

Ultra Fractal

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Computers in Our World - Lisa Strite Jedlicka 2003-09

This new offering is a fantastic addition to any introductory computer course, focusing on how computers are used in a variety of interesting disciplines such as Arts & Entertainment, Medicine, and Sports. This short title will engage your students and increase the relevancy of essential concepts.

Imaginary Mathematics for Computer Science - John Vince 2018-08-16

The imaginary unit $i = \sqrt{-1}$ has been used by mathematicians for nearly five-hundred years, during which time its physical meaning has been a constant challenge. Unfortunately, René Descartes referred to it as “imaginary”, and the use of the term “complex number” compounded the unnecessary mystery associated with this amazing object. Today, $i = \sqrt{-1}$ has found its way into virtually every branch of mathematics, and is widely employed in physics and science, from solving problems in electrical engineering to quantum field theory. John Vince describes the evolution of the imaginary unit from the roots of quadratic and cubic equations, Hamilton’s quaternions, Cayley’s octonions, to Grassmann’s geometric algebra. In spite of the aura of mystery that surrounds the subject, John Vince makes the subject accessible and very readable. The first two chapters cover the imaginary unit and its integration with real numbers. Chapter 3 describes how complex numbers work with matrices, and shows how to compute complex eigenvalues and eigenvectors. Chapters 4 and 5 cover Hamilton’s invention of quaternions, and Cayley’s development of octonions, respectively. Chapter 6 provides a brief introduction to geometric algebra, which possesses many of the imaginary qualities of quaternions, but works in space of any dimension. The second half of the book is devoted to applications of complex numbers, quaternions and geometric algebra. John Vince explains how complex numbers simplify trigonometric identities, wave combinations and phase differences in circuit analysis, and how geometric algebra resolves geometric problems, and quaternions rotate 3D vectors. There are two short chapters on the Riemann hypothesis and the Mandelbrot set, both of which use complex numbers. The last chapter references the role of complex numbers in quantum mechanics, and ends with Schrödinger’s famous wave equation. Filled with lots of clear examples and useful illustrations, this compact book provides an excellent introduction to imaginary mathematics for computer science.

The Routledge Companion to Biology in Art and Architecture - Charissa N. Terranova 2016-08-12

The Routledge Companion to Biology in Art and Architecture collects thirty essays from a transdisciplinary array of experts on biology in art and architecture. The book presents a diversity of hybrid art-and-science thinking, revealing how science and culture are interwoven. The book situates bioart and bioarchitecture within an expanded field of biology in art, architecture, and design. It proposes an emergent field of biocreativity and outlines its historical and theoretical foundations from the perspective of artists, architects, designers, scientists, historians, and theoreticians. Includes over 150 black and white images.

Capron's Pocket Internet - H. L. Capron 1999-09

Smart Antennas: Recent Trends in Design and Applications - Praveen Kumar Malik 2021-07-30

This reference provides the reader with focused information about microstrip antenna design and applications. Readers are first introduced to the basic design of microstrip antennas. Subsequent chapters explain how microstrip antennas are suitable for practical applications. These chapters cover topics such as fractal and defected ground structure antennas, microstrip antenna evaluation, and the use of microstrip antennas in mobile communications and IoT applications. Scholars, researchers, and industrial

professionals involved in the fields of electronics and electrical engineering as well as instrumentation will benefit from the information given in this book.

Multifunctional MIMO Antennas: Fundamentals and Applications - Yadwinder Kumar 2022-05-20

This book presents a comprehensive approach to antenna designs for various applications, including 5G communication, the internet of things (IoT), and wearable devices. It discusses models, designs, and developments of MIMO antennas, antenna performance measurement, 5G communication challenges and opportunities, and MIMO antennas for LTE/ISM applications. It covers important topics including mmWave antennas, antenna arrays for MIMO applications, reconfigurable/band-notched MIMO antennas, multiband MIMO antennas, wideband MIMO antennas, and fractal-based compact multiband hybrid antennas.

