

## A Focus On SIm And SIs Methods In 3d Printing Emerald Gems

PCNNs represent a new advance in imaging technology, allowing images to be refined to levels well beyond that of the original. This volume provides an introduction to the topic by reviewing the theoretical foundations as well as a number of image processing applications, including segmentation, edge extraction, texture extraction, object identification, object isolation, motion processing, noise suppression, and image fusion. This is the first book to cover PCNN technology, an area which will have many applications in medical, military and industrial imaging. Land Restoration: Reclaiming Landscapes for a Sustainable Future provides a holistic overview of land degradation and restoration in that it addresses the issue of land restoration from the scientific and practical development points of view. Furthermore, the breadth of chapter topics and contributors cover the topic and a wealth of connected issues, such as security, development, and environmental issues. The use of graphics and extensive references to case studies also make the work accessible and encourage it to be used for reference, but also in active field-work planning. Land Restoration: Reclaiming Landscapes for a Sustainable Future brings together practitioners from NGOs, academia, governments, and the United Nations Convention to Combat Desertification (UNCCD) to exchange lessons to enrich the academic understanding of these issues and the solution sets available. Provides accessible information about the science behind land degradation and restoration for those who do not directly engage with the science allowing full access to the issue at hand. Includes practical on-the-ground examples garnered from diverse areas, such as the Sahel, Southeast Asia, and the U.S.A. Provides practical tools for designing and implementing restoration/re-greening processes.

Endocrinology of Cardiovascular Function is a fitting inauguration to the Endocrine Update Series. The aim of these publications is to provide the clinician with cutting edge, yet succinct, access to the latest advances in endocrinology. Historically, our understanding of hormonal disturbances was restricted to the classical secretory glands and their targets. As Endocrinology of Cardiovascular Function so aptly indicates, endocrinology is no longer constrained by our early physiologic understanding of glandular disorder. Endocrinology of Cardiovascular Function has set the standard of excellence for the future volumes in this series. Shlomo Melmed, M.D. Series Editor, Endocrine Update Growth factors such as IGF-1 play important roles in cardiovascular cell hypertrophy and the response to acute vascular injury. From another perspective, traditional endocrine hormones, such as estrogen, have been found to participate in preventing the development of atherosclerosis in women, acting through novel mechanisms on target vascular cells. Other 'endocrine' hormones, such as PTHRP and adrenomedullin, also modulate cardiovascular and renovascular dynamic states, suggesting new roles for these peptides as vasodilators. This multi-authored text is dedicated to highlighting emerging and important new information regarding the endocrinology of the cardiovascular system. Ellis R. Levin, M.D.

This book is an exciting collection of research articles that offer a unique view into the fast developing field of metal additive manufacturing, providing insights into this advanced manufacturing technology. The articles span recent advances in metal AM technologies, and their application to a wide range of metals, exploring how the processing parameters offer unique material properties. This book encapsulates the state of the art in this rapidly evolving field of technology and will be a valuable resource for researchers in the field, from Ph.D. students to professors, and through to industrial end users.

Gives ITIL Foundation candidates a comprehensive overview of the key elements, concepts and terminology used in the ITIL service lifecycle.

This revised and expanded second edition of Routledge International Handbook of Migration Studies provides a comprehensive basis for understanding the complexity and patterns of international migration. Despite increased efforts to limit its size and consequences, migration has wide-ranging impacts upon social, environmental, economic, political, and cultural life in countries of origin and settlement. Such transformations impact not only those who are migrating, but those who are left behind, as well as those who live in the areas where migrants settle. Featuring forty-six essays written by leading international and multidisciplinary scholars, this new edition showcases evolving research and theorizing around refugees and forced migrants, new migration paths through Central Asia and the Middle East, the condition of statelessness, and South to South migration. New chapters also address immigrant labor and entrepreneurship, skilled migration, ethnic succession, contract labor and informal economies. Uniquely among texts in the subject area, the Handbook provides a six-chapter compendium of methodologies for studying international migration and its impacts. Written in a clear and direct style, this Handbook offers a contemporary integrated resource for students and scholars from the perspectives of social science, humanities, journalism and other disciplines.

