

Mft Expression Tep By Step

In this ready reference, a global team of experts comprehensively cover molecular and cell biology-based approaches to the impact of increasing global temperatures on crop productivity. The work is divided into four parts. Following an introduction to the general challenges for agriculture around the globe due to climate change, part two discusses how the resulting increase of abiotic stress factors can be dealt with. The third part then outlines the different strategies and approaches to address the challenge of climate change, and the whole is rounded off by a number of specific examples of improvements to crop productivity. With its forward-looking focus on solutions, this book is an indispensable help for the agro-industry, policy makers and academia.

MicroRNAs in Medicine provides an access point into the current literature on microRNA for both scientists and clinicians, with an up-to-date look at what is happening in the emerging field of microRNAs and their relevance to medicine. Each chapter is a comprehensive review, with descriptions of the latest microRNA research written by international leaders in their field. Opening with an introduction to what microRNAs are and how they function, the book goes on to explore the role of microRNAs in normal physiological functions, infectious diseases, non-infectious diseases, cancer, circulating microRNAs as non-invasive biomarkers, and finally their potential as novel therapeutics. Including background information on the field as well as reviews of the latest research breakthroughs, MicroRNAs in Medicine is a one-stop source of information to satisfy the specialists and non-specialists alike, appealing to students, researchers, and clinicians interested in understanding the potential of microRNAs in medicine and research.

With the upsurge in terrorism in recent years and the possibility of accidental blast threats, there is growing interest in manufacturing blast 'hardened' structures and retrofitting blast mitigation materials to existing structures. Composites provide the ideal material for blast protection as they can be engineered to give different levels of protection by varying the reinforcements and matrices. Part one discusses general technical issues with chapters on topics such as blast threats and types of blast damage, processing polymer matrix composites for blast protection, standards and specifications for composite blast protection materials, high energy absorbing composite materials for blast resistant design, modelling the blast response of hybrid laminated composite plates and the response of composite panels to blast wave pressure loadings. Part two reviews applications including ceramic matrix composites for ballistic protection of vehicles and personnel, using composites to protect military vehicles from mine blasts, blast protection of buildings using FRP matrix composites, using composites in blast resistant walls for offshore, naval and defence related structures, using composites to improve the blast resistance of columns in buildings, retrofitting using fibre reinforced polymer composites for blast protection of buildings and retrofitting to improve the blast response of concrete masonry walls. With its distinguished editor and team of expert contributors, Blast protection of civil infrastructures and vehicles using composites is a standard reference for all those concerned with protecting structures from the effects of blasts in both the civil and military sectors. Reviews the role of composites in blast protection with an examination of technical issues, applications of composites and ceramic matrix composites Presents numerical examples of simplified blast load computation and an overview of the basics of high explosives includes important properties and physical forms Varying applications of composites for protection are explored including military and non-military vehicles and increased resistance in building columns and masonry walls

The leaf is an organ optimized for capturing sunlight and safely using that energy through the process of photosynthesis to drive the productivity of the plant and, through the position of plants as primary producers, that of Earth's biosphere. It is an exquisite organ composed of multiple tissues, each with unique functions, working synergistically to: (1) deliver water, nutrients, signals, and sometimes energy-rich carbon compounds throughout the leaf (xylem); (2) deliver energy-rich carbon molecules and signals within the leaf during its development and then from the leaf to the plant once the leaf has matured (phloem); (3) regulate exchange of gasses between the leaf and the atmosphere (epidermis and stomata); (4) modulate the radiation that penetrates into the leaf tissues (trichomes, the cuticle, and its underlying epidermis); (5) harvest the energy of visible sunlight to transform water and carbon dioxide into energy-rich sugars or sugar alcohols for export to the rest of the plant (palisade and spongy mesophyll); and (6) store sugars and/or starch during the day to feed the plant during the night and/or acids during the night to support light-driven photosynthesis during the day (palisade and spongy mesophyll). Various regulatory controls that have been shaped through the evolutionary history of each plant species result in an incredible diversity of leaf form across the plant kingdom. Genetic programming is also flexible in allowing acclimatory phenotypic adjustments that optimize leaf functioning in response to a particular set of environmental conditions and biotic influences experienced by the plant. Moreover, leaves and the primary processes carried out by the leaf respond to changes in their environment, and the status of the plant, through multiple regulatory networks over time scales ranging from seconds to seasons. This book brings together the findings from laboratories at the forefront of research into various aspects of leaf function, with particular emphasis on the relationship to photosynthesis.