FEATURES Discusses antenna design optimization techniques in detail Covers MIMO antenna performance measurement, multiband MIMO antennas, and wideband MIMO antennas Discusses modeling, simulation, and specific absorption rate (SAR) analysis of antennas Provides applications including radio-frequency identification (RFID), wearable antennas, and antennas for IoT Multifunctional MIMO Antennas: Fundamentals and Application is useful for undergraduate and graduate students and academic researchers in areas including electrical engineering, electronics, and communication engineering.

Discrete Encounters - Craig Bauer 2020-05-14

Eschewing the often standard dry and static writing style of traditional textbooks, Discrete Encounters provides a refreshing approach to discrete mathematics. The author blends traditional course topics and applications with historical context, pop culture references, and open problems. This book focuses on the historical development of the subject and provides fascinating details of the people behind the mathematics, along with their motivations, deepening readers’ appreciation of mathematics. This unique book covers many of the same topics found in traditional textbooks, but does so in an alternative, entertaining style that better captures readers’ attention. In addition to standard discrete mathematics material, the author shows the interplay between the discrete and the continuous and includes high-interest topics such as fractals, chaos theory, cellular automata, money-saving financial mathematics, and much more. Not only will readers gain a greater understanding of mathematics and its culture, they will also be encouraged to further explore the subject. Long lists of references at the end of each chapter make this easy. Highlights: Features fascinating historical context to motivate readers Text includes numerous pop culture references throughout to provide a more engaging reading experience Its unique topic structure presents a fresh approach The text’s narrative style is that of a popular book, not a dry textbook Includes the work of many living mathematicians Its multidisciplinary approach makes it ideal for liberal arts mathematics classes, leisure reading, or as a reference for professors looking to supplement traditional courses Contains many open problems Profusely illustrated

Rethinking the Concept of Law of Nature - Yemima Ben-Menahem 2022-06-13

This book subjects the traditional concept of law of nature to critical examination. There are two kinds of reasons that invite this reexamination, one deriving from philosophical concerns over the traditional concept, the other motivated by theoretical and practical changes in science. One of the philosophical worries is that the idiom of law of nature, especially when combined with the notion of laws 'governing' individual events and processes, is no longer as intelligible as it used to be in the theistic context in which the formulation of laws became central to science. The traditional concept is also challenged in various

ways by contemporary scientific theories such as quantum mechanics, chaos theory and the general theory of relativity. It is no longer clear that there are any universal laws, laws do not always guarantee predictability, and the border between physical and mathematical considerations is constantly shifting. The most difficult challenge, perhaps, is to come up with a scientific explanation of the origin of laws. Wrestling with these intriguing problems, the papers in this volume broaden both our understanding of the natural order and our desiderata of scientific explanation.

Microelectronics, Electromagnetics and Telecommunications - P. Satish Rama Chowdary 2020-06-24

This book discusses the latest developments and outlines future trends in the fields of microelectronics, electromagnetics and telecommunication. It includes original research presented at the International Conference on Microelectronics, Electromagnetics and Telecommunication (ICMEET 2019), organized by the Department of ECE, Raghu Institute of Technology, Andhra Pradesh, India. Written by scientists, research scholars and practitioners from leading universities, engineering colleges and R&D institutes around the globe, the papers share the latest breakthroughs in and promising solutions to the most important issues facing today's society.

Tales of the Turing Church: Hacking religion, enlightening science, awakening technology - Giulio Prigo 2020-02-07

This book explores intersections of science and religion, spirituality and technology, engineering and science fiction, mind and matter, and outlines a new cosmic, transhumanist religion. Hacking religion, enlightening science, awakening technology.

