

Java Code For Hidden Markov Model

The success of all-IP networking and wireless technology has changed the ways of living the people around the world. The progress of electronic integratrn and wireless communications is going to pave the way to offer people the access to the wireless networks on the fly, based on which all electronic devices will be able to exchange the information with each other in ubiquitous way whenever necessary. The aim of the volume is to provide latest research findings, innovative research results, methods and development techniques from both theoretical and practical perspectives related to the emerging areas of broadband and wireless computing. This proceedings volume presents the results of the 11th International Conference on Broad-Band Wireless Computing, Communication And Applications (BWCCA-2016), held November 5-7, 2016, at Soonchunhyang University, Asan, Korea.

The study of molecular biological experiments involving high-throughput techniques and in silico approaches to analyze potential drug targets. These in silico methods are often predictive, yielding faster and less expensive analyses than traditional in vivo or in vitro procedures. In Silico Technologies in Drug Target Identification and Validation addresses the challenge of testing a growing number of new potential targets and reviews currently available in silico approaches for identifying and validating these targets. The book emphasizes computational tools, public and commercial databases, mathematical methods, and software for interpreting complex experimental data. The book describes how these tools are used to visualize a target structure, identify binding sites, and predict behavior. World-renowned researchers cover many topics not typically found in most informatics books, including functional annotation, siRNA design, pathways, text mining, ontologies, systems biology, database management, data pipelining, and pharmacogenomics. Covering issues that range from prescreening target selection to genetic modeling and valuable data integration, In Silico Technologies in Drug Target Identification and Validation is a self-contained and practical guide to the various computational tools that can accelerate the identification and validation stages of drug target discovery and determine the biological functionality of potential targets more effectively. Daniel E. Levy, editor of the Drug Discovery Series, is the founder of DEL BioPharma, a consulting service for drug discovery programs. He also maintains a blog that explores organic chemistry.

The book focuses on the integration of intelligent communication systems, control systems, and devices related to all aspects of engineering and sciences. It contains high-quality research papers presented at the 2nd International conference, ICICCD 2017, organized by the Department of Electronics, Instrumentation and Control Engineering of University of Petroleum and Energy Studies, Dehradun on 15 and 16 April, 2017. The volume broadly covers recent advances of intelligent communication, intelligent control and intelligent devices. The work presented in this book is original research work, findings and practical development experiences of researchers, academicians, scientists and industrial practitioners.

This book constitutes the refereed proceedings of the 6th International Symposium on Security in Computing and Communications, SSCC 2018, held in Bangalore, India, in September 2018. The 34 revised full papers and 12 revised short papers presented were carefully reviewed and selected from 94 submissions. The papers cover wide research fields including cryptography, database and storage security, human and societal aspects of security and privacy.

Chaos, Fractals, Cellular Automata, Neural Networks, Genetic Algorithms, Gene Expression Programming, Support Vector Machine, Wavelets, Hidden Markov Models, Fuzzy Logic with C++, Java and SymbolicC++ Programs

Introduction to SinJAR (a New Tool for Reverse Engineering Java Applications) and Tracing Its Malicious Actions Using Hidden Markov Models

Chaos, Fractals, Cellular Automata, Genetic Algorithms, Gene Expression Programming, Support Vector Machine, Wavelets, Hidden Markov Models, Fuzzy Logic with C++, Java and SymbolicC++ Programs

Noise Reduction by Wavelet Thresholding

Proceedings of ESAI 2019, Fez, Morocco

Concepts, Methodologies, Tools, and Applications

Embedded Systems and Artificial Intelligence

This book includes the post-conference proceedings of the 22nd RoboCup International Symposium, held in Montreal, QC, Canada, in June 2018. The 32 full revised papers and 11 papers from the winning teams presented were carefully reviewed and selected from 51 submissions. This book highlights the approaches of champion teams from the competitions and documents the proceedings of the 22nd annual RoboCup International Symposium. Due to the complex research challenges set by the RoboCup initiative, the RoboCup International Symposium offers a unique perspective for exploring scientific and engineering principles underlying advanced robotic and AI systems.

This book will focus on utilizing statistical modelling of the software source code, in order to resolve issues associated with the software development processes. Writing and maintaining software source code is a costly business; software developers need to constantly rely on large existing code bases. Statistical modelling identifies the patterns in software artifacts and utilize them for predicting the possible issues.

Data Science and Big Data Analytics is about harnessing the power of data for new insights. The book covers the breadth of activities and methods and tools that Data Scientists use. The content focuses on concepts, principles and practical applications that are applicable to any industry and technology environment, and the learning is supported and explained with examples that you can replicate using open-source software. This book will help you: Become a contributor on a data science team Deploy a structured lifecycle approach to data analytics problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification

Corresponding data sets are available at www.wiley.com/go/9781118876138. Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

This book features high-quality papers presented at the International Conference on Computational Intelligence and Communication Technology (ICICT 2019) organized by ABES Engineering College, Ghaziabad, India, and held from February 22 to 23, 2019. It includes the latest advances and research findings in fields of computational science and communication such as communication & networking, web & informatics, hardware and software designs, distributed & parallel processing, advanced software engineering, advanced database management systems and bioinformatics. As such, it is of interest to research scholars, students, and engineers around the globe.

