What Is Generative Art Complexity Theory As A Context

Generative Art - Matt Pearson 2011-06-29 Summary Generative Art presents both the technique and the beauty of algorithmic art. The book includes fundamental generative art along with the specific programmatic steps author and artist Matt Pearson followed to create each unique piece using the Processing programming language. About the Technology Artists have always explored new media, and computer-based artists are no exception. Generative art, a technique where the artist creates print or screen images by using computer algorithms, finds the artistic intersection of programming, computer graphics, and individual expression. The book includes a tutorial on Processing, an open source programming language and environment for people who want to create images, animations, and interactions. About the Book Generative Art presents both the techniques and the beauty of algorithmic art. In it, you'll find dozens of high-quality examples of generative art, along with the specific steps the author followed to create each unique piece using the Processing programming language. The book includes concise tutorials for each of the technical components required to create the book's images, and it offers countless suggestions for how you can combine and reuse the various techniques to create your own works. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle ebook from Manning. Also available is all code from the book.

Design, User Experience, and Usability - User Experience in Advanced Technological Environments - Aaron Marcus 2019-09-02 The four-volume set LNCS 11583, 11584, 11585, and 11586 constitutes the proceedings of the 8th International Conference on Design, User Experience, and Usability, DUXU 2019, held as part of the 21th International Conference, HCI International 2019, which took place in Orlando, FL, USA, in July 2019. The total of 1274 papers and 209 posters included in the 35 HCI2019 proceedings was carefully reviewed and selected from 5209 submissions. DUXU 2019 includes a total of 167 regular papers, organized in the following topical sections: design philosophy; design theories, methods, and tools; user requirements, preferences emotions and personality; visual DUXU; DUXU for novel interaction techniques and devices; DUXU and robots; DUXU for AI and AI for DUXU; dialogue, narrative, storytelling; DUXU for automated driving, transport, sustainability and smart cities; DUXU for cultural heritage; DUXU for well-being; DUXU for learning; user experience evaluation methods and tools; DUXU practice; DUXU case studies.

A Companion to Digital Art - Christiane Paul 2016-03-02 Reflecting the dynamic creativity of its subject, this definitive guide spans the evolution, aesthetics, and practice of today's digital art, combining fresh, emerging perspectives with the nuanced insights of leading theorists. Showcases the critical and theoretical approaches in this fast-moving discipline. Explores the history and evolution of digital art, its aesthetics and politics, as well as its often turbulent relationships with established institutions. Provides a platform for the most influential voices shaping the current discourse surrounding digital art, combining fresh, emerging perspectives with the nuanced insights of leading theorists. Tackles digital art's primary practical challenges: how to present, document, and preserve pieces that could be erased forever by rapidly accelerating technological obsolescence. Up-to-date, forward-looking, and critically reflective, this authoritative new collection is informed throughout by a deep appreciation of the technical intricacies of digital art.

Rethinking Resilience, Adaptation and Transformation in a Time of Change - Wanglin Yan 2017-03-21 This book contributes to the literature on resilience, hazard planning, risk management, environmental policy and design, presenting articles that focus on building resilience through social and technical means. Bringing together contributions from Japanese authors, the book also offers a rare English-language glimpse into current policy and practice in Japan since the 2011 Tohoku disaster. The growth of resilience as a common point of contact for fields as disparate as economics, architecture and population politics reflects a shared concern about our capacity to cope with and adapt to change. The ability to bounce back from hardship and disaster is essential to all of our futures. Yet, if such ability is to be sustainable, and not rely on a “brute force” response, innovation will need to become a core practice for policymakers and on-the-ground responders alike. The book offers a valuable reference guide for graduate students, researchers and policy analysts who are looking for a holistic but practical approach to resilience planning.

Practices of Abstract Art - Isabel Wünsche 2016-12-14 Recent decades have seen a renewed interest in the phenomenon of abstract art, particularly with regard to its ability to speak to the political, social, and cultural conditions of our times. This collection of essays, which looks at historical examples of artistic practice from the early pioneers of abstraction to late modernism, investigates the ambivalent role that abstraction has played in the visual arts and cultures of the last hundred years. In addition, it explores various theoretical and critical narratives that seek to articulate new perspectives on its legacy in the visual arts. From metaphysical considerations and philosophical reflections to debates on interculturality and global perspectives, the contributors examine and reconsider abstraction in the visual arts from a contemporary point of view that acknowledges the many social, economic, cultural, and political aspects of artistic practice. As such, the volume progressively expands the boundaries of thinking about abstract art by engaging it in its increasingly diverse cultural environment.