Listening, Thinking, Being - Lisbeth Lipari 2015-12-07

Although listening is central to human interaction, its importance is often ignored. In the rush to speak and be heard, it is easy to neglect listening and disregard its significance as a way of being with others and the world. Drawing upon insights from phenomenology, linguistics, philosophy of communication, and ethics, *Listening, Thinking, Being* is both an invitation and an intervention meant to turn much of what readers know, or think they know, about language, communication, and listening inside out. It is not about how to be a good listener or the numerous pitfalls that stem from the failure to listen. Rather, the purpose of the book is, first, to make readers aware of the value and importance of listening as a fundamental human ability inextricably connected with language and thought; second, to alert readers to the complexity of listening from personal, cultural, and philosophical perspectives; and third, to offer readers a way to think of listening as a mode of communicative action by which humans create and abide in the world. Lisbeth Lipari brings together historical, literary, intercultural, scientific, musical, and philosophical perspectives, as well as a range of her own personal experiences, to produce this highly readable analysis of how "the human experience of being as an ethical relation with others . . . is enacted by means of listening."

Regenerative-Adaptive Design for Sustainable Development - Phillip B. Roös 2020-09-15

In this book, the author tests a regenerative-adaptive pattern language theory towards investigating the possibilities of a holistic, integrated design and planning method for sustainable development that incorporates the principles of regenerative design, as well as an adaptive pattern language that re-establishes our wholeness with nature, and considers the vulnerabilities of a changing landscape. The book examines an integral approach to contemporary theories of planning and design that explores the human-nature relationship patterns in social and spatial interconnections, between people and their natural environments. The interconnectedness of human and natural systems is used to scaffold possible solutions to address key environmental and sustainability issues that specifically address the need for patterns of behaviour that acknowledge the duality of 'man and nature'. In 12 chapters, the book presents a holistic, regenerative-adaptive pattern language that encapsulates how communities can better appreciate landscape change under future climate effects, and acknowledges the importance to adapt to patterns of change of place and the environment and therefore inform the communities' responses for sustainable development. The application of the regenerative-adaptive pattern language was tested along the Great Ocean Road region of the Victorian coast in Australia. The concluding chapters argue that for human settlements and cities to be resilient and sustainable, we must understand the interconnected patterns of human-built environments and natural systems, and how we function in a social-spatial dimension with these. The book is intended for practitioners and academic scholars with interest in sustainable

development, regenerative design, pattern languages, biophilia, settlement planning, and climate change adaptation.

Resources, Environment and Engineering - Liquan Xie 2014-08-12

Resources, Environment and Engineering contains 66 technical papers from the 2014 Technical Congress on Resources, Environment and Engineering (CREE 2014, Hong Kong, 6-7 September 2014, including the 4th Technical Conference on Chemical Engineering, CCE 2014). The contributions review recent technological advances in the fields of resources and the

Archipelagic American Studies - Brian Russell Roberts 2017-05-12

Departing from conventional narratives of the United States and the Americas as fundamentally continental spaces, the contributors to *Archipelagic American Studies* theorize America as constituted by and accountable to an assemblage of interconnected islands, archipelagoes, shorelines, continents, seas, and oceans. They trace these planet-spanning archipelagic connections in essays on topics ranging from Indigenous sovereignty to the work of Édouard Glissant, from Philippine call centers to US militarization in the Caribbean, and from the great Pacific garbage patch to enduring overlaps between US imperialism and a colonial Mexican archipelago. Shaking loose the straitjacket of continental exceptionalism that hinders and permeates Americanist scholarship, *Archipelagic American Studies* asserts a more relevant and dynamic approach for thinking about the geographic, cultural, and political claims of the United States within broader notions of America. Contributors Birte Blascheck, J. Michael Dash, Paul Giles, Susan Gillman, Matthew Pratt Guterl, Hsinya Huang, Allan Punzalan Isaac, Joseph Keith, Yolanda Martínez-San Miguel, Brandy Nalani McDougall, Ifeoma Kiddoe Nwankwo, Craig Santos Perez, Brian Russell Roberts, John Carlos Rowe, Cherene Sherrard-Johnson, Ramón E. Soto-Crespo, Michelle Ann Stephens, Elaine Stratford, Etsuko Taketani, Alice Te Punga Somerville, Teresia Teaiwa, Lanny Thompson, Nicole A. Waligora-Davis

Climate Change Science: A Modern Synthesis - Thomas Farmer 2013-01-12

An introduction to the principles of climate change science with an emphasis on the empirical evidence for climate change and a warming world. Additional readings are given at the end of each chapter. A list of "Things to Know" opens each chapter. Chapters are arranged so that the student is first introduced to the scientific method(s), examples of the use of the scientific method from other sciences drawn from the history of science with an emphasis on climate science. Climate science is treated in each chapter based on the premise of global warming. Chapter treatments on the atmosphere, biosphere, geosphere, hydrosphere, and anthroposphere and their inter-relationships are given.