This open access book presents and discusses current issues and innovative solution approaches for land management in a European context. Manifold sustainability issues are closely interconnected with land use practices. Throughout the world, we face increasing conflict over the use of land as well as competition for land. Drawing on experience in sustainable land management gained from seven years of the FONA programme (Research for Sustainable Development, conducted under the auspices of the German Federal Ministry of Education and Research), the book stresses and highlights co-design processes within the "co-creation of knowledge", involving collaboration in transdisciplinary research processes between academia and other stakeholders. The book begins with an overview of the current state of land use practices and the subsequent need to manage land resources more sustainably. New system solutions and governance approaches in sustainable land management are presented from a European perspective on land use. The volume also addresses how to use new modes of knowledge transfer between science and practice. New perspectives in sustainable land management and methods of combining knowledge and action are presented to a broad readership in land system sciences and environmental sciences, social sciences and geosciences.

This volume presents a careful selection of fifteen articles presented at the SPCL meetings in Atlanta, Boston and Hawai'i in 2003 and 2004. The contributions reflect – from various perspectives and using different types of data – on the interplay between structure and variation in contact languages, both synchronically and diachronically. The contributors consider a wide range of languages, including Surinamese creoles, Chinook Jargon, Yiddish, AAVE, Haitian Creole, Afro-Hispanic and Afro-Portuguese varieties, Nigerian Pidgin, Sri Lankan Malay, Papiamentu, and Bahamian Creole English. A need to question and test existing claims regarding pidginization/creolization is evident in all contributions, and the authors provide analyses for a variety of grammatical structures: VO-ordering and affixation, agglutination, negation, TMAs, plural marking, the copula, and serial verb constructions. The volume provides ample evidence for the observation that pidgin/creole studies is today a mature subfield of linguistics which is making important contributions to general linguistic theory.

This practical and comprehensive handbook offers step-by-step instruction, guiding entrepreneurs of innovative technology startups all the way from idea to profitability. With its easy-to-follow format aimed at both experienced as well as novice entrepreneurs, this book covers all technical, financial, legal, and governmental hurdles facing startups. It discusses common causes of business failure and points out the pitfalls to avoid in getting innovative technology successfully to market.

Land economics is grossly neglected in developing countries, including India. The disconnect between land use planning through master plans and land economics is glaring. Master planning has led to an acute scarcity of serviced land and floor space for economic growth and affordable housing. It has resulted in sprawl, housing–employment mismatch, environmental degradation, social exclusion, rent-seeking and deadweight welfare losses. Land Economics and Policy in Developing Countries delves into

theory and practice of land economics to draw lessons for land policy and management. It presents concepts and perspectives of land, functioning of land markets, determinants of location and land use, fallacies of comprehensive land use planning, sustainable land management design, land-based financing of infrastructure and land policy reforms in developing countries. This book evaluates land policy and national urban strategy frameworks, and suggests directions for broader reforms in urban planning, financing and governance.

This book presents firsthand insights into strategies and approaches for the commercial aerospace supply chain in response to the numerous changes that airlines, aircraft OEMs and their suppliers have experienced over the past few decades. In doing so, it investigates the entire product value chain. Accordingly, the chapters address the challenges of configuration and demand, and highlight the specificities of customization in the aviation industry. They analyze component manufacturing, share valuable insights into assembly and integration activities, and describe aftermarket business models. In order to ensure more varied and balanced coverage, the book includes contributions by researchers, suppliers, and experts and practitioners from consulting companies and the aircraft industry. Taken together, they provide a holistic perspective on the transformation drivers and the innovations that have either been implemented or will be adopted in the near future. The book introduces and describes new concepts and innovations such as 3D printing, E2E demand management, digital production, predictive maintenance and open innovation in general, supplementing them with sample industrial applications from the aviation sector.

The Handbook of Neurophotonics provides a dedicated overview of neurophotonics, covering the use of advanced optical technologies to record, stimulate, and control the activity of the brain, yielding new insight and advantages over conventional tools due to the adaptability and non-invasive nature of light. Including 32 colour figures, this book addresses functional studies of neurovascular signaling, metabolism, electrical excitation, and hemodynamics, as well as clinical applications for imaging and manipulating brain structure and function. The unifying theme throughout is not only to highlight the technology, but to show how these novel methods are becoming critical to breakthroughs that will lead to advances in our ability to manage and treat human diseases of the brain. Key Features: Provides the first dedicated book on state-of-the-art optical techniques for sensing and imaging across at the cellular, molecular, network, and whole brain levels. Highlights how the methods are used for measurement, control, and tracking of molecular events in live neuronal cells, both in basic research and clinical practice. Covers the entire spectrum of approaches, from optogenetics to functional methods, photostimulation, optical dissection, multiscale imaging, microscopy, and structural imaging. Includes chapters that show use of voltage-sensitive dye imaging, hemodynamic imaging, multiphoton imaging, temporal multiplexing, multiplane microscopy, optoacoustic imaging, near-infrared spectroscopy, and miniature neuroimaging devices to track cortical brain activity.