Issues in Life Sciences: Botany and Plant Biology Research: 2011 Edition

Structural Phase Transitions I

Digital Play Therapy

Theoretical Nuclear and Subnuclear Physics

Long-Distance Systemic Signaling and Communication in Plants

The Future of the Socially Responsible Tech Organization

- How do unconscious motivational needs (i.e., implicit motives) influence physiological, cognitive, affective, and behavioral responses to incentives? - How can implicit motives be measured? - How are they shaped by culture, how do they influence political and societal processes? - Why are they often mismatched with the explicit beliefs people have about their motivational needs and what are the consequences of such mismatches? - How can we use knowledge about implicit motives in clinical, business, and school contexts to help people achieve their goals? These are some of the topics this comprehensive book presents in 18 clearly written chapters, contributed by leading authorities in the field. It represents a state-of-the-art reference for all researchers and practitioners interested in human motivation. Bringing together exciting new research on a central topic in human motivation, this volume is an important addition to the libraries of personality, social, and cognitive psychologists, affective and social neuroscientists, clinical psychologists, as well as graduate students in these fields and practitioners.

Our view of plants is changing dramatically. Rather than being only slowly responding organisms, their signaling is often very fast and signals, both of endogenous and exogenous origin, spread throughout plant bodies rapidly. Higher plants coordinate and integrate their tissues and organs via sophisticated sensory systems, which sensitively screen both internal and external factors, feeding them information through both chemical and electrical systemic long-distance communication channels. This revolution in our understanding of higher plants started some twenty years ago with the discovery of systemin and rapid advances continue to be made. This volume captures the current 'state of the art' of this exciting topic in plant sciences.

Rozin and colleagues' CAD model (1999) proposed that violations of three different moral domains (community, autonomy, and divinity) each elicit a specific emotional response (contempt, anger, and disgust). Moral Foundations Theory (MFT; Haidt & Joseph, 2007) is a five-factor moral taxonomy derived from the three moral domains used in the CAD study. This thesis investigates whether the CAD model fully applies

to MFT, regarding both state and trait emotions. In keeping with the CAD model, previous research found that state anger relates to harm and fairness violations (autonomy), and that both state and trait disgust relate to purity violations (divinity; Horberg, Oveis, Keltner, & Cohen, 2009). However, no study has empirically tested whether the loyalty and authority foundations (community) relate to state or trait contempt. This gap in the literature was investigated across two studies. Study 1 used a correlational design that primarily focused on the development of a new comprehensive trait contempt instrument and construct; exploratory and confirmatory factor analyses indicated that the instrument's items formed factors that matched their predicted structure, and that each of these factors contributed strongly to a latent trait contempt construct. To test the convergent and discriminant validity of the new instrument, participants completed previously developed instruments that assess trait anger, trait disgust, and trait contempt (Crowley, 2013; Izard et al., 1993). However, a principle components analysis that included these instruments did not fully support the new instrument's discriminant validity, as trait anger and disgust did not form separate factors from trait contempt but rather loaded onto dimensions of trait contempt relating to other-criticalness. Finally, in order to test whether trait contempt predicts loyalty and authority values, participants completed the Moral Foundations Questionnaire (Graham et al., 2011). Contrary to expectations, trait contempt was not associated with authority, and was negatively associated with loyalty values. Study 2, a within-subjects experiment, used contempt's unique facial expression as a way to assess contempt's relation to MFT. Participants engaged in a facial expression-rating task: They read short scenarios featuring violations of the five moral foundations, and then rated photos of contempt, anger, and disgust facial expressions according to how strongly they felt each emotion. Study 2 appears to be the first study to use a facial expression photo paradigm (similar to Rozin et al., 1999) to test the relations between the CAD emotions and MFT. Contrary to predictions, although contempt was significantly associated with loyalty and authority violations, this association was not unique, as contempt was statistically similar to both anger and disgust across all moral violations except purity. Participants also completed the trait contempt instrument from Study 1; this was done to test whether overall contempt expression ratings could be used as an alternate measure of trait contempt. However, contempt expression ratings were not significantly associated with trait contempt, either across or within scenario types. Finally, Study 2 tested the relation between trait contempt and immorality judgments towards loyalty and authority foundation violations; trait contempt was not significantly associated with either. Although hypotheses pertaining to the CAD model and MFT were disconfirmed, this thesis makes several contributions. The development of a comprehensive trait contempt construct and instrument may provide opportunities for a wide range of future studies. Trait contempt may predict behaviors such as discrimination and attitudes such as prejudice, social dominance orientation, and political ideology. Studies 1 and 2 were also the first to comprehensively test both contempt and trait contempt's relation to moral foundation theory; their results may cast some doubt on the original CAD study's findings. Finally, this study's findings contribute a greater understanding of the link between personality, emotion, and moral values.