Issues in Curating Contemporary Art and Performance - Judith Rugg 2007-01-01 Issues in Curating Contemporary Art and Performance proposes that the concept of curating is a complex field of enquiry. By drawing together artists, curators, architects and cultural theorists, it proposes new approaches to curating and ways of developing critical enquiry about this increasingly expanding field. Focusing on pertinent issues in curating contemporary art and performance, the book’s four parts examine forms of thinking in contemporary curating, curating and the interdisciplinary, as intervention and contestation; as a form of reconsideration of conventional museum spaces and as a problematic in ‘emerging’ practices. Beginning with a contextual ‘map’ of recent thinking on curating which examines some of the issues that have emerged in curatorial discourse over the last ten years, the volume then investigates curating as a research process and a form of collaboration in considering contemporary photography and video. The relationships between writing and curating, reception and encounter is proposed as part of a way of thinking about the complex spatial practice, and disciplinary issues are considered in curating science / art exhibitions. Historical and contemporary perspectives examine issues of gender and marginalisation and diversity; and the particular issues relating to curating and practices such as animation, site-specific dance and computer-based work are discussed.

Applications of Evolutionary Computation - Cecilia Di Chiio 2010-04-03 Evolutionary Computation (EC) techniques are e cient, nature-inspired - ods based on the principles of natural evolution and genetics. Due to their - ciency and simple underlying principles, these methods can be used for a diverse range of applications including problem solving, optimization, machine learning and pattern recognition. A large and continuously increasing number of researchers and professionals make use of EC techniques in various application domains. This volume presents a careful selection of relevant EC examples combined with a thorough examination of the techniques used in EC. The papers in the volume illustrate the current state of the art in the application of EC and should help and inspire researchers and professionals to develop e cient EC methods for design and problem solving. All papers in this book were presented during EvoApplications 2010, which included a range of events on application-oriented aspects of EC. Since 1998, EvoApplications — formerly known as EvoWorkshops — has provided a unique opportunity for EC researchers to meet and discuss application aspects of EC and has been an important link between EC research and its application in a variety of domains. During these 12 years, new events have arisen, some have disappeared, while others have matured and changed shape, such as EuroGP in 2000, EvoCOP in 2004, and EvoBIO in 2007. And from this year, EvoApplications has become a conference as well.

The Routledge Companion to Biology in Art and Architecture - Charisca N. Terrarova 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 intertwined. The book situates biarti and bioarchitecture in an expanded field of biology in art, architecture, and design. It proposes an emerging 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.

Book of Abstracts DRHA2014 - Anastasios Maragiannis 2014-10-28 The DRHA2014 publication includes ground breaking academic papers and well-known speakers and series of installations and exhibitions. The "book of Abstract" publication for the DRHA2014 conference showcase up-to-date discussions, dynamic debates, innovative keynotes and experimental performances and aims to open a discussion on defining digital communication futures, as a theme that connects disciplinary practices, focusing particularly on issues of communication and its impact on creative industries.

Confronting the Machine - Boris Magrini 2017-03-28 Artists who work with new media generally adopt a critical media approach in contrast to artists who work with traditional art media. Where does the difference lie between media artists and artists who produce modern art? Which key
art objects illustrate this trend? The author investigates the relationship between art and technology on the basis of work produced by Edward Ihnatowicz and Harold Cohen, and on the basis of the pioneering computer art exhibition at Dokumenta X in 1997. His line of argument counters the generally held view that computer art straddles the gap between art and technology. Instead, he is seeking a genuine interpretation of the origin of media art, and to develop new perspectives for it.

Evolutionary and Biologically Inspired Music, Sound, Art and Design - Juan Romero 2014-08-22 This book constitutes the refereed proceedings of the Third International Conference on Biologically Inspired Music, Sound, Art and Design, Evo MUSIC 2014, held in Granada, Spain, in April 2014, co-located with the Evo*2013 events Evo GP, Evo COV, Evo IBO and Evo Applications. The 11 revised full papers presented were carefully reviewed and selected from 30 submissions. They cover a wide range of topics and application areas.