Biologically-Inspired Computing for the Arts: Scientific Data through Graphics - Ursyn, Anna 2012-04-30

"This book comprises a collection of authors' individual approaches to the relationship between nature, science, and art created with the use of computers, discussing issues related to the use of visual language in communication about biologically-inspired scientific data, visual literacy in science, and application of practitioner's approach"--Provided by publisher.

ICT Systems and Sustainability - Milan Tuba 2022-01-04

This book proposes new technologies and discusses future solutions for ICT design infrastructures, as reflected in high-quality papers presented at the 6th International Conference on ICT for Sustainable Development (ICT4SD 2021), held in Goa, India, on 5-6 August 2021. The book covers the topics such as big data and data mining, data fusion, IoT programming toolkits and frameworks, green communication systems and network, use of ICT in smart cities, sensor networks and embedded system, network and information security, wireless and optical networks, security, trust, and privacy, routing and control protocols, cognitive radio and networks, and natural language processing. Bringing together experts from different countries, the book explores a range of central issues from an international perspective.

Algorithmic and Aesthetic Literacy - Lydia Schulze Heuling 2021-03-29

Algorithmic and Aesthetic Literacy is a selection of texts aiming to extend current understandings of algorithmic and aesthetic literacy. The volume presents a wide array of transdisciplinary perspectives on computational and aesthetic practices and thinking. Drawing on computer and educational science, artistic research, designing and crafting, this collection delves deeply into societal and educational challenges in the wake of the digital transformation. The volume brings together diverse approaches and viewpoints to

stimulate dialogue and awareness of the manifold ways in which algorithmic processes have become part of our lives. By extending our ability to respond to a data-driven world in creative and non-habitual ways, we will be better equipped to re-imagine and shape our collective future as meaningful and fulfilling.

UWB Technology - Mohamed Kheir 2020-01-22

Ultra Wide Band (UWB) technology has attracted increasing interest and there is a growing demand for UWB for several applications and scenarios. The unlicensed use of the UWB spectrum has been regulated by the Federal Communications Commission (FCC) since the early 2000s. The main concern in designing UWB circuits is to consider the assigned bandwidth and the low power permitted for transmission. This makes UWB circuit design a challenging mission in today's community. Various circuit designs and system implementations are published in this book to give the reader a glimpse of the state-of-the-art examples in this field. The book starts at the circuit level design of major UWB elements such as filters, antennas, and amplifiers; and ends with the complete system implementation using such modules.

College Calculus Michael E. Boardman 2015-03-03

College Calculus: A One-Term Course for Students with Previous Calculus Experience is a textbook for students who have successfully experienced an introductory calculus course in high school. College Calculus begins with a brief review of some of the content of the high school calculus course, and proceeds to give students a thorough grounding in the remaining topics in single variable calculus, including integration techniques, applications of the definite integral, separable and linear differential equations, hyperbolic functions, parametric equations and polar coordinates, L'Hôpital's rule and improper integrals, continuous probability models, and infinite series. Each chapter concludes with several "Explorations," extended discovery investigations to supplement that chapter's material. The text is ideal as the basis of a course focused on the needs of prospective majors in the STEM disciplines (science, technology, engineering, and mathematics). A one-term course based on this text provides students with a solid foundation in single variable calculus and prepares them for the next course in college level mathematics, be it multivariable calculus, linear algebra, a course in discrete mathematics, statistics, etc.