This book deals with the latest achievements in the field of optical coherent microscopy. While many other books exist on microscopy and imaging, this book provides a unique resource dedicated solely to this subject. Similarly, many books describe applications of holography, interferometry and speckle to metrology but do not focus on their use for microscopy. The coherent light microscopy reference provided here does not focus on the experimental mechanics of such techniques but instead is meant to provide a users manual to illustrate the strengths and capabilities of developing techniques. The areas of application of this technique are in biomedicine, medicine, life sciences, nanotechnology and materials sciences.

Introduction to Flat Panel Displays describes the fundamental physics and materials of major flat panel display technologies including LED, OLED, LCD, PDP and FED and reflective displays. A reference for graduate students and new entrants to the display industry, the book currently covers the basic science behind each display technology and gives solved problems and homework problems in each chapter to aid self-study. With advancements in this field, there is enough change in the FPD industry to justify a second edition. This book offers the latest information on modern display technology and features new developments in OLED materials including phosphorescent, TTA, and TADF OLEDs, white light OLED and light extraction. It provides key information on blue phase, automotive lighting, quantum-dot enhanced LCDs, device configurations and performance, and LEDs, specifically nitrate-based. Application features include OLED for mobile, TV, light and flexible OLED, and reflective display specifically e-paper technology and low power consumption displays.

The Handbook brings together a systematic review of the research topics, empirical findings, and methods that comprise modern labor economics. It serves as an introduction to what has been done in this field, while at the same time indicating possible future trends which will be important in both spheres of public and private decision-making. Part 1 is concerned with the classic topics of labor supply and demand, the size and nature of the elasticities between the two, and their impact on the wage structure. This analysis touches on two fundamental questions: what are the sources of income inequality, and what are the disincentive effects of attempts to produce a more equal income distribution? The papers in Part II proceed from the common observation that the dissimilarity in worker skills and employer demands often tempers the outcomes that would be expected in frictionless labor markets. And the last section of the Handbook deals explicitly with the role of institutional structures (e.g. trade unions) that now form an important part of modern labor economics.

Measurement models developed by Georg Rasch are renowned in the social sciences. In this introduction, the focus is on the simple logistic model, which is one of the most elementary and commonly used. The author explains the general principles behind the models, and demonstrates their procedures for measurement. Comparisons are made with other more widely-used models. Throughout the text, an example from a personality inventory is used to provide continuity as the statistical arguments are presented and procedures explained.

The 30-volume set, comprising the LNCS books 12346 until 12375, constitutes the refereed proceedings of the 16th European Conference on Computer Vision, ECCV 2020, which was planned to be held in Glasgow, UK, during August 23-28, 2020. The conference was held virtually due to the COVID-19 pandemic. The 1360 revised papers presented in these proceedings were carefully reviewed and selected from a total of 5025 submissions. The papers deal with topics such as computer vision; machine learning; deep neural networks; reinforcement learning; object recognition; image classification; image processing; object detection; semantic segmentation; human pose estimation; 3d reconstruction; stereo vision; computational photography; neural networks; image coding; image reconstruction; object recognition; motion estimation.

Policies promoting pro-poor agricultural growth are the key to helping countries achieve the Millennium Development Goals especially the goal of halving poverty and hunger by 2015. The public sector, private sector, and civil society

organizations are working to enhance productivity and competitiveness of the agricultural sector to reduce rural poverty and sustain the natural resource base. The pathways involve participation by rural communities, science and technology, knowledge generation and further learning, capacity enhancement, and institution building. Sustainable land management (SLM) an essential component of such policies will help to ensure the productivity of agriculture, forestry, fisheries, and hydrology. SLM will also support a range of ecosystem services on which agriculture depends. The 'Sustainable Land Management Sourcebook' provides a knowledge repository of tested practices and innovative resource management approaches that are currently being tested. The diverse menu of options represents the current state of the art of good land management practices. Section one identifies the need and scope for SLM and food production in relation to cross-sector issues such as freshwater and forest resources, regional climate and air quality, and interactions with biodiversity conservation and increasingly valuable ecosystem services. Section two categorizes the diversity of land management systems globally and the strategies for improving household livelihoods in each system type. Section three presents a range of investment notes that summarize good practice, as well as innovative activity profiles that highlight design of successful or innovative investments. Section four identifies easy-to-access, Web-based resources relevant for land and natural resource managers. The 'Sourcebook' is a living document that will be periodically updated and expanded as new material and findings become available on good land management practices. This book will be of interest to project managers and practitioners working to enhance land and natural resource management in developing countries.