Intersecting Art and Technology in Practice - Camille C Barker 2016-12-19 This book focuses on the artistic process, creativity and collaboration, and personal approaches to creation and ideation, in making digital and electronic technology-based art. Less interested in the outcome itself - the artefact, artwork or performance - contributors instead highlight the emotional, intellectual, intuitive, instinctive and step-by-step creation dimensions. They aim to shine a light on digital and electronic art practice, involving coding, electronic gadgetry and technology mixed with other forms of more established media, to uncover the practice-as-research processes required, as well as the collaborative aspects of art and technology processes.

Biologically-Inspired Computing for the Arts: Scientific Data through Graphics - Uryun, 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.

Complexity and the Art of Public Policy - David Colander 2016-02-16 How ideas in complexity can be used to develop more effective public policy Complexity science—made possible by modern analytical and computational advances—is changing the way we think about social systems and social theory. Unfortunately, economists’ policy models have not kept up and are stuck in either a market fundamentalist or government control narrative. While these standard narratives are useful in some cases, they are damaging in others, diverting thinking away from creative, innovative policy solutions. Complexity and the Art of Public Policy outlines a new, more flexible policy narrative, which envision societies as a complex evolving system that is uncontrollable but can be influenced. David Colander and Roland Kupfers describe how economists and sociologists became locked into the current policy framework, and lay out fresh alternatives for framing policy questions. Offering original solutions to stubborn problems, the complexity narrative builds on broader philosophical traditions, such as those in the work of John Stuart Mill, to suggest initiatives that the authors call “activist laissez-faire” policies. Colander and Kupfers develop innovative bottom-up solutions that, through new institutional structures such as for-profit corporations, channel individuals’ social instincts into solving societal problems, making profits a tool for change rather than a goal. They argue that a central role for government in this complexity framework is to foster an ecostructure within which diverse forms of social entrepreneurship can emerge and blossom.

Cellular Automa in Image Processing and Geometry - Paul Rosin 2014-05-29 The book presents findings, views and ideas on what exact problems of image processing, pattern recognition and generation can be efficiently solved by cellular automata architectures. This volume provides a convenient collection in this area, in which publications are otherwise widely scattered throughout the literature. The topics covered include image compression and resizing; skeletonization, erosion and dilation; convex hull computation, edge detection and segmentation; forgery detection and content-based retrieval; and pattern generation. The book advances the theory of image processing, pattern recognition and generation as well as the design of efficient algorithms and hardware for parallel image processing and analysis. It is aimed at computer scientists, software programmers, electronic engineers, mathematicians and physicists, and at everyone who studies or develops cellular automata algorithms and tools for image processing and analysis, or develops novel architectures and implementations of massive parallel computing devices. The book will provide attractive reading for a general audience because it has do-it-yourself appeal: all the computer experiments presented within it can be implemented with minimal knowledge of programming. The simplicity yet substantial functionality of the cellular automaton approach, and the transparency of the algorithms proposed, makes the text ideal supplementary reading for courses on image processing, parallel computing, automata theory and applications.

Complexity Theory and the Social Sciences - David Byrne 2002-01-04 Chaos and complexity are the new buzz words in both science and contemporary society. The ideas they represent have enormous implications for the way we understand and engage with the world. Complexity Theory and the Social Sciences introduces students to the key ideas which surround the chaos/complexity theories. It discusses key concepts before using them as a way of investigating the nature of social research. By applying them to such familiar topics as urban studies, education and health, David Byrne allows readers new to the subject to appreciate the contribution which complexity theory can make to social research and to illuminating the crucial social issues of our day.

Distributed, Ambient, and Pervasive Interactions - Norbert Streitz 2015-07-21 This book constitutes the refereed proceedings of the Third International Conference on Distributed, Ambient, and Pervasive Interactions, DAPI 2015, held as part of the 17th International Conference on Human-Computer Interaction, HCII 2015, held in Los Angeles, CA, USA, in August 2015, jointly with 15 other thematically conferences. The total of 1462 papers and 246 posters presented at the HCII 2015 conferences were carefully reviewed and selected from 4843 submissions. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers accepted for presentation thoroughly cover the entire field of human-computer interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. This volume contains papers addressing the following major topics: designing and developing intelligent environments; natural interaction; design and development of distributed, ambient and pervasive interactions; smart devices, objects and materials; location, motion and activity recognition; smart cities and communities; and humor in ambient intelligence.