Basic Transforms for Electrical Engineering - Orhan Özhan 2022-07-16

The textbook covers the most popular transforms used in electrical engineering along with the mathematical foundations of the transforms, uniquely bringing together the two in a single text. Geared towards an upper-undergraduate or graduate-level class, the book covers the most-used transforms including Fourier, Laplace, Discrete Fourier, z-, short-time Fourier, and discrete cosine transforms. The book includes the complex numbers, complex functions, and complex integration that are fundamental to understand the transforms. The author strives to make the study of the subject approachable by appealing to the use of popular software like LabVIEW virtual instruments, Matlab m-files, and C programming resources. Computer projects at the end of chapters further enhance the learning process. The book is based on the author's years of teaching Engineering Mathematics and Signal courses and can be used in both electrical engineering and mathematics curriculum. Presents both electrical engineering transforms and their mathematical foundations in an understandable, pedagogical, and applicable approach; Covers the most common transforms for electronics and communications engineers including Laplace transform, the Fourier transform, STFT, the z-transform; Features LabVIEW virtual instrument (vi) files, LTSpice simulation files, MATLAB m files, and computer projects in the chapter problems.

Culture and Computing Matthias Rauterberg 2022-06-16

This book constitutes the refereed proceedings of the 10th International Conference on Culture and Computing, C&C 2022, held as part of the 23rd International Conference, HCI International 2022, which was held virtually in June/July 2022. The total of 1271 papers and 275 posters included in the HCII 2022 proceedings was carefully reviewed and selected from 5487 submissions. The C&C 2022 proceedings presents topics such as User Experience, Culture, and Technology, Culture and Computing in Arts and Music and preservation and fruition of cultural heritage, as well as developing and shaping future cultures.

Handbook of Research on Cyber Crime and Information Privacy - Cruz-Cunha, Maria Manuela 2020-08-21

In recent years, industries have transitioned into the digital realm, as companies and organizations are adopting certain forms of technology to assist in information storage and efficient methods of production. This dependence has significantly increased the risk of cyber crime and breaches in data security.

Fortunately, research in the area of cyber security and information protection is flourishing; however, it is the responsibility of industry professionals to keep pace with the current trends within this field. The Handbook of Research on Cyber Crime and Information Privacy is a collection of innovative research on the modern methods of crime and misconduct within cyber space. It presents novel solutions to securing and preserving digital information through practical examples and case studies. While highlighting topics including virus detection, surveillance technology, and social networks, this book is ideally designed for cybersecurity professionals, researchers, developers, practitioners, programmers, computer scientists, academicians, security analysts, educators, and students seeking up-to-date research on advanced approaches and developments in cyber security and information protection.

Foundations of Qualitative Research - Jerry W. Willis 2007-01-26

Foundations of Qualitative Research introduces key theoretical and epistemological concepts replete with historical and current real-world examples. Author Jerry W. Willis provides an invaluable resource to guide the critical and qualitative inquiry process written in an accessible and non-intimidating style that brings these otherwise difficult concepts to life.

A Fractal Epistemology for a Scientific Psychology - Terry Marks-Tarlow 2020-01-06

Fractal dynamics provide an unparalleled tool for understanding the evolution of natural complexity throughout physical, biological, and psychological realms. This book's conceptual framework helps to reconcile several persistent dichotomies in the natural sciences, including mind-brain, linear-nonlinear, subjective-objective, and even personal-transpersonal processes. A fractal approach is especially useful when applied to recursive processes of consciousness, both within their ordinary and anomalous manifestations. This novel way to study the interconnection of seemingly divided wholes encompasses multiple dimensions of experience and being. It brings together experts in diverse fields—neuropsychologists, psychiatrists, physicists, physiologists, psychoanalysts, mathematicians, and professors of religion and music composition—to demonstrate the value of fractals as model, method, and metaphor within psychology and related social and physical sciences. The result is a new perspective for understanding what has often been dismissed as too subjective, idiosyncratic, and ineffably beyond the scope of science, bringing these areas back into a natural-scientific framework.

