

Mathematics And Computation In Music 5th International Conference Mcm 2015 London Uk June 22 25 2015 Proceedings Lecture Notes In Computer Science

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Object-Oriented and Classical Software Engineering - Stephen R. Schach 2001-11

Designed for an introductory software engineering course. This two-part book provides an introduction to software engineering fundamentals, covering both traditional and object-oriented techniques. It presents the underlying software engineering theory in Part I and follows it up with the practical life-cycle material in Part II.

Understanding the Brain Function and Emotions - José Manuel Ferrández Vicente 2019-05-09

The two volume set LNCS 11486 and 11487 constitutes the proceedings of the International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2019, held in Almería, Spain, in June 2019. The total of 103 contributions was carefully reviewed and selected from 190 submissions during two rounds of reviewing and improvement. The papers are organized in two volumes, one on understanding the brain function and emotions, addressing topics such as new tools for analyzing neural data, or detection emotional states, or interfacing with physical systems. The second volume deals with bioinspired systems and biomedical applications to machine learning and contains papers related bioinspired programming strategies and all the contributions oriented to the computational solutions to engineering problems in different applications domains, as biomedical systems, or big data solutions.

Proceedings of 2nd International Conference on Communication, Computing and Networking - C. Rama Krishna 2018-09-07

The book provides insights from the 2nd International Conference on Communication, Computing and Networking organized by the Department of Computer Science and Engineering, National Institute of Technical Teachers Training and Research, Chandigarh, India on March 29–30, 2018. The book includes contributions in which researchers, engineers, and academicians as well as industrial professionals from around the globe presented their research findings and development activities in the field of Computing Technologies, Wireless Networks, Information Security, Image Processing and Data Science. The book provides opportunities for the readers to explore the literature, identify gaps in the existing works and propose new ideas for research.

The Cognition of Basic Musical Structures - David Temperley 2004-08-20

In this book, David Temperley addresses a fundamental question about music cognition: how do we extract basic kinds of musical information, such as meter, phrase structure, counterpoint, pitch spelling, harmony, and key from music as we hear it? Taking a computational approach, Temperley develops models for generating these aspects of musical structure. The models he proposes are based on preference rules, which are criteria for evaluating a possible structural analysis of a piece of music. A preference rule system evaluates many possible interpretations and chooses the one that best satisfies the rules. After an introductory chapter, Temperley presents preference rule systems for generating six basic kinds of musical structure: meter, phrase structure, contrapuntal structure, harmony, and key, as well as pitch spelling (the labeling of pitch events with spellings such as A flat or G sharp). He suggests that preference rule systems

not only show how musical structures are inferred, but also shed light on other aspects of music. He substantiates this claim with discussions of musical ambiguity, retrospective revision, expectation, and music outside the Western canon (rock and traditional African music). He proposes a framework for the description of musical styles based on preference rule systems and explores the relevance of preference rule systems to higher-level aspects of music, such as musical schemata, narrative and drama, and musical tension.

Mathematics Education in the Digital Age - Alison Clark-Wilson 2021-05-25

The wide availability of digital educational resources for mathematics teaching and learning is indisputable, with some notable genres of technologies having evolved, such as graphing calculators, dynamic graphing, dynamic geometry and data visualization tools. But what does this mean for teachers of mathematics, and how do their roles evolve within this digital landscape? This essential book offers an international perspective to help bridge theory and practice, including coverage of networking theories, curriculum design, task implementation, online resources and assessment. Mathematics Education in the Digital Age details the impacts this digital age has, and will continue to have, on the parallel aspects of learning and teaching mathematics within formal education systems and settings. Written by a group of international authors, the chapters address the following themes: Mathematics teacher education and professional development Mathematics curriculum development and task design The assessment of mathematics Theoretical perspectives and methodologies/approaches for researching mathematics education in the digital age This book highlights not only the complex nature of the field, but also the advancements in theoretical and practical knowledge that is enabling the mathematics education community to continue to learn in this increasingly digital age. It is an essential read for all mathematics teacher educators and master teachers.