Lessons from a Multispecies Studio - Julie Andreyev 2021-11-19 A collection of nonfiction, first-hand writings about my creative collaborations with local animals and ecologies - companion dogs, wild birds and salmon, as well as forest communities. The stories reveal human relations
Art and Complexity}. J. Casti 2003-02-19 This title is the result of a one-week workshop sponsored by the Swedish research agency, FRN, on the interface between complexity and art. Among others, it includes discussions on whether “good” art is “complex” art, how artists see the term ‘complex’, and what poets try to convey in word about complex behavior in nature.

In Your Computer}. Domenico Quarranta 2014-04-27 «There is this hacker slogan: “We love your computer.” We also get inside people’s computers. And we are honored to be in somebody’s computer. You are very close to a person when you are on his desktop.» Jodi 1997 This book is a collection of texts written by Domenico Quarranta between 2005 and 2010 for exhibition catalogues, printed magazines and online reviews. A pocket version of what the author would save from the universal flood, in a world without computers. Most of the fields of research he has developed are represented: from Net Art to Software Art and videogames, from biotechnologies to the debate about curating and the positioning of New Media Art in the contemporary landscape, and back to Net Art again.

Computers and Creativity}. Jon McCormack 2012-08-21 This interdisciplinary volume introduces new theories and ideas on creativity from the perspectives of science and art. Featuring contributions from leading researchers, theorists and artists working in artificial intelligence, generative art, creative computing, music composition, and cybernetics, the book examines the relationship between computation and creativity from both analytic and practical perspectives. Each contributor describes innovative new ways creativity can be understood through, and inspired by, computers. The book tackles critical philosophical questions and discusses the major issues raised by computational creativity, including whether a computer can exhibit creativity independently of its creator; what kinds of creativity are possible in light of our knowledge from computational simulation, artificial intelligence, evolutionary theory and information theory; and whether we can begin to automate the evaluation of aesthetics and creativity in silico. These important, often controversial questions are contextualised by current thinking in computational creative arts practice. Leading artistic practitioners discuss their approaches to working creatively with computational systems in a diverse array of media, including music, sound art, visual art, and interactivity. The volume also includes a comprehensive review of computational aesthetic evaluation and judgement research, alongside discussion and insights from pioneering artists working with computational technology as a creative medium over the last fifty years. A distinguishing feature of this volume is that it explains and grounds new theoretical ideas on creativity through practical applications and creative practice. Computers and Creativity will appeal to theorists, researchers in artificial intelligence, generative and evolutionary computation, practicing artists and musicians, students and any reader generally interested in understanding how computers can impact upon creativity. It bridges concepts from computer science, psychology, neuroscience, visual art, music and philosophy in an accessible way, illustrating how computers are fundamentally changing what we can imagine and create, and how we might shape the trajectory of the future.

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Advances in Artificial Life}. Fernando Almeida e Costa 2007-09-04 This book constitutes the refereed proceedings of the 9th European Conference on Artificial Life, ECAL 2007, held in Lisbon, Portugal. The 125 revised full papers cover morphogenesis and development, robotics and autonomous agents, evolutionary computation and theory, cellular automata, models of biological systems and their applications, art colony and swarm systems, evolution of communication, simulation of social interactions, self-replication, artificial chemistry.

Educating Artists for the Future}. Melvin L. Alexenberg 2008 Publisher's description: In Educating Artists for the Future, some of the world’s most innovative thinkers in higher education in art and design offer fresh directions for educating artists for a rapidly evolving post-digital future. Their creative redefinition of art at the interdisciplinary interface where scientific enquiry and new technologies shape aesthetic and cultural values offers groundbreaking guidelines for art education in an era of emerging new media. This is the first book concerned with educating artists for the post-digital age, propelling artists into unknown territory. A culturally diverse range of art educators focus on teaching their students to create artworks that explore the complex balance between cultural pride and global awareness. They demonstrate how the dynamic interplay between digital, biological, and cultural systems calls for alternative pedagogical strategies that encourage student-centered, self-regulated, participatory, interactive, and immersive learning. Educating Artists for the Future charts the diaphanous boundaries between art, science, technology, and culture that are reshaping art education.