Exploring Scale Symmetry Thomas Lowe 2021-02-18

Welcome to the world of scale symmetry, the last elementary symmetry and the least explored! Find out how this long-neglected element transforms the traditional geometry of lines and planes into a rich landscape of trees, craggy mountains and rolling oceans. Enjoy a visual exploration through the intricate and elaborate structures of scale-symmetric geometry. See unique fractals, Mandelboxes, and automata and physical behaviors. Take part in the author's forage into the lesser-trodden regions of this landscape, and discover unusual and attractive specimens! You will also be provided with all the tools needed to recreate the structures yourself. Every example is new and developed by the author, and is chosen because it pushes the field of scale-symmetric geometry into a scarcely explored region. The results are complex and intricate but the method of generation is often simple, which allows it to be presented graphically without depending on too much mathematical syntax. If you are interested in the mathematics, science and art of scale symmetry, then read on! This is also a book for programmers and for hobbyists: those of us who like to dabble with procedural imagery and see where it leads.

The Spiraling Web - Ryan Somma 2006-01-01

Who Owns the A.I.'s? The cycs are not a computer virus destroying the Internet as everyone thinks, but a sentience naturally evolved from our information systems. Flatline, a hacker with seemingly supernatural powers over information systems, has assumed leadership of the AI hive, overseeing their domination of the World Wide Web and plots conquest of the world outside it. Devin, handle "Omni," straddles both the virtual and the physical. He sees a war, where one side's victory, human or AI, means the end of the other.

Fractals in Engineering - Jacques Levy Vehel 2012-12-06

Fractal analysis research is expanding into a variety of engineering domains. The strong potential of this work is now beginning to be seen in important applications in real industrial situations. Recent research progress has already led to new developments in domains such as signal processing and chemical engineering, and the major advances in fractal theory that underlie such developments are detailed here.

New domains of applications are also presented, among them environmental science and rough surface analysis. Sections include multifractal analysis, iterated function systems, random processes, network traffic analysis, fractals and waves, image compression, and applications in physics. Fractals in Engineering emphasizes the connection between fractal analysis research and applications to industry. It is an important volume that illustrates the scientific and industrial value of this exciting field.

Chinese Forestry Science and Technology - 2006

Planar Antennas Praveen Kumar Malik 2021-10-21

This comprehensive reference text discusses fundamental concepts, applications, design techniques, and challenges in the field of planar antennas. The text focuses on recent advances in the field of planar antenna design and their applications in various fields of research, including space communication, mobile communication, wireless communication, and wearable applications. This resource presents planar antenna design concepts, methods, and techniques to enhance the performance parameters and applications for IoTs and device-to-device communication. The latest techniques used in antenna design, including their structures defected ground, MIMO, and fractal design, are discussed comprehensively. The text will be useful for senior undergraduate students, graduate students, and academic researchers in fields including electrical engineering, electronics, and communication engineering.

Algebraic Identification of Smart Systems Natalia A. Serdyukova 2020-08-20

This book is a continuation of our recently published book "Algebraic formalization of smart systems. Theory and practice." It incorporates a new concept of quasi-fractal algebraic systems, based on A.I. Maltsev's theory of algebraic systems and the theory of fractals developed by Benoit Mandelbrot, to investigate smart systems in more detail. The main tool used in the book, quasi-fractal algebraic systems, helps us to see smart systems in more detail by adding new factors, which e.g. make it possible to describe the previously indivisible elements of the initial model of factors. The techniques presented include fixed-point theorem, theorems of group theory, theory of Boolean algebras, and Erdős-Renyi algorithms. Given its focus, the book is intended for anyone interested in smart system theory.