Automated Scheduling and Planning - A. Sima Uyar 2013-07-12

Solving scheduling problems has long presented a challenge for computer scientists and operations researchers. The field continues to expand as researchers and practitioners examine ever more challenging problems and develop automated methods capable of solving them. This book provides 11 case studies in automated scheduling, submitted by leading researchers from across the world. Each case study examines a challenging real-world problem by analysing the problem in detail before investigating how the problem may be solved using state of the art techniques. The areas covered include aircraft scheduling, microprocessor instruction scheduling, sports fixture scheduling, exam scheduling, personnel scheduling and production scheduling. Problem solving methodologies covered include exact as well as (meta)heuristic approaches, such as local search techniques, linear programming, genetic algorithms and ant colony optimisation. The field of automated scheduling has the potential to impact many aspects of our lives and work; this book highlights contributions to the field by world class researchers.

Understanding Second Language Acquisition - Lourdes Ortega 2014-02-04

Whether we grow up with one, two, or several languages during our early years of life, many of us will learn a second, foreign, or heritage language in later years. The field of Second language acquisition (SLA, for short) investigates the human capacity to learn additional languages in late childhood, adolescence, or adulthood, after the first language --in the case of monolinguals-- or languages --in the case of bilinguals-- have already been acquired. *Understanding Second Language Acquisition* offers a wide-encompassing survey of this burgeoning field, its accumulated findings and proposed theories, its developed research paradigms, and its pending questions for the future. The book zooms in and out of universal, individual, and social forces, in each case evaluating the research findings that have been generated across diverse naturalistic and formal contexts for second language acquisition. It assumes no background in SLA and provides helpful chapter-by-chapter summaries and suggestions for further reading. Ideal as a textbook for students of applied linguistics, foreign language education, TESOL, and education, it is also recommended for students of linguistics, developmental psycholinguistics, psychology, and cognitive science. Supporting resources for tutors are available free at www.routledge.com/ortega.

From Christoffel Words to Markoff Numbers - Christophe Reutenauer 2019-01-15

In 1875, Elwin Bruno Christoffel introduced a special class of words on a binary alphabet linked to continued fractions which would go on to be known as Christoffel words. Some years later, Andrey Markoff published his famous theory, the now called Markoff theory. It characterized certain quadratic forms and certain real numbers by extremal inequalities. Both classes are constructed using certain natural numbers known as Markoff numbers and they are characterized by a certain Diophantine equality. More basically, they are constructed using certain words essentially the Christoffel words. The link between Christoffel words and the theory of Markoff was noted by Ferdinand Frobenius in 1913, but has been neglected in recent times. Motivated by this overlooked connection, this book looks to expand on the relationship between these two areas. Part I focuses on the classical theory of Markoff, while Part II explores the more advanced and recent results of the theory of Christoffel words.

Musimathics, Volume 1 - Gareth Loy 2011-08-19

A commonsense, self-contained introduction to the mathematics and physics of music; essential reading for musicians, music engineers, and anyone interested in the intersection of art and science. "Mathematics can be as effortless as humming a tune, if you know the tune," writes Gareth Loy. In *Musimathics*, Loy teaches us the tune, providing a friendly and spirited tour of the mathematics of music—a commonsense, self-contained introduction for the nonspecialist reader. It is designed for musicians who find their art increasingly mediated by technology, and for anyone who is interested in the intersection of art and science. In Volume 1, Loy presents the materials of music (notes, intervals, and scales); the physical properties of music (frequency, amplitude, duration, and timbre); the perception of music and sound (how we hear); and music composition. Calling himself "a composer seduced into mathematics," Loy provides answers to foundational questions about the mathematics of music accessibly yet rigorously. The examples given are all practical problems in music and audio. Additional material can be found at <http://www.musimathics.com>.

Mathematics and Computation in Music - Octavio A. Agustín-Aquino 2017-11-17

This book constitutes the thoroughly refereed proceedings of the 6th International Conference on Mathematics and Computation in Music, MCM 2017, held in Mexico City, Mexico, in June 2017. The 26 full papers and 2 short papers presented were carefully reviewed and selected from 40 submissions. The papers feature research that combines mathematics or computation with music theory, music analysis, composition, and performance. They are organized in topical sections on algebraic models, computer assisted performance, Fourier analysis, Gesture Theory, Graph Theory and Combinatorics, Machine Learning, and Probability and Statistics in Musical Analysis and Composition.

