of medicinal plants in cancer drug discovery. It explores the opportunities for metabolic engineering in the realm of cancer research towards development of new cancer therapies based on metabolically derived targets. Lastly, it discusses the applications of data mining techniques in cancer research. This book is an excellent guide for oncologists and researchers who are involved in the latest cancer research.

INDIAN SCIENCE ABSTRACTS

VACCINE DESIGN

METHODS AND PROTOCOLS, VOLUME 1. VACCINES FOR HUMAN DISEASES

Springer Nature This volume provides a practical guide providing step-by-step protocol to design and develop vaccines for human diseases. Divided into three volumes, Volume 1: Vaccines for Human Diseases guides readers through an introductory section on future challenges for vaccinologists and the immunological mechanism of vaccines. Chapters focus on design of human vaccines for viral, bacterial, fungal, and parasitic diseases as well as tumor vaccines. Written in the format of the highly successful Methods in Molecular Biology series, each chapter includes an introduction to the topic, lists necessary materials and reagents, includes tips on troubleshooting and known pitfalls, and step-by-step, readily reproducible protocols. Authoritative and practical, Vaccine Design: Methods and Protocols, Second Edition, Volume 1: Vaccines for Human Diseases aims to be a useful practical guide to researchers to help further their study in this field.

PROCEEDINGS OF INTERNATIONAL CONFERENCE ON INDUSTRIAL INSTRUMENTATION AND CONTROL

ICI2C 2021

Springer Nature This book is a collection of selected high-quality research papers presented at the International Conference on Industrial Instrumentation and Control (ICI2C 2021), organized by the Department of Applied Electronics & Instrumentation Engineering, RCC Institute of Information Technology, Kolkata, India, during 20–August 22, 2021. It includes novel and innovative work from experts, practitioners, scientists and decision-makers from academia and industry. It covers topics such as instrumentation application in industry, instrumentation in electrical applications and instrumentation in recent trends with computation approach.

SOLAR ENERGY UPDATE

MACHINE LEARNING WITH RADIATION ONCOLOGY BIG DATA

Frontiers Media SA

HERBAL COSMETICS & AYURVEDIC MEDICINES (EOU) (3RD REVISED EDITION)

NIIR PROJECT CONSULTANCY SERVICES Herbal cosmetics have been into usage from time immemorial so has been the use of Ayurvedic medicines. Ayurveda which means the complete knowledge for long life has been very popular these days on account of its minimum or zero side effects with considerable power of curing. Similarly herbal cosmetics have been of great value because of the least harm they cause to the skin and the radiance they add to the skin. These days a number of beauty products that are using the herbal formulae and Ayurveda concepts have got lot of attention and have been witnessing a huge rise in demand not only nationally but on international arena. The charm of understanding herbal product is even you can use it by making certain combination at your home and get the benefits. These are economical and sure to provide alleviate the problems not only for skin but for long term health issues also. Herbal products combine the skills of specialists in chemistry, physics, biology, medicine and herbs. These are less likely to cause any damaging effect to health. Bath and beauty products use herbs for both their scents and therapeutic qualities. Herbal products are replacing the synthetics products because of its harsh nature. Herbal products are in huge demand in the developed world for health care for the reason that they are efficient, safe and have lesser side effects. The formulations based on herbs are safe and effective. To exploit the knowledge that has got the genesis in our country the book aims to provide you a comprehensive information on different types of herbal Cosmetics formulas. The contents of the book are: Analysis of Creams, Infra-Red Spectrophotometer In Cosmetic Analysis, Infra Red Spectrophotometer In Cosmetic Analysis, Analysis of Creams, Analysis of Shampoos, Lal Tooth Powder, Bath and Massage Oil, Sun Care/Skin Lightening Compound, Herbal Liver Tonic, Vicks Like Compound, hair oil, Eye Drops, Packaging Criteria for Cosmetics and Toiletries, Vicks Like Compound, Cosmetics for Elderly People, Cough Syrup, Colour in Cosmetics, Herbal Liver Tonic, Herbal Formulation, Medicinal Herbs as Cosmetics, Medicinal & Massage Oils, Herbal Cosmetic Cream for Dry Skin, Herbal Deodorant Roll On, Drug Standardization, Guide Lines on GMP, Premises and Equipment Requirements, Aloe Gel, Tablets and Capsule, Sandalwood Oil and Machinery Section. The Third Revised Edition of Herbal cosmetics and Ayurvedic medicines (EOU) also includes photographs of machinery and equipments with addresses of their manufacturers. The book in general will be beneficial for entrepreneurs, industrialists, project consultants, libraries and in general all those looking for detail information.