Proceeding of the International Conference on Computer Networks, Big Data and IoT (ICCBi - 2018) A.Pasumpon Pandian 2019-07-31

This book presents the proceedings of the International Conference on Computer Networks, Big Data and IoT (ICCBi-2018), held on December 19-20, 2018 in Madurai, India. In recent years, advances in information and communication technologies [ICT] have collectively aimed to streamline the evolution of internet applications. In this context, increasing the ubiquity of emerging internet applications with an enhanced capability to communicate in a distributed environment has become a major need for existing networking models and applications. To achieve this, Internet of Things [IoT] models have been developed to facilitate a smart interconnection and information exchange among modern objects - which plays an essential role in every aspect of our lives. Due to their pervasive nature, computer networks and IoT can easily connect and engage effectively with their network users. This vast network continuously generates data from heterogeneous devices, creating a need to utilize big data, which provides new and unprecedented opportunities to process these huge volumes of data. This International Conference on Computer Networks, Big Data, and Internet of Things [ICCBi] brings together state-of-the-art research work, which briefly describes advanced IoT applications in the era of big data. As such, it offers valuable insights for researchers and scientists involved in developing next-generation, big-data-driven IoT applications to address the real-world challenges in building a smartly connected environment.

Aesthetics of Interdisciplinarity: Art and Mathematics - Kristóf Fenyvesi 2017-11-28

This anthology fosters an interdisciplinary dialogue between the mathematical and artistic approaches in the field where mathematical and artistic thinking and practice merge. The articles included highlight the most significant current ideas and phenomena, providing a multifaceted and extensive snapshot of the field and indicating how interdisciplinary approaches are applied in the research of various cultural and artistic phenomena. The discussions are related, for example, to the fields of aesthetics, anthropology, art history, art theory, artistic practice, cultural studies, ethno-mathematics, geometry, mathematics, new physics, philosophy, physics, study of visual illusions, and symmetry studies. Further, the book introduces a new

concept: the interdisciplinary aesthetics of mathematical art, which the editors use to explain the manifold nature of the aesthetic principles intertwined in these discussions.

Exposé 3 - Mark Andrew Snoswell 2005

EXPOSÉ 3, the third edition of the industry's best art book celebrating the creative talents of digital artists worldwide. Surpassing the number of entries for both EXPOSÉ 1 and 2, EXPOSÉ 3 sets the bar even higher for quality of entries and awards across existing and new categories.

Metabolism and Medicine - Brian Fertig 2022-01-26

Chronic disease states of aging should be viewed through the prism of metabolism and biophysical processes at all levels of physiological organization present in the human body. This book describes the building blocks of understanding from a reasonable but not high-level technical language viewpoint, employing the perspective of a clinical physician. It brings together concepts from five specific branches of physics relevant to biology and medicine, namely, biophysics, classical electromagnetism, thermodynamics, systems biology and quantum mechanics. Key Features: Broad and up-to-date overview of the field of metabolism, especially connecting the spectrum of topics that range from modern physical underpinnings with cell biology to clinical practice. Provides a deeper basic science and interdisciplinary understanding of biological systems that broaden the perspectives and therapeutic problem solving. Introduces the concept of the Physiological Fitness Landscape, which is inspired by the physics of phase transitions This first volume in a two-volume set, primarily targets an audience of clinical and science students, biomedical researchers and physicians who would benefit from understanding each other's language.

Computer Generated Imagery - Fouad Sabry 2022-08-03

What Is Computer Generated Imagery The use of computer graphics to create or contribute to images in works of art, printed media, video games, simulators, computer animation, and visual effects in motion pictures, television programs, shorts, commercials, and videos is referred to as computer-generated imagery (also abbreviated as CGI). Although the word "CGI" is most generally used to refer to the 3-D computer graphics used for producing characters, scenes, and special effects in films and television, which is defined as "CGI animation," the pictures may be dynamic or static, and they may be two-dimensional (2D). How You Will Benefit (I) Insights, and validations about the following topics: Chapter 1: Computer-generated imagery Chapter 2: Computer animation Chapter 3: Digital art Chapter 4: Autodesk 3ds Max Chapter 5: Visual effects Chapter 6: Scientific visualization Chapter 7: Visualization (graphics) Chapter 8: Non-photorealistic rendering Chapter 9: Real-time computer graphics Chapter 10: Virtual cinematography Chapter 11: 3D rendering Chapter 12: 3D computer graphics Chapter 13: Projection augmented model Chapter 14: Computer graphics (computer science) Chapter 15: Computer graphics Chapter 16: Fractal-generating software Chapter 17: List of 3D computer graphics software Chapter 18: History of computer animation Chapter 19: 3D modeling Chapter 20: Visual computing Chapter 21: Virtual humans (II) Answering the public top questions about computer generated imagery. (III) Real world examples for the usage of computer generated imagery in many fields. (IV) 17 appendices to explain, briefly, 266 emerging technologies in each industry to have 360-degree full understanding of computer generated imagery' technologies. Who This Book Is For Professionals, undergraduate and graduate students, enthusiasts, hobbyists, and those who want to go beyond basic knowledge or information for any kind of computer generated imagery.