Lumen Naturae}. Matilde Marcolli 2020-05-26 Exploring common themes in modern art, mathematics, and science, including the concept of space, the notion of randomness, and the shape of the cosmos. This is a book about art—and a book about mathematics and physics. In Lumen Naturae (the title refers to a purely immanent, non-supernatural form of enlightenment), mathematical physicist Matilde Marcolli explores common themes in modern art and modern science—the concept of space, the notion of randomness, the shape of the cosmos, and other puzzles of the universe—while mapping convergences with the work of such artists as Paul Cezanne, Mark Rothko, Sol LeWitt, and Lee Krasner. Her account, focusing on questions she has investigated in her own scientific work, is illustrated by more than two hundred color images of artworks by modern and contemporary artists. Thus Marcolli finds in still life paintings brooding, modern and philosophical reflections on space and time, and connects notions of space in mathematics to works by Paul Klee, Sol LeWitt, and others. She considers the relation of entropy and art and how notions of entropy have been expressed by such artists as Hans Arp and Fernando Léger; and traces the evolution of randomness as a mode of artistic expression. She analyzes the relation between graphical illustration and scientific text, and offers her own watercolor-decorated mathematical notebooks. Throughout, she balances discussions of science with explorations of art, using one to inform the other. (She employs some formal notation, which can easily be skipped by general readers.) Marcolli is not simply explaining art to scientists and science to artists; she charts unexpected interdependencies that illuminate the universe.

Complexity Science, Living Systems, and Reflecting Interfaces: New Models and Perspectives}. Orsucci, Franco 2012-09-30 There are new and important advancements in today’s complexity theories in ICT and requires an extraordinary perspective on the interaction between living systems and information technologies. With human evolution and its continuous link with the development of new tools and information technologies. With human evolution and its continuous link with the development of new tools and technologies, a new perspective of human beings, in which we live. The Oxford Handbook of Music Education offers a comprehensive overview of the many facets of musical experience, behavior and development in relation to this diverse variety of contexts. While the first volume primarily focuses on children during school-age years, this second collects an international list of contributors to explore how music learning takes place outside of the traditional classroom.
classroom environment. Discussing a range of issues such as music education for the special needs population, music learning in adulthood, and music learning through media and technology these chapters help to broaden conceptions of music and musical involvement. Whether they are used individually or in tandem, the two volumes of The Oxford Handbook of Music Education update and redefine the discipline, and show how individuals across the world learn, enjoy and share the power and uniqueness of music.

Creativities, Technologies, and Media in Music Learning and Teaching

Gary E. McPherson 2018-05-03 Creativities, Media, and Technology in Music Learning and Teaching is one of five paperback books derived from the foundational two-volume Oxford Handbook of Music Education. Designed for music teachers, students, and scholars of music education, as well as educational administrators and policy makers, this fifth book in the set comprises three complementary sections: musical creativity as practice; music teaching and learning through technology; and the interplay of media, music, and education. The first section reviews notions of musical creativity, examining practice-based perspectives to support and develop understanding of the diverse types of creativity found within music education practice across the globe. In the second section, authors explore the essential role of technology in music discourse and in various forms of musical learning, even as technology continually evolves and the needs and possibilities continue to rapidly change. The second section provokes readers to assess their own thinking about the transformative changes occurring within the discipline as a result of advances in media, and the increasing infiltration of media into all aspects of life, the classroom, and music making. Contributors Andrew B. Brown, Pamela Burnard, Bernadette Colley, Ian Cross, Rokus de Groot, Steven C. Dillon, Randi Margrethe Eidssaa, David G. Hebert, Evangelos Himonides, Neryl Jeanneret, Alibhe Kenny, Andrew King, Eleni Lapidaki, Felicity Laurence, Samuel Leong, Bo Wah Leung, Alaqi Miyae, Gary E. McPherson, Ross Purves, Tal-Chen Rabinowitch, Alex Ruthmann, Eva Sæther, Jonathan Savage, Reza Shayesteh, Petros Stagkos, Matthew D. Thibeault, Evan S. Tobias, Carole Waugh, Graham F. Welch

Human-Computer Interaction: Interaction Technologies

Masaaki Kurosu 2015-07-20 The 3-volume set LNCS 9169, 9170, 9171 constitutes the refereed proceedings of the 17th International Conference on Human-Computer Interaction, HCII 2015, held in Los Angeles, CA, USA, in August 2015. The total of 1462 papers and 246 posters presented at the HCII 2015 conferences was carefully reviewed and selected from 4843 submissions. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers in LNCS 9170 are organized in topical sections on gesture and eye-gaze based interaction; touch-based and haptic interaction; natural user interfaces; adaptive and personalized interfaces; distributed, migratory and multi-screen user interfaces; games and gamification; HCI in smart and intelligent environments.