Offers timely and comprehensive coverage of dynamic system reliability theory This book focuses on hot issues of dynamic system reliability, systematically introducing the reliability modeling and analysis methods for systems with imperfect fault coverage, systems with function dependence, systems subject to deterministic or probabilistic common-cause failures, systems subject to deterministic or probabilistic competing failures, and dynamic standby sparing systems. It presents recent developments of such extensions involving reliability modelling theory, reliability evaluation methods, and features numerous case studies based on real-world examples. The presented dynamic reliability theory can enable a more accurate representation of actual complex system behavior, thus more effectively guiding the reliable design of real-world critical systems. Dynamic System Reliability: Modelling and Analysis of Dynamic and Dependent Behaviors begins by describing the evolution from the traditional static reliability theory to the dynamic system reliability theory, and provides a detailed investigation of dynamic and dependent behaviors in subsequent chapters. Although written for those with a background in basic probability theory and stochastic processes, the book includes a chapter reviewing the fundamentals that readers need to know in order to understand contents of other chapters which cover advanced topics in reliability theory and case studies. The first book systematically focusing on dynamic system reliability modelling and analysis theory Provides a comprehensive treatment on imperfect fault coverage (single-level/multi-level or modular), function dependence, common cause failures (deterministic and probabilistic), competing failures (deterministic and probabilistic), and dynamic standby sparing Includes abundant illustrative examples and case studies based on real-world systems Covers recent advances in combinatorial models and algorithms for dynamic system reliability analysis Offers a rich set of references, providing helpful resources for readers to pursue further research and study of the topics Dynamic System Reliability: Modelling and Analysis of Dynamic and Dependent Behaviors is an excellent book for undergraduate and graduate students, and engineers and researchers in reliability and related disciplines.

Liquid Crystals and Their Computer Simulations

Probabilistic Models and Maintenance Methods, Second Edition

New Applications

Male Sterility in Higher Plants

4th Asian Symposium, APLAS 2006, Sydney, Australia, November 8-10, 2006, Proceedings

Journal of the National Cancer Institute

This book discusses the process of "Lot Streaming" and how it can significantly improve the overall performance of a production process, and thereby, make the operation of a manufacturing system lean. It provides a complete introduction to the Flow Shop Lot Streaming Problem and provides a historical perspective. It further presents algorithms for a variety of lot streaming problems with numerical illustrations for ease of understanding and implementation.

In the twenty-first century, applications in medicine and engineering must acquire greater safety and flexibility if they are to yield better products at higher efficiency. Experts from academia, industry, and government research laboratories who have pioneered CME ideas and technologies describe its concept and research approach and discuss related hardware and software, science and technology, and medicine and engineering. This book will be invaluable to scientists, researchers, and graduates in the emerging field of CME.

Subcellular Fractions—Advances in Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Cell-Free System. The editors have built Subcellular Fractions—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Cell-Free System in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Subcellular Fractions—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at

<http://www.ScholarlyEditions.com/>.

Family-based treatment (FBT) for eating disorders is an outpatient therapy in which parents are utilized as the primary resource in treatment. The therapist supports the parents to do the work nurses would have done if the patient were hospitalized to an inpatient-

refeeding unit, and are eventually tasked with encouraging the patient to resume normal adolescent development. In recent years many new adaptations of the FBT intervention have been developed for addressing the needs of special populations. This informative new volume chronicles these novel applications of FBT in a series of chapters authored by the leading clinicians and investigators who are pioneering each adaptation.