Computational Thinking Education - Harold Abelson 2020-10-08

This book is open access under a CC BY 4.0 license. This book offers a comprehensive guide, covering every important aspect of computational thinking education. It provides an in-depth discussion of computational thinking, including the notion of perceiving computational thinking practices as ways of mapping models from the abstraction of data and process structures to natural phenomena. Further, it explores how computational thinking education is implemented in different regions, and how computational

thinking is being integrated into subject learning in K-12 education. In closing, it discusses computational thinking from the perspective of STEM education, the use of video games to teach computational thinking, and how computational thinking is helping to transform the quality of the workforce in the textile and apparel industry. This work was published by Saint Philip Street Press pursuant to a Creative Commons license permitting commercial use. All rights not granted by the work's license are retained by the author or authors.

Medical Image Computing and Computer-Assisted Intervention - Miccai 2012 - 2012-08-29

The Rise and Decline of the Post-Cold War International Order - Hanns W. Maull 2018-10-18

This book surveys the evolution of the international order in the quarter century since the end of the Cold War through the prism of developments in key regional and functional parts of the 'liberal international order 2.0' (LIO 2.0) and the roles played by two key ordering powers, the United States and the People's Republic of China. Among the partial orders analysed in the individual chapters are the regions of Europe, the Middle East and East Asia and the international regimes dealing with international trade, climate change, nuclear weapons, cyber space, and international public health emergencies, such as SARS and ZIKA. To assess developments in these various segments of the LIO 2.0, and to relate them to developments in the two other crucial levels of political order, order within nation-states, and at the global level, the volume develops a comprehensive, integrated framework of analysis that allows systematic comparison of developments across boundaries between segments and different levels of the international order. Using this framework, the book presents a holistic assessment of the trajectory of the international order over the last decades, the rise, decline, and demise of the LIO 2.0, and causes of the dangerous erosion of international order over the last decade.

How the Web was Born - James M. Gillies 2000

Two Web insiders who were employees of CERN in Geneva, where the Web was developed, tell how the idea for the World Wide Web came about, how it was developed, and how it was eventually handed over at no charge for the rest of the world to use. 20 illustrations.

Generalized Musical Intervals and Transformations - David Lewin 2010-11

David Lewin's *Generalized Musical Intervals and Transformations* is recognized as the seminal work paving the way for current studies in mathematical and systematic approaches to music analysis. Lewin, one of the 20th century's most prominent figures in music theory, pushes the boundaries of the study of pitch-structure beyond its conception as a static system for classifying and inter-relating chords and sets. Known by most music theorists as "GMIT", the book is by far the most significant contribution to the field of systematic music theory in the last half-century, generating the framework for the "transformational theory" movement. Appearing almost twenty years after GMIT's initial publication, this Oxford University Press edition features a previously unpublished preface by David Lewin, as well as a foreword by Edward Gollin contextualizing the work's significance for the current field of music theory.

Autonomous Control for a Reliable Internet of Services - Ivan Ganchev 2018-05-30

This open access book was prepared as a Final Publication of the COST Action IC1304 "Autonomous Control for a Reliable Internet of Services (ACROSS)". The book contains 14 chapters and constitutes a show-case of the main outcome of the Action in line with its scientific goals. It will serve as a valuable reference for undergraduate and post-graduate students, educators, faculty members, researchers, engineers, and research strategists working in this field. The explosive growth of the Internet has fundamentally changed the global society. The emergence of concepts like SOA, SaaS, PaaS, IaaS, NaaS, and Cloud Computing in general has catalyzed the migration from the information-oriented Internet into an Internet of Services (IoS). This has opened up virtually unbounded possibilities for the creation of new and innovative services that facilitate business processes and improve the quality of life. However, this also calls for new approaches to ensuring the quality and reliability of these services. The objective of this book is, by applying a systematic approach, to assess the state-of-the-art and consolidate the main research results achieved in this area.

Class Matters - Charles Umney 2018

Social class remains a fundamental presence in British life in the twenty-first century. It is woven into the

very fabric of social and political discourse, undiminished by the end of mass industry; unaugmented despite the ascendancy of 'ordinary working people' and other substitute phrases. Absent from this landscape, however, is any compelling Marxist expression or analysis of class. In *Class Matters*, Charles Umney brings Marxist analysis out of the 19th century textiles mill, and into the call centres, office blocks and fast food chains of modern Britain. He shows how core Marxist concepts are vital to understanding increasing pay inequality, decreasing job security, increasing routinisation and managerial control of the labour process. Providing a critical analysis of competing perspectives, Umney argues that class must be understood as a dynamic and exploitative process integral to capitalism - rather than a descriptive categorisation - in order for us to better understand the gains capital has made at the expense of labour over the last four decades.