The emergence of empirical approaches to L2 pronunciation research and teaching is a powerful fourth wave in the history of the field. Authored by two leading proponents of evidence-based instruction, this volume surveys both foundational and cutting-edge empirical work and pinpoints its ramifications for pedagogy. The authors begin by tracing the history of pronunciation instruction and explicating L2 phonetic learning processes. Subsequent chapters explore the themes, strengths, and ethical problems of the field through the lens of the intelligibility principle. The importance of error gravity, and the need for assessment and individualized instruction are highlighted, and the role of L2 accents in social contexts is probed. Material readily available elsewhere has been omitted in favour of an emphasis on the how, why, and when of pronunciation instruction. Anyone with an interest in L2 pronunciation—especially graduate students, language teachers, and experienced researchers—will find much value in this indispensable resource.

Radioactive particles have been released to the environment from a number of sources, including nuclear weapon tests, nuclear accidents and discharges from nuclear installations. Particle characteristics influence the mobility, biological uptake and effects of radionuclides, hence information on these characteristics is essential for assessing environmental impact and risks. This publication presents a series of papers covering sources and source term characterisation, methodologies for characterizing particles, and the impact of particles on the behaviour of radioactive particles in the environment. Sources covered include the Chernobyl accident, nuclear weapons accidents at Thule and Palomares accident, the discharges from Dounreay and Krashnoyarsk, and depleted uranium in Kosovo and Kuwait. The overall aim is that an increased understanding of particle characteristics and behavior will help to reduce some of the uncertainties in environmental impact and risk assessment for particle contaminated areas.

ITIL® is a framework for IT service management and provides best management practice to meet ISO/IEC 20k. The guide introduces ITIL to Foundation Examination candidates and offers a practical understanding of IT service management. This new edition is compatible with the 2011 update to ITIL®. It includes the following additional processes: business relationship management; design coordination; strategy management for IT services; transition planning and support. An ITIL® licensed product.

Being a grandmother is one of life's most important roles and many women can feel unprepared to take it on. New Age Nanas presents the rich and diverse views of over 1000 modern Australian grandmothers on what it is like to be a grandmother today, interwoven with expert commentary on how to make the most of this potentially .....

Sustainable management of the natural resource base is a fundamental issue to support global environmental benefits provided by ecosystem services, and to ensure agricultural production and ultimately food security and livelihoods.

Assessing land degradation is a major component of effective sustainable land management particularly in Small Island Developing States (SIDS). SIDS are generally characterized by high levels of chronic poverty, largely rural based populations and dependence on traditional agriculture. At the same time, SIDS possess unique characteristics, that further exacerbates the problems associated with land degradation, given the small size of the countries and their economies, limited infrastructure, distance from large international markets, high vulnerability to natural disasters, low level of human resource development, and increasing urbanization. Small size, combined with, diverse soil types, topography, climatic variation, lack or in some cases archaic and poor land use policies limits the area available for urban settlement, agriculture, mining, commercial forestry, tourism and other infrastructure, and creates intense competition between land use options. This manual adapts the assessment methodologies which were developed under the LADA project to the particular situation of SIDS. It is built on country experiences and is expected to enhance the capacity of the user to conduct more integrated and participatory assessments of land degradation, and to monitor impacts of interventions or changes in land management more effectively. The manual reflects a substantial shift in attention from the conventional focus on assessing degradation, to a balanced assessment that looks at both the negative and positive effects and trends of land use/ management on the natural resources and ecosystem services.

A Focus on SLM and SLS Methods in 3D Printing Emerald Group Publishing

IT management and staff are called upon to perform the almost-impossible tasks of evaluating, purchasing, integrating, and maintaining complex IT systems, and directing these systems to meet the ever-changing goals of an organization. Add to that the spending restraints of a down economy, and IT managers find themselves in need of a thoughtful, rea

The optical trapping of colloidal matter is an unequalled field of technology for enabling precise handling of particles on microscopic scales, solely by the force of light. Although the basic concept of optical tweezers, which are based on a single laser beam, has matured and found a vast number of exciting applications, in particular in the life sciences, there are strong demands for more sophisticated approaches. This thesis gives an introductory overview of existing optical micromanipulation techniques and reviews the state-of-the-art of the emerging field of structured light fields and their applications in optical trapping, micromanipulation, and organisation. The author presents established, and introduces novel concepts for the holographic and non-holographic shaping of a light field. A special emphasis of the work is the demonstration of advanced applications of the thus created structured light fields in optical micromanipulation, utilising various geometries and unconventional light propagation properties. While most of the concepts developed are demonstrated with artificial microscopic reference particles, the work concludes with a comprehensive demonstration of optical control and alignment of bacterial cells, and hierarchical supramolecular organisation utilising dedicated nanocontainer particles.