Complex Medical Engineering

Contemporary Families: Therapeutic Support for New Challenges

Family Therapy for Adolescent Eating and Weight Disorders

Molecular Genetics, Genomics and Biotechnology of Crop Plants Breeding

From Origin to Treatment

Reliability Engineering

Intermediate Algebra offers a practical approach to the study of intermediate algebra concepts, consistent with the needs of today's student. The authors help students to develop a solid understanding of functions by revisiting key topics related to functions throughout the text. They put special emphasis on the worked examples in each section, treating them as the primary means of instruction, since students rely so heavily on examples to complete assignments. The applications (both within the examples and exercises) are also uniquely designed so that students have an experience that is more true to life--students must read information as it appears in headline news sources and extract only the relevant information needed to solve a stated problem. The unique pedagogy in the text focuses on promoting better study habits and critical thinking skills along with orienting students to think and reason mathematically. Through Intermediate Algebra, students will not only be better prepared for future math courses, they will be better prepared to solve problems and answer questions they encounter in their own lives. Available with InfoTrac Student Collections <http://gocengage.com/infotrac>. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

" Nature has something more in view than that its own proper males should fecundate each blossom. " Andrew Knight Philosophical Transactions, 1799 Sterility implicating the male sex solely presents a paradoxical situation in which universality and uniqueness are harmoniously blended. It maintains a built-in outbreeding system but is not an isolating mechanism, as male steriles, the "self-emasculated" plants, outcross with their male fertile sibs normally. Both genes (nuclear and cytoplasmic) and environment, individually as well as conjointly, induce male sterility, the former being genetic and the latter nongenetic. Genetic male sterility is controlled either exclusively by nuclear genes (ms) or by the complementary action of nuclear (lr) and cytoplasmic (c) genes. The former is termed genic and the latter gene-cytoplasmic male sterility. Whereas genic male sterility exhibits Mendelian inheritance, gene-cytoplasmic male sterility is non-Mendelian, with specific transmissibility of the maternal cytoplasm type. Genetic male sterility is documented in 617 species and species crosses comprising 320 species, 162 genera and 43 families. Of these, genic male sterility occurs in 216 species and 17 species crosses and gene-cytoplasmic male sterility in 16 species and 271 species crosses. The Predominance of species exhibiting genic male sterility and of species crosses exhibiting gene-cytoplasmic male sterility is due to the fact that for the male sterility expression in the former, mutation of nuclear genes is required, but in the latter, mutations of both nuclear and cytoplasmic genes are necessary.

"This book is a revised and updated version of the most comprehensive text on nuclear physics, first published in 1995. It maintains the original goal of providing a clear, logical, in-depth and unifying treatment of modern nuclear theory, ranging from the nonrelativistic many-body problem to the standard model of the strong, electromagnetic, and weak interactions. In addition, new chapters on the theoretical and experimental advances made in nuclear physics in the past decade have been incorporated." "This book is designed to provide graduate students with a basic understanding of modern nuclear and hadronic physics needed to explore the frontiers of the field. Researchers will benefit from the updates on developments and the bibliography."--Jacket.

Issues in Life Sciences: Botany and Plant Biology Research: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Life Sciences—Botany and Plant Biology Research. The editors have built Issues in Life Sciences: Botany and Plant Biology Research: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Life Sciences—Botany and Plant Biology Research in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Life Sciences: Botany and Plant Biology Research: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

Adsorption and Surface Curvature Effects

The Leaf: A Platform for Performing Photosynthesis

Indian Plate and Its Epic Voyage from Gondwana to Asia

Evolutionary Perspectives

Flow Shop Lot Streaming

Seed Dormancy, Germination and Pre-Harvest Sprouting

\The fossil history of animal life in India is central to our understanding of the tectonic evolution of Gondwana, dispersal of India northward journey, and its collision with Asia. This book provides the only detailed overview of the paleobiogeographic, tectonic, paleoclimatic evolution of the Indian plate from Gondwana to Asia. This thorough, up-to-date volume is a must-have reference for researchers and students in Indian geology, paleontology, plate tectonics, and collision of continents.

Recent advances in science and technology have made modern computing and engineering systems more powerful and sophisticated.