Computational Music Analysis - David Meredith 2015-10-27

This book provides an in-depth introduction and overview of current research in computational music analysis. Its seventeen chapters, written by leading researchers, collectively represent the diversity as well as the technical and philosophical sophistication of the work being done today in this intensely interdisciplinary field. A broad range of approaches are presented, employing techniques originating in disciplines such as linguistics, information theory, information retrieval, pattern recognition, machine learning, topology, algebra and signal processing. Many of the methods described draw on well-established theories in music theory and analysis, such as Forte's pitch-class set theory, Schenkerian analysis, the methods of semiotic analysis developed by Ruwet and Nattiez, and Lerdahl and Jackendoff's Generative Theory of Tonal Music. The book is divided into six parts, covering methodological issues, harmonic and pitch-class set analysis, form and voice-separation, grammars and hierarchical reduction, motivic analysis and pattern discovery and, finally, classification and the discovery of distinctive patterns. As a detailed and up-to-date picture of current research in computational music analysis, the book provides an invaluable resource for researchers, teachers and students in music theory and analysis, computer science, music information retrieval and related disciplines. It also provides a state-of-the-art reference for practitioners in the music technology industry.

Global Monitoring Report 2014/2015 - World Bank; International Monetary Fund 2014-10-21

The *Global Monitoring Report 2014/2015: Ending Poverty and Sharing Prosperity* was written jointly by the World Bank Group (WBG) and the International Monetary Fund, with substantive inputs from the Organisation for Economic Co-operation and Development. This year's report details, for the first time, progress toward the WBG's twin goals of ending extreme poverty by 2030 and promoting shared prosperity and assesses the state of policies and institutions that are important for achieving them. The report continues to monitor progress on the Millennium Development Goals (MDGs). Also for the first time, the report includes information about high-income countries. It finds that while gaps in living standards have been closing in many countries, the well-being of households in the bottom 40 percent, as measured by the non-income MDGs such as access to education and health services, remains below that of households in the top 60 percent. The focus of this year's report is on three elements needed to make growth more inclusive and sustainable: investment in human capital that favors the poor, the best use of safety nets, and steps to ensure the environmental sustainability of economic growth. These three elements are imperative to all countries' development strategies, and are also fundamental to global efforts to achieve the twin goals, the MDGs, and the Sustainable Development Goals that will succeed the MDGs. *Global Monitoring Report 2014/2015* was prepared in collaboration with regional development banks and other multilateral partners.

Intelligent Data Engineering and Automated Learning - IDEAL 2019 - Hujun Yin 2019-11-07

This two-volume set of LNCS 11871 and 11872 constitutes the thoroughly refereed conference proceedings of the 20th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2019, held in Manchester, UK, in November 2019. The 94 full papers presented were carefully reviewed and selected from 149 submissions. These papers provided a timely sample of the latest advances in data engineering and machine learning, from methodologies, frameworks, and algorithms to applications. The core themes of IDEAL 2019 include big data challenges, machine learning, data mining, information retrieval and management, bio-/neuro-informatics, bio-inspired models (including neural networks, evolutionary computation and swarm intelligence), agents and hybrid intelligent systems, real-world

applications of intelligent techniques and AI.

Mathematics and Computation in Music - Mariana Montiel 2019-05-31

This book constitutes the thoroughly refereed proceedings of the 7th International Conference on Mathematics and Computation in Music, MCM 2019, held in Madrid, Spain, in June 2019. The 22 full papers and 10 short papers presented were carefully reviewed and selected from 48 submissions. The papers feature research that combines mathematics or computation with music theory, music analysis, composition, and performance. They are organized in topical sections on algebraic and other abstract mathematical approaches to understanding musical objects; remanaging Riemann: mathematical music theory as "experimental philosophy"?; octave division; computer-based approaches to composition and score structuring; models for music cognition and beat tracking; pedagogy of mathematical music theory.