Entrepreneurs Navigating a Universe of Disruption - Gerard Anthony Reed 2022

This book details the exploratory stages of a research study that produced a framework for entrepreneurial endeavour and enterprise. It presents an unfolding discussion, throughout its chapters, regarding the entrepreneurial nature potential within us all, and the modes by which those involved in such activity, and associated innovative discoveries, can be informed by the skills and experience already in their possession. The book also provides, through its structure, a tool by which the entrepreneur, innovator, educator, student or those yet-to-be involved in the entrepreneurial arena can plan for the yet-to-be known eventualities of such endeavour. The parabolic scramble framework is backgrounded across the discussion of entrepreneurship and the necessity to deal with the tangible and intangibility of any venture, as well as other considered aspects that the entrepreneurial journey engenders. Dr. Gerard Anthony Reed is a Senior Lecturer in Screen Business at the Australian Film Television and Radio School (AFTRS) and experienced in

economic development with an emphasis on entrepreneurial and innovative screen media business practices. Gerard has written, directed, and produced factual programming, with a specialization in documentary formats.

Power of Patterns: Fractals - Theo Buchanan 2017-03-31

Fractals come in a huge variety of forms, but they are generally defined as shapes that exhibit self-similarity and high complexity. These shapes appear in many different forms throughout nature. Introduce students to the fascinating topic of fractals with this high-interest nonfiction book! Developed by Timothy Rasinski and featuring TIME content, this title includes essential text features like an index, captions, glossary, and table of contents. The intriguing sidebars, detailed images, and in-depth Reader's Guide require students to connect back to the text and encourage multiple readings. The Think Link and Dig Deeper! sections develop students' higher-order thinking skills. The Check It Out! section includes suggested books, videos, and websites for further reading. Aligned with state standards, this title features complex and rigorous content appropriate for students preparing for college and career readiness.

Proceedings of SAI Intelligent Systems Conference (IntelliSys) 2016 - Yaxin Bi 2017-08-19

These proceedings of the SAI Intelligent Systems Conference 2016 (IntelliSys 2016) offer a remarkable collection of chapters on a wide range of topics in intelligent systems, artificial intelligence and their

applications to the real world. Authors hailing from 56 countries on 5 continents submitted 404 papers to the conference, attesting to the global importance of the conference's themes. After being reviewed, 222 papers were accepted for presentation, and 168 were ultimately selected for these proceedings. Each has been reviewed on the basis of its originality, novelty and rigorousness. The papers not only present state-of-the-art methods and valuable experience from researchers in the related research areas; they also outline the field's future development.

Textual Wanderings - Rhian Atkin 2017-12-02

"Digression is a crucial motif in literary narratives. It features as a key characteristic of fictional works from Cervantes and Sterne, to Proust, Joyce and Calvino. Moving away from a linear narrative and following a path of associations reflects how we think and speak. Yet an author's inability to stick to the point has often been seen to detract from a work of literature, somehow weakening it. This wide-ranging and timely volume seeks to celebrate narrative digressions and move towards a theoretical framework for studying the meanderings of literary texts as a useful and valuable aspect of literature. Essays discussing some of the possibilities for approaching narrative digression from a theoretical perspective are complemented with focused studies of European and American authors. As a whole, the book offers a broad and varied view of textual wanderings."