Exploring Digital Design

Ina Wagner 2010-08-12 Exploring Digital Design takes a multi-disciplinary look at digital design research where digital design is embedded in a larger socio-cultural context. Working from socio-technical research areas such as Participatory Design (PD), Computer Supported Cooperative Work (CSCW) and Human-Computer Interaction (HCI), the book explores how humanities offer new insights into digital design, and discusses a variety of digital design research practices, methods, and theoretical approaches spanning established disciplinary borders. The aim of the book is to explore the diversity of contemporary digital design practices in which commonly shared aspects are interpreted and integrated into different disciplinary and interdisciplinary conversations. It is the conversations and explorations with humanities that further distinguish this book within digital design research. Illustrated with real examples from digital design research practices from a variety of research projects and from a broad range of contexts Exploring Digital Design offers a basis for understanding the disciplinary roots as well as the interdisciplinary dialogues in digital design research, providing theoretical, empirical, and methodological sources for understanding digital design research. The first half of the book Exploring Digital Design is authored as a multi-disciplinary approach to digital design research, and represents new perspectives and analysis in the field. It is written by Endre Beldoe, Uri Hasson, Lee H. Siegel, Chad Raymond, Ian Morrison and Christina Morberg in addition to the editors. Although primarily written for researchers and graduate students, digital design practitioners will also find the book useful. Overall, Exploring Digital Design provides an excellent introduction to, and resource for, research into digital design.

Research & Education in Design: People & Processes & Products & Philosophy

Rita Almendra 2020-05-27 Design is about the creation of meaningful connections to solve problems and advance human wellbeing; the discipline has always explored the beneficial links between form and function, technology and meaning, beauty and utility, people and artefacts and problems and solutions, among others. This book focuses on the crucial connection between design research and design education. Contemporary society grows increasingly hyper-complex and globally competitive. This state of affairs raises fundamental questions for both Design Education and Design Research: Should research skills be integrated into undergraduate courses? How can we modify design courses without compromising the positive aspects of the educational studio experience? Can the three cycles of higher education in design be combined into a creative and inquisitive educational continuum? To examine the relationship between research and education in Design we must address the topic of knowledge, keeping in mind that the development and dissemination of new and useful knowledge is the core purpose of a University. If we agree that design has its own things to know and ways to find out about them, then design knowledge resides in people, processes, products, and philosophy. This book explores the intersection of these four areas with the aim of uncovering insights to advance the current state of the design discipline.

Entropy and Art

Rudolf Arnheim 2010-08-02 This essay is an attempt to reconcile the disturbing contradiction between the striving for order in nature and in man and the principle of entropy implicit in the second law of thermodynamics - between the tendency toward greater organization and the general trend of the material universe toward disorder.

New Research in Multimedia and Internet Systems

Aleksander Zgrzywa 2014-09-02 The rapid proliferation of Multimedia and Network Information Systems is one of the key features of our times. What is also important is that the pace of change is ever increasing. University projects of today will form the core of consumer products of tomorrow. Therefore, it is very important to have a broad view of the recent scientific investigation in that area. This was the primary reason for gathering this collection of carefully selected and hopefully representative research projects, found solutions, and finally applications. They are the achievements of scientific teams from several countries. The contents of the monograph has been divided into four parts: 1) Multimedia Information Technology, 2) Information Systems Specification, 3) Information Systems Applications, 4) Web Systems and Network Technologies. The book presents up to date research from the diverse fields of multimedia and Internet data processing.

New Directions in Third Wave Human-Computer Interaction: Volume 1 - Technologies

Michael Filimowicz 2018-07-02 As the first extensive exploration of contemporary third wave HCI, this handbook covers key developments at the leading edge of human-computer interactions. Now in its second decade as a major current of HCI research, the third wave integrates insights from the humanities and social sciences to emphasize human dimensions beyond workplace efficiency or cognitive capacities. The earliest HCI work was strongly based on the concept of human-machine coupling, which expanded to workplace collaboration as computers came into mainstream professional use. Today HCI can connect to almost any human experience because there are new applications for every aspect of daily life. Volume 1 - Technologies covers technical applications related to artificial intelligence, metacreation, machine learning, perceptual computing, 3D printing, critical making, physical computing, the internet of things, accessibility, sonification, natural language processing, multimodal display, and virtual reality.