Digital Identity Management - Maryline Laurent 2015-04-02

In the past four decades, information technology has altered chains of value production, distribution, and information access at a significant rate. These changes, although they have shaken up numerous economic models, have so far not radically challenged the bases of our society. This book addresses our current progress and viewpoints on digital identity management in different fields (social networks, cloud computing, Internet of Things (IoT), with input from experts in computer science, law, economics and sociology. Within this multidisciplinary and scientific context, having crossed analysis on the digital ID issue, it describes the different technical and legal approaches to protect digital identities with a focus on authentication systems, identity federation techniques and privacy preservation solutions. The limitations of these solutions and research issues in this field are also discussed to further understand the changes that are taking place. Offers a state of the discussions and work places on the management of digital identities in various contexts, such as social networking, cloud computing and the Internet of Things Describes the advanced technical and legal measures to protect digital identities Contains a strong emphasis of authentication techniques, identity federation tools and technical protection of privacy

Exploratory Data Analysis with MATLAB - Wendy L. Martinez 2017-08-07

Praise for the Second Edition: "The authors present an intuitive and easy-to-read book. ... accompanied by many examples, proposed exercises, good references, and comprehensive appendices that initiate the reader unfamiliar with MATLAB." —Adolfo Alvarez Pinto, *International Statistical Review* "Practitioners of EDA who use MATLAB will want a copy of this book. ... The authors have done a great service by bringing together so many EDA routines, but their main accomplishment in this dynamic text is providing the understanding and tools to do EDA. —David A Huckaby, *MAA Reviews Exploratory Data Analysis (EDA)* is an important part of the data analysis process. The methods presented in this text are ones that should be in the toolkit of every data scientist. As computational sophistication has increased and data sets have grown in size and complexity, EDA has become an even more important process for visualizing and summarizing data before making assumptions to generate hypotheses and models. *Exploratory Data Analysis with MATLAB, Third Edition* presents EDA methods from a computational perspective and uses numerous examples and applications to show how the methods are used in practice. The authors use MATLAB code, pseudo-code, and algorithm descriptions to illustrate the concepts. The MATLAB code for examples, data sets, and the EDA Toolbox are available for download on the book's website. New to the Third Edition Random projections and estimating local intrinsic dimensionality Deep learning autoencoders and stochastic neighbor embedding Minimum spanning tree and additional cluster validity indices Kernel density estimation Plots for visualizing data distributions, such as beanplots and violin plots A chapter on visualizing categorical data

CMMR 2004 - Uffe Wiil 2005-02-14

This book constitutes the thoroughly refereed post-proceedings of the International Computer Music Modeling and Retrieval Symposium, CMMR 2004, held in Esbjerg, Denmark in May 2004. The 26 revised full papers presented were carefully selected during two rounds of reviewing and improvement. Due to the interdisciplinary nature of the area, the papers address a broad variety of topics. The papers are organized in topical sections on pitch and melody detection; rhythm, tempo, and beat; music generation and knowledge; music performance, rendering, and interfaces; music scores and synchronization; synthesis, timbre, and musical playing; music representation and retrieval; and music analysis.

The History of Medical Informatics in the United States - Morris F. Collen 2015-10-08

This is a meticulously detailed chronological record of significant events in the history of medical informatics and their impact on direct patient care and clinical research, offering a representative sampling of published contributions to the field. The History of Medical Informatics in the United States has been restructured within this new edition, reflecting the transformation medical informatics has undergone in the years since 1990. The systems that were once exclusively institutionally driven - hospital, multihospital, and outpatient information systems - are today joined by systems that are driven by clinical subspecialties, nursing, pathology, clinical laboratory, pharmacy, imaging, and more. At the core is the person - not the clinician, not the institution - whose health all these systems are designed to serve. A group of world-renowned authors have joined forces with Dr Marion Ball to bring Dr Collen's incredible work to press. These recognized leaders in medical informatics, many of whom are recipients of the Morris F. Collen Award in Medical Informatics and were friends of or mentored by Dr Collen, carefully reviewed, editing and updating his draft chapters. This has resulted in the most thorough history of the subject imaginable, and also provides readers with a roadmap for the subject well into later in the century.

Advances in Communication Systems and Networks - J. Jayakumari 2020-06-13

This book presents the selected peer-reviewed papers from the International Conference on Communication Systems and Networks (ComNet) 2019. Highlighting the latest findings, ideas, developments and applications in all areas of advanced communication systems and networking, it covers a variety of topics, including next-generation wireless technologies such as 5G, new hardware platforms, antenna design, applications of artificial intelligence (AI), signal processing and optimization techniques. Given its scope, this book can be useful for beginners, researchers and professionals working in wireless communication and networks, and other allied fields.