The increasing complexity and scale imply that system reliability problems not only continue to be a challenge but also require models and solutions. This is the first book systematically covering the state-of-the-art binary decision diagrams and their extensions which can provide efficient and exact solutions to reliability analysis of large and complex systems. The book provides both basic and detailed algorithms for modelling and evaluating reliability of a wide range of complex systems, such as multi-state systems, power systems, fault-tolerant systems with imperfect fault coverage, systems with common-cause failures, systems with disjoint failures with functional dependent failures. These types of systems abound in safety-critical or mission-critical applications such as aerospace systems, power systems, medical systems, telecommunication systems, transmission systems, traffic light systems, data storage systems. The book provides both small-scale illustrative examples and large-scale benchmark examples to demonstrate broad applications and uses of different decision diagrams based methods for complex system reliability analysis. Other measures including component importance and failure frequency are also covered. A rich set of references is cited in the book, providing helpful resources for readers to pursue further research and study of the topics. The target audience of the book is reliability and safety engineers or researchers. The book can be used as a textbook on system reliability analysis. It can also serve as a tutorial and reference book on decision diagrams, multi-state systems, mission systems, and imperfect fault coverage models.

Crust and Lithosphere Dynamics brings together the results of studies that are fundamental to our understanding of crust and lithosphere dynamics. It begins with a discussion of plate kinematics and mechanics. Then it considers the evidence from surface heat flow measurements, and magmatism for the thermal and mechanical structure of the lithosphere. Finally, consideration is given to tectonic styles of faulting, the deformation of the crust and lithosphere in extensional (e.g. rifting) and compressional (e.g. mountain building) and the implications of plate mechanics for sedimentary basin evolution. Self-contained volume starts with an overview of the field and explores each topic with in depth detail Extensive reference lists and cross references with other volumes to facilitate further reading. Color figures and tables support the text and aid in understanding Content suited for both the expert and non-expert Treatise on Geophysics, Second Edition, is a comprehensive and in-depth study of the physics of the Earth beyond what any other book has provided previously. Thoroughly revised and updated, it provides fundamental and state-of-the-art discussion of all aspects of geophysics. A highlight of the second edition is a new volume on Near Surface Geophysics that discusses the role of geophysics in the exploration and conservation of natural resources and the assessment of degradation of natural systems by pollution. Additional features include chapters on the Planets and Moon, Mantle Dynamics, Core Dynamics, Crustal and Lithosphere Dynamics, Evolution of the Earth, and Geodynamics. New material is also presented on the uses of Earth gravity measurements. This title is essential for professionals, researchers, and advanced undergraduate and graduate students in the fields of Geophysics and Earth system science. Comprehensive and detailed treatment of all aspects of geophysics Fundamental and state-of-the-art discussions of all research topics Integration of topics into a coherent whole

Vernalization and Flowering Time: Celebrating 20 Years of FLC

Its Tectonic, Paleoclimatic, and Paleobiogeographic Evolution

A Progress Report and Preliminary Tabular Findings of the St. Paul School Report, Number 25

Crust and Lithosphere Dynamics

Blast Protection of Civil Infrastructures and Vehicles Using Composites

Structural Geometry of Mobile Belts of the Indian Subcontinent

Study Guide for the MFT Exam DSM-5 Lulu.com *Blast Protection of Civil Infrastructures and Vehicles Using Composites* Elsevier *Digital Play Therapy focuses on the responsible integration of technology into play therapy. With a respect for the many different modalities and approaches under the play therapy umbrella, this book incorporates therapist fundamentals, play therapy tenets, and practical information for the responsible integration of digital tools into play therapy treatment. Written in a relatable manner, this book provides both the foundation and practical information for confident use of digital tools and brings play therapy, and therapy in general, forward into the 21st century. Digital Play Therapy provides a solid grounding both for clinicians who are brand new to the incorporation of digital tools as well as to those who have already begun to witness the powerful therapeutic dynamic of digital play therapy.*