MASTERS THESES IN THE PURE AND APPLIED SCIENCES

ACCEPTED BY COLLEGES AND UNIVERSITIES OF THE UNITED STATES AND CANADA VOLUME 36

Springer Science & Business Media Masters Theses in the Pure and Applied Sciences was first conceived, published, and disseminated by the Center for Information and Numerical Data Analysis and Synthesis (CINDAS) * at Purdue University in 1957, starting its coverage of theses with the academic year 1955. Beginning with Volume 13, the printing and dissemination phases of the activity were transferred to University Microfilms/Xerox of Ann Arbor, Michigan, with the thought that such an arrangement would be more beneficial to the academic and general scientific and technical community. After five years of this joint undertaking we had concluded that it was in the interest of all concerned if the printing and distribution of the volumes were handled by an international publishing house to assure improved service and broader dissemination. Hence, starting with Volume 18, Masters Theses in the Pure and Applied Sciences has been disseminated on a worldwide basis by Plenum Publishing Corporation of New York, and in the same year the coverage was broadened to include Canadian universities. All back issues can also be ordered from Plenum. We have reported in Volume 36 (thesis year 1991) a total of 11,024 thesis titles from 23 Canadian and 161 United States universities. We are sure that this broader base for these titles reported will greatly enhance the value of this important annual reference work. While Volume 36 reports theses submitted in 1991, on occasion, certain universities do report theses submitted in previous years but not reported at the time.

DATA SCIENCE

THEORY, ALGORITHMS, AND APPLICATIONS

Springer Nature This book targets an audience with a basic understanding of deep learning, its architectures, and its application in the multimedia domain. Background in machine learning is helpful in exploring various aspects of deep learning. Deep learning models have a major impact on multimedia research and raised the performance bar substantially in many of the standard evaluations. Moreover, new multi-modal challenges are tackled, which older systems would not have been able to handle. However, it is very difficult to comprehend, let alone guide, the process of learning in deep neural networks, there is an air of uncertainty about exactly what and how these networks learn. By the end of the book, the readers will have an understanding of different deep learning approaches, models, pre-trained models, and familiarity with the implementation of various deep learning algorithms using various frameworks and libraries.

COMMUNITIES IN ACTION

PATHWAYS TO HEALTH EQUITY

National Academies Press In the United States, some populations suffer from far greater disparities in health than others. Those disparities are caused not only by fundamental differences in health status across segments of the population, but also because of inequities in factors that impact health status, so-called determinants of health. Only part of an individual's health status depends on his or her behavior and choice; community-wide problems like poverty, unemployment, poor education, inadequate housing, poor public transportation, interpersonal violence, and decaying neighborhoods also contribute to health inequities, as well as the historic and ongoing interplay of structures, policies, and norms that shape lives. When these factors are not optimal in a community, it does not mean they are intractable: such inequities can be mitigated by social policies that can shape health in powerful ways. Communities in Action: Pathways to Health Equity seeks to delineate the causes of and the solutions to health inequities in the United States. This report focuses on what communities can do to promote health equity, what actions are needed by the many and varied stakeholders that are part of communities or support them, as well as the root causes and structural barriers that need to be overcome.