Water, megacities and global change - ARCEAU Ile-de-France 2019-04-30

Encyclopedia of Computer Graphics and Games - Newton Lee

Music Theory and Mathematics - Jack Moser Douthett editor 2008

Essays in diatonic set theory, transformation theory, and neo-Riemannian theory -- the newest and most exciting fields in music theory today. The essays in *Music Theory and Mathematics: Chords, Collections, and Transformations* define the state of mathematically oriented music theory at the beginning of the twenty-first century. The volume includes essays in diatonic set theory, transformation theory, and neo-Riemannian theory -- the newest and most exciting fields in music theory today. The essays constitute a close-knit body of work -- a family in the sense of tracing their descent from a few key breakthroughs by John Clough, David Lewin, and Richard Cohn in the 1980s and 1990s. They are integrated by the ongoing dialogue they conduct with one another. The editors are Jack Douthett, a mathematician and music theorist who collaborated extensively with Clough; Martha M. Hyde, a distinguished scholar of twentieth-century music; and Charles J. Smith, a specialist in tonal theory. The contributors are all prominent scholars, teaching at institutions such as Harvard, Yale, Indiana University, and the University at Buffalo. Six of them (Clampitt, Clough, Cohn, Douthett, Hook, and Smith) have received the Society for Music Theory's prestigious Publication Award, and one (Hyde) has received the ASCAP Deems Taylor Award. The collection includes the last paper written by Clough before his death, as well as the last paper written by David Lewin, an important music theorist also recently deceased. Contributors: David Clampitt, John Clough, Richard Cohn, Jack Douthett, Nora Engebretsen, Julian Hook, Martha Hyde, Timothy Johnson, Jon Kochavi, David Lewin, Charles J. Smith, and Stephen Soderberg.

Technology in Mathematics Teaching - Gilles Aldon 2019-07-01

This book comprises chapters featuring a state of the art of research on digital technology in mathematics education. The chapters are extended versions of a selection of papers from the Proceedings of the 13th International Conference on Technology in Mathematics Teaching (ICTMT-13), which was held in Lyon, France, from July 3rd to 6th. ICTMT-13 gathered together over one hundred participants from twenty countries sharing research and empirical results on the topical issues of technology and its potential to improve mathematics teaching and learning. The chapters are organised into 4 themed parts, namely

assessment in mathematics education and technology, which was the main focus of the conference, innovative technology and approaches to mathematics education, teacher education and professional development toward the technology use, and mathematics teaching and learning experiences with technology. In 13 chapters contained in the book, prominent mathematics educators from all over the world present the most recent theoretical and practical advances on these themes This book is of particular interest to researchers, teachers, teacher educators and other actors interested in digital technology in mathematics education.

Tonal Pitch Space - Fred Lerdahl 2004-12-09

Building on the foundation of Lerdahl and Jackendoff's influential *A Generative Theory of Tonal Music*, this volume presents a multidimensional model of diatonic and chromatic spaces that quantifies listeners' intuitions of the relative distances of pitches, chords, and keys from a given tonic. The model is employed to assign prolongational structure, represent paths through the space, and compute patterns of tension and attraction as musical events unfold, thereby providing a partial basis for understanding musical narration, expectation, and expression. Conceived as both a music-theoretic treatise and a contribution to the cognitive science of music, this book will be of interest to music theorists, musicologists, composers, computer musicians, and cognitive psychologists.

Mobile Computing, Applications, and Services - Gerard Memmi 2014-03-04

This book constitutes the thoroughly refereed post-conference proceedings of the 5th International Conference on Mobile Computing, Applications, and Services (MobiCASE 2013) held in Paris, France, in November 2013. The 13 full, 5 short and 9 poster papers were carefully reviewed and selected from 64 submissions, and are presented together with 3 papers from the Workshop on Near Field Communication for Mobile Applications (NFS). The conference papers are covering mobile applications development, mobile social networking, novel user experience and interfaces, mobile services and platforms such as Android, iOS, BlackBerry OS, Windows phone, Bada, mobile software engineering and mobile Web, mobile payments and M2M infrastructure, mobile services such as novel hardware add-ons, energy aware services or tools, NFC-based services, authentication services.