Major advances in the diagnosis and treatment of oral clefts have been made in the past 50 years, and recent genetics and epidemiological studies have led to new theories about the causes of cleft lip and palate. Addressing issues that are relevant to clinicians, researchers and family members, this book is a comprehensive, well-illustrated, and up-to-date account of the many facets of this common disorder. The authors describe the embryological and molecular mechanisms of cleft causation, present and illustrate the genetic and epidemiological methods used to identify risk factors for oral clefts, and describe treatments by the various professionals of the cleft team. A section is also devoted to the integration of research findings into public health practice, including ethical and financial considerations. The book draws together such diverse disciplines as craniofacial development, gene mapping, epidemiology, medicine, ethics, health economics, and health policy and management, and it will be an invaluable reference work. This book summarizes the latest research on the structural geology of the mobile belts of the Indian subcontinent including the Himalayas, NE Himalayas, Bangladesh thrust belt, Andaman subduction zone, the Aravalli-Delhi, the Central India Tectonic Zone, the Singhbhum, the Eastern Ghats and the Southern granulite terrane. It offers essential information on deformational structures in the mobile belt, such as folding patterns, the character of the shear zone, shear strain analysis, and faults, as well as fault zone rocks. The findings presented here are based on field observations, mapping, sampling and analysis work (e.g. petrographic studies), as well as limited geochemical and geochronological analysis to support the findings. A discussion on the structural evolution of these mobile belts and their connections with other belts rounds out the coverage.

Fundamentals of Gas Lift Engineering

JNCI.

Advances in Plant Dormancy

Treatise on Geophysics

Phase Transitions and Critical Phenomena

Molecular Theory of the Liquid-vapor Interface

?Plant dormancy involves synchronization of environmental cues with developmental processes to ensure plant survival; however, negative impacts of plant dormancy include pre-harvest sprouting, non-uniform germination of crop and weed

seeds, and fruit loss due to inappropriate bud break. Thus, our continued quest to disseminate information is important in moving our understanding of plant dormancy forward and to develop new ideas for improving food, feed, and fiber production and efficient weed control, particularly under global climate change. Proceeding from the 5th International Plant Dormancy Symposium will provide an overview related to our current understanding of how environmental factors impact cellular, molecular, and physiological processes involved in bud and seed dormancy, and perspectives and/or reviews on achievements, which should stimulate new ideas and lines of investigation that increase our understanding of plant dormancy and highlight directions for future research. ?

This book provides insights on new geological, tectonic, and climatic developments in India through a time progression from the Archean to the Anthropocene that are captured via authoritative entries from experts in earth sciences. This volume aims to bring graduate students and researchers up to date on the geodynamic evolution of the Indian Plate; concepts that have so far resulted in a rather uneven treatment of the subject at different institutions. The book is divided into 4 sections and includes perspectives such as the formation and evolution of the Indian crust in comparison to its neighbors such as Antarctica, Africa and Australia; the evolution of Precambrian cratons and sedimentary basins of India; and a summary account of early life reported in the Indian stratigraphic record. Readers will also discover the key recent research into the neotectonics, tectonic geomorphology, and paleoseismology of the Himalayan Front. Researchers and students in geology, earth sciences, sedimentology, paleobiology and geography will find this book appealing.

Pre-harvest sprouting (PHS) and late-maturity alpha-amylase (LMA) are two of the biggest grain quality defects that grain growers encounter. About 50 percent of the global wheat crop is affected by pre-harvest sprouting to various degrees. Pre-harvest sprouting is a genetically-based quality defect and results in the presence of alpha-amylase in otherwise sound mature grain. It can range from perhaps undetectable to severe damage on grain and is measured by the falling numbers or alpha-amylase activity. This is an international issue, with sprouting damage lowering the value of crops to growers, seed and grain merchants, millers, maltsters, bakers, other processors, and ultimately the consumer. As such it has attracted attention from researchers in many biological and non-biological disciplines. The 13th International Symposium on Pre-Harvest Sprouting in Cereals was held 18-20 September, 2016 in Perth to discuss current findings of grain physiology, genetic pathways, trait expression and screening methods related to pre-harvest sprouting and LMA. This event followed the previous symposium in 2012 in Canada.

This Special Issue on molecular genetics, genomics, and biotechnology in crop plant breeding seeks to encourage the use of the tools currently available. It features nine research papers that address quality traits, grain yield, and mutations by exploring cytoplasmic male sterility, the delicate control of flowering in rice, the removal of anti-nutritional factors, the use and development of new technologies for non-model species marker technology, site-directed mutagenesis and GMO regulation, genomics selection and genome-wide association studies, how to cope with abiotic stress, and an exploration of fruit trees adapted to harsh environments for breeding purposes. A further four papers review the genetics of pre-harvest sprouting, readiness for climate-smart crop development, genomic selection in the breeding of cereal crops, and the large numbers of mutants in straw lignin biosynthesis and deposition.