Greater Central Asia encompasses a vast area that includes deserts, natural grasslands, steppes, shrublands and alpine regions. Many of these land types are degraded and productivity is falling at a time when human populations and livestock inventories are on the rise. Ecosystem stability and biodiversity are under threat and there is an urgent need to develop more sustainable land management regimes. This book uses an integrated regional approach to provide a comprehensive exploration of sustainable land development in Central Asia. An interdisciplinary team of experts analyses the economic, ecological, sociological, technological and political factors surrounding sustainable land and water management in the region, sharing potential problems and solutions. As international concern about desertification grows, the book concludes by asking how the region is likely to develop in the future. This book will be of value to scholars, students, policy makers and NGOs with an interest in sustainable development in Central Asia.

A Focus on SLM and SLS Methods in 3D Printing is an indispensable collection of articles for anyone involved in additive manufacturing - from academics and researchers through to engineers and managers within the manufacturing industry. In recent years, much work has been done in formulating and clarifying the concept of sustainable development and related theoretical and research issues. Now, the challenge has shifted to designing and stimulating processes of effective planning and decision-making, at all levels of human activity, in such a way as to achieve local and global sustainable development. Information technology can help a great deal in achieving sustainable development by providing well-designed and useful tools for decision makers. One such tool is the decision support system, or DSS. This book explores the area of DSS in the context of sustainable development. As DSS is a very new technique, especially in the developing world, this book will serve as a reference text, primarily for managers, government officials, and information professionals in developing countries. It covers the concept of sustainable development, defines DSS and how it can be used in the planning and management of sustainable development, and examines the state of the art in DSS use. Other interested readers will include students, teachers, and analysts in information sciences; DSS designers, developers, and implementors; and international development agencies.

The Federal Government of Nigeria has adopted an ambitious strategy to make Nigeria the world's 20th largest economy by 2020. This book analyzes options for Nigeria to achieve these development objectives and pursue low-carbon development in the sectors agriculture and land use, oil and gas, power, and transport.

Sri Lanka Malay shows extreme language contact: Malay phonology and lexicon are squared with clearly Indian morphosyntax and semantics. Historical, anthropological, typological and structural approaches shed light on the complex genesis and rapid evolution of this language.

Topics in this volume on optoelectronic information processing include: channel transformations for improving colour pattern recognition; nonlinear cascaded correlation process for recognition of target in nonoverlapping noise; and Fourier-plane nonlinear filtering.

Measure, manage, and improve the speed and reliability of Web services with this complete reference for creating relevant, effective Service Level Agreements. Starting with an explanation of SLM and common performance metrics, the book provides detailed discussions of methods to measure and improve performance.

With the advent of consumer-market Virtual Reality (VR) technology, the next revolution in visual entertainment is already on the horizon: real VR will enable us to experience live-action movies, sports broadcasts, concert videos, etc. in true visual (and aural) immersion. This book provides a comprehensive overview of the algorithms and methods that make it possible to immerse into real-world recordings. It brings together the expertise of internationally renowned experts from academia and industry who present the state of the art in this fascinating, interdisciplinary new research field. Written by and for scientists, engineers, and practitioners, this book is the definitive reference for anyone interested in finding out about how to import the real world into head-mounted displays.

Presented here are 97 refereed papers given at the 37th MATADOR Conference held at The University of Manchester in July 2012. 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. This book contains a selection of articles from The 2016 World Conference on Information Systems and Technologies (WorldCIST'16), held between the 22nd and 24th of March at Recife, Pernambuco, Brazil. WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and challenges of modern Information Systems and Technologies research, together with their technological development and applications. The main topics covered are: Information and Knowledge Management; Organizational Models and Information Systems; Software and Systems Modeling; Software Systems, Architectures, Applications and Tools; Multimedia Systems and Applications; Computer Networks, Mobility and Pervasive Systems; Intelligent and Decision Support Systems; Big Data Analytics and Applications; Human-Computer Interaction; Health Informatics; Information

Technologies in Education; Information Technologies in Radiocommunications.

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