Software-Defined Radio for Engineers - Alexander M. Wyglinski 2018-04-30

Based on the popular Artech House classic, *Digital Communication Systems Engineering with Software-Defined Radio*, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

Digital Entrepreneurship - Mariusz Soltanifar 2020-11-13

This open access book explores the global challenges and experiences related to digital entrepreneurial activities, using carefully selected examples from leading companies and economies that shape world business today and tomorrow. Digital entrepreneurship and the companies steering it have an enormous global impact; they promise to transform the business world and change the way we communicate with each other. These companies use digitalization and artificial intelligence to enhance the quality of decisions and augment their business and customer operations. This book demonstrates how cloud services are continuing to evolve; how cryptocurrencies are traded in the banking industry; how platforms are created to commercialize business, and how, taken together, these developments provide new opportunities in the digitalized era. Further, it discusses a wide range of digital factors changing the way businesses operate, including artificial intelligence, chatbots, voice search, augmented and virtual reality, as well as cyber

threats and data privacy management. "Digitalization mirrors the Industrial Revolution's impact. This book provides a complement of perspectives on the opportunities emanating from such a deep seated change in our economy. It is a comprehensive collection of thought leadership mapped into a very useful framework. Scholars, digital entrepreneurs and practitioners will benefit from this timely work." Gina O'Connor, Professor of Innovation Management at Babson College, USA "This book defines and delineates the requirements for companies to enable their businesses to succeed in a post-COVID19 world. This book deftly examines how to accomplish and achieve digital entrepreneurship by leveraging cloud computing, AI, IoT and other critical technologies. This is truly a unique "must-read" book because it goes beyond theory and provides practical examples." Charlie Isaacs, CTO of Customer Connection at Salesforce.com, USA "This book provides digital entrepreneurs useful guidance identifying, validating and building their venture. The international authors developed new perspectives on digital entrepreneurship that can support to create impact ventures." Felix Staeritz, CEO FoundersLane, Member of the World Economic Forum Digital Leaders Board and bestselling author of FightBack, Germany

The Musical-Mathematical Mind - Gabriel Pareyon 2017-10-20

This book presents a deep spectrum of musical, mathematical, physical, and philosophical perspectives that have emerged in this field at the intersection of music and mathematics. In particular the contributed chapters introduce advanced techniques and concepts from modern mathematics and physics, deriving from successes in domains such as Topos theory and physical string theory. The authors include many of the leading researchers in this domain, and the book will be of value to researchers working in computational music, particularly in the areas of counterpoint, gesture, and Topos theory.

Mathematics and Computation in Music - Tom Collins 2015-06-15

This book constitutes the thoroughly refereed proceedings of the 5th International Conference on Mathematics and Computation in Music, MCM 2015, held in London, UK, in June 2015. The 24 full papers and 14 short papers presented were carefully reviewed and selected from 64 submissions. The papers feature research that combines mathematics or computation with music theory, music analysis, composition, and performance. They are organized in topical sections on notation and representation,

music generation, patterns, performance, similarity and contrast, post-tonal music analysis, geometric approaches, deep learning, and scales.

Educational Research and Innovation Innovating Education and Educating for Innovation The Power of Digital Technologies and Skills - OECD 2016-09-26

OECD's Innovation Strategy calls upon all sectors in the economy and society to innovate in order to foster productivity, growth and well-being. Education systems are critically important for innovation through the development of skills that nurture new ideas and technologies.

OECD Skills Outlook 2019 Thriving in a Digital World - OECD 2019-05-09

Economies and societies are undergoing digital transformations that bring both opportunities and challenges and countries' preparedness to seize the benefits of a digital world is largely dependent on the skills of their population.

Advances in Emerging Trends and Technologies - Miguel Botto-Tobar 2019-10-19

This book constitutes the proceedings of the 1st International Conference on Advances in Emerging Trends and Technologies (ICAETT 2019), held in Quito, Ecuador, on 29-31 May 2019, jointly organized by Universidad Tecnológica Israel, Universidad Técnica del Norte, and Instituto Tecnológico Superior Rumiñahui, and supported by SNOTRA. ICAETT 2019 brought together top researchers and practitioners working in different domains of computer science to share their expertise and to discuss future developments and potential collaborations. Presenting high-quality, peer-reviewed papers, the book discusses the following topics: Technology Trends Electronics Intelligent Systems Machine Vision Communication Security e-Learning e-Business e-Government and e-Participation

Ubiquitous Music - Damián Keller 2014-11-27

This is the first monograph dedicated to this interdisciplinary research area, combining the views of music, computer science, education, creativity studies, psychology, and engineering. The contributions include introductions to ubiquitous music research, featuring theory, applications, and technological development, and descriptions of permanent community initiatives such as virtual forums, multi-institutional research projects, and collaborative publications. The book will be of value to researchers and educators in all domains engaged with creativity, computing, music, and digital arts.