Programming Languages and Systems

A Clinician's Guide to Comfort and Competence

Subcellular Fractions—Advances in Research and Application: 2013 Edition

Dynamic System Reliability

St. Paul Junior High School Study

Binary Decision Diagrams and Extensions for System Reliability Analysis

Standing as the first unified textbook on the subject, Liquid Crystals and Their Computer Simulations provides a comprehensive and up-to-date treatment of liquid crystals and of their Monte Carlo and molecular dynamics computer simulations. Liquid crystals have a complex physical nature, and, therefore, computer simulations are a key element of research in this field. This modern text develops a uniform formalism for addressing various spectroscopic techniques and other experimental methods for studying phase transitions of liquid crystals, and emphasises the links between their molecular organisation and observable static and dynamic properties. Aided by the inclusion of a set of Appendices containing detailed mathematical background and derivations, this book is accessible to a broad and multidisciplinary audience. Primarily intended for graduate students and academic researchers, it is also an invaluable reference for industrial researchers working on the development of liquid crystal display technology.

Without proper reliability and maintenance planning, even the most efficient and seemingly cost-effective designs can incur enormous expenses due to repeated or catastrophic failure and subsequent search for the cause. Today's engineering students face increasing pressure from employers, customers, and regulators to produce cost-efficient designs that are less prone to failure and that are safe and easy to use. The second edition of Reliability Engineering aims to provide an understanding of reliability principles and maintenance planning to help accomplish these goals. This edition expands the treatment of several topics while maintaining an integrated introductory resource for the study of reliability evaluation and maintenance planning. The focus across all of the topics treated is the use of analytical methods to support the design of dependable and efficient equipment and the planning for the servicing of that equipment. The argument is made that probability models provide an effective vehicle for portraying and evaluating the variability that is inherent in the performance and longevity of equipment. With a blend of mathematical rigor and readability, this book is the ideal introductory textbook for graduate students and a useful resource for practising engineers.

Technology has made human lives incomparably better. Civilization as we know it would utterly collapse without it. However, if not properly managed, technology can and will be systematically

abused and misuse and thereby become one of the biggest threats to humankind. This open access book applies proactive crisis management to the management of technology organizations to make them more sustainable and socially responsible for the betterment of humankind. It forecasts the unintended consequences of technology and offers methods to counteract it.

This book constitutes the refereed proceedings of the 4th Asian Symposium on Programming Languages and Systems, APLAS 2006, held in Sydney, Australia in November 2006. The 22 revised full papers presented together with 2 invited talks and 1 tutorial examine foundational and practical issues in programming languages and systems.

Geodynamics of the Indian Plate

Modeling and Analysis of Dynamic and Dependent Behaviors

Well Design and Troubleshooting

Trait Contempt and the Five Moral Foundations

Techlash

Climate Change and Plant Abiotic Stress Tolerance

With contributions by numerous experts

Fundamentals of Gas Lift Engineering: Well Design and Troubleshooting discusses the important topic of oil and gas reservoirs as they continue to naturally deplete, decline, and mature, and how more oil and gas companies are trying to divert their investments in artificial lift methods to help prolong their assets. While not much physically has changed since the invention of the King Valve in the 1940s, new developments in analytical procedures, computational tools and software, and many related technologies have completely changed the way production engineers and well operators face the daily design and troubleshooting tasks and challenges of gas lift, which can now be carried out faster, and in a more accurate and productive way, assuming the person is properly trained. This book fulfills this training need with updates on the latest gas lift designs, troubleshooting techniques, and real-world field case studies that can be applied to all levels of situations, including offshore. Making operational and troubleshooting techniques central to the discussion, the book empowers the engineer, new and experienced, to analyze the challenge involved and make educated adjustments and conclusions in the most economical and practical way. Packed with information on computer utilization, inflow and outflow performance analysis, and worked calculation examples made for training, the book brings fresh air and innovation to a long-standing essential component in a well's lifecycle. Covers essential gas lift design, troubleshooting, and the latest developments in R&D Provides real-world field experience and techniques to solve both onshore and offshore challenges Offers past and present analytical and operational techniques available in an easy-to-read manner Features information on computer utilization, inflow and outflow performance analysis, and worked calculation training examples

Cleft Lip and Palate

Implicit Motives

Intermediate Algebra

MicroRNAs in Medicine

Study Guide for the MFT Exam DSM-5