MIGRATION, SQUATTING AND RADICAL AUTONOMY

Routledge This book offers a unique contribution, exploring how the intersections among migrants and radical squatter's movements have evolved over past decades. The complexity and importance of squatting practices are analyzed from a bottom-up perspective, to demonstrate how the spaces of squatting can be transformed by migrants. With contributions from scholars, scholar-activists, and activists, this book provides unique insights into how squatting has offered an alternative to dominant anti-immigrant policies, and the implications of squatting on the social acceptance of migrants. It illustrates the different mechanisms of protest followed in solidarity by migrant squatters and Social Center activists, when discrimination comes from above or below, and explores how can different spatialities be conceived and realized by radical practices. Contributions adopt a variety of perspectives, from critical human geography, social movement studies, political sociology, urban anthropology, autonomous Marxism, feminism, open localism, anarchism and post-structuralism, to analyze and contextualize migrants and squatters' exclusion and social justice issues. This book is a timely and original contribution through its exploration of migrations, squatting and radical autonomy.

FOOD SAFETY ENGINEERING

Springer Nature Food Safety Engineering is the first reference work to provide up-to-date coverage of the advanced technologies and strategies for the engineering of safe foods. Researchers, laboratory staff and food industry professionals with an interest in food engineering safety will find a singular source containing all of the needed information required to understand this rapidly advancing topic. The text lays a solid foundation for solving microbial food safety problems, developing advanced thermal and non-thermal technologies, designing food safety preventive control processes and sustainable operation of the food safety preventive control processes. The first section of chapters presents a comprehensive overview of food microbiology from foodborne pathogens to detection methods. The next section focuses on preventative practices, detailing all of the major manufacturing processes assuring the safety of foods including Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Points (HACCP), Hazard Analysis and Risk-Based Preventive Controls (HARPC), food traceability, and recalls. Further sections provide insights into plant layout and equipment design, and maintenance. Modeling and process design are covered in depth. Conventional and novel preventive controls for food safety include the current and emerging food processing technologies. Further sections focus on such important aspects as aseptic packaging and post-packaging technologies. With its comprehensive scope of up-to-date technologies and manufacturing processes, this is a useful and first-of-its kind text for the next generation food safety engineering professionals.

NEURAL APPROACHES TO DYNAMICS OF SIGNAL EXCHANGES

Springer Nature The book presents research that contributes to the development of intelligent dialog systems to simplify diverse aspects of everyday life, such as medical diagnosis and entertainment. Covering major thematic areas: machine learning and artificial neural networks; algorithms and models; and social and biometric data for applications in human-computer interfaces, it discusses processing of audio-visual signals for the detection of user-perceived states, the latest scientific discoveries in processing verbal (lexicon, syntax, and pragmatics), auditory (voice, intonation, vocal

expressions) and visual signals (gestures, body language, facial expressions), as well as algorithms for detecting communication disorders, remote health-status monitoring, sentiment and affect analysis, social behaviors and engagement. Further, it examines neural and machine learning algorithms for the implementation of advanced telecommunication systems, communication with people with special needs, emotion modulation by computer contents, advanced sensors for tracking changes in real-life and automatic systems, as well as the development of advanced human-computer interfaces. The book does not focus on solving a particular problem, but instead describes the results of research that has positive effects in different fields and applications.

JOURNAL OF THE INSTITUTION OF ENGINEERS (INDIA).

PRODUCTION ENGINEERING DIVISION. PART PE

APPLIED SCIENCE & TECHNOLOGY INDEX

OXIDATIVE STRESS IN MICROBIAL DISEASES

Springer Nature This book discusses recent advances in our understanding of the role of oxidants in microbial pathophysiology, providing valuable insights into the complex role of reactive oxygen species (ROS) in host-microbial interactions. The various chapters take readers through the function of ROS in infections ranging from viral to bacterial, and describe how microorganisms have developed complex strategies to not only avoid contact with phagocyte-derived oxidants, but also protect themselves from injury when oxidants are encountered. Featuring the latest research in the field of microbial diseases, this timely book is a ready reference for scientists looking to develop new anti-microbial drugs.