Proceedings of ICICCD 2017

The Nonlinear Workbook

Intelligent Virtual Agents

In Silico Technologies in Drug Target Identification and Validation

Natural Language Processing with Java and LingPipe Cookbook

Chaos, Fractals, Cellular Automata, Neural Networks, Genetic Algorithms, Gene Expression Programming, Support Vector Machine, Wavelets, Hidden Markov Models, Fuzzy Logic with C++, Java and SymbolicC++ Programs Fourth Edition

Chaos, Fractals, Cellular Automata, Genetic Algorithms, Gene Expression Programming, Support Vector Machine, Wavelets, Hidden Markov Models, Fuzzy Logic with C++, Java and SymbolicC++ Programs Fifth Edition

Tackling globalization is a great challenge – it is both extremely beneficial and essentially problematic. This comprehensive, multidisciplinary study confronts this ambivalence through the use of computer simulation. It discusses the findings of social interaction and social simulation through the use of understandable global examples. Readers can use this book as a tool to outline significant aspects of intercultural simulation and highlight the issues that need to be considered in the reader’s analysis. The author leads the reader via sequential narration from a colloquial description of intercultural situations to final simulation prototypes; each step is accompanied by descriptive comments and program code. Social Interaction, Globalization and Computer-aided Analysis shows the reader how to acquire intercultural data from seemingly inconceivable information sources. Researchers and software developers engaged in interdisciplinary research projects in the field of Human-Computer Interaction will find this book to be a useful companion in their work. Alexander Osherenko is the founder of the start-up company Socioware Development, which implements psychologically-, sociologically- and culturally-aware software that scrutinizes information based on the findings of the cognitive sciences. Solutions created by Socioware Development can be implemented across a vast spectrum of industries, including car manufacturing, insurance and banking, internet search engines and e-retailers.

This book is for experienced Java developers with NLP needs, whether academics, industrialists, or hobbyists. A basic knowledge of NLP terminology will be beneficial. Welcome to the Proceedings of the 8th International Conference on Intelligent Virtual Agents, which was held on September 1-3, 2008 in Tokyo, Japan. Intelligent virtual agents (IVAs) are autonomous, graphically embodied agents in a virtual environment that are able to interact intelligently with human users, otherIVAs,andtheenvironment. TheIVAconferenceseriesisthemajornnual meeting of the intelligent virtual agents community, attracting interdisciplinary minded researchers and practitioners from embodied cognitive modeling, artificial intelligence, computer graphics, animation, virtual worlds, games, natural language processing, and human-computer interaction. The origin of the IVA conferences dates from a successful workshop on Intelligent Virtual Environments held in Brighton, UK, at the 13th European Conference on Artificial Intelligence (ECAI 2008). This workshop was followed by a second one held in Salford in Manchester, UK in 1999. Subsequent events took place in Madrid, Spain in 2001, Irsee, Germany 2003 and Kos, Greece in 2005. Starting in 2006, IVA moved from being a biennial to an annual event and became a full-fedged international conference, held in Marina del Rey, Calif- nia, USA in 2006, and Paris, France in 2007. From 2005, IVA also hosted the Gathering of Animated Lifelike Agents (GALA), an annual festival to showcase the latest animated lifelike agents created by university students and academic or industrial research groups. IVA 2008was the 71sttime thatIVA wasorganizedinAsia andwearehappy to report that a large number of papers were submitted. IVA 2008 received 94 submissions from Europe, the Americas and Asia.

Traditionally, research on model-driven engineering (MDE) has mainly focused on the use of models at the design, implementation, and verification stages of development. This work has produced relatively mature techniques and tools that are currently being used in industry and academia. However, software models also have the potential to be used at runtime, to monitor and verify particular aspects of runtime behavior, and to implement self-* capabilities (e.g., adaptation technologies used in self-healing, self-managing, self-optimizing systems). A key benefit of using models at runtime is that they can provide a richer semantic base for runtime decision-making related to runtime system concerns associated with autonomic and adaptive systems. This book is one of the outcomes of the Dagstuhl Seminar 11481 on models@run.time held in November/December 2011, discussing foundations, techniques, mechanisms, state of the art, research challenges, and applications for the use of runtime models. The book comprises four research roadmaps, written by the original participants of the Dagstuhl Seminar over the course of two years following the seminar, and seven research papers from experts in the area. The roadmap papers provide insights to key features of the use of runtime models and identify the following research challenges: the need for a reference architecture, uncertainty tackled by runtime models, mechanisms for leveraging runtime models for self-adaptive software, and the use of models at runtime to address assurance for self-adaptive systems.

4th International Symposium, NFM 2012, Norfolk, VA, USA, April 3-5, 2012. Proceedings

NASA Formal Methods

Volume 1

Chaos, Fractals, Cellular Automata, Genetic Algorithms, Gene Expression Programming, Support Vector Machine, Wavelets, Hidden Markov Models, Fuzzy Logic with C++, Java and SymbolicC++ Programs Sixth Edition

Chaos, Fractals, Cellular Automata, Genetic Algorithms, Gene Expression Programming, Support Vector Machine, Wavelets, Hidden Markov Models, Fuzzy Logic with C++, Java and Symbolic C++ Programs

6th IFIP WG 12.5 International Conference, AIAI 2010, Larnaca, Cyprus, October 6-7, 2010. Proceedings

An Artificial Intelligence Approach

This book provides an integrated framework for natural and artificial cognition by highlighting the fundamental role played by the cognitive architecture in the dialectics with the surrounding environment and consequently in the definition of a particular meaningful world. This book is also about embodied and non-embodied artificial systems, cognitive architectures that are human constructs, meant to be able to populate the human world, capable of identifying different life contexts and replicating human patterns of perform tasks in a human-like way. By identifying the essential phenomena at the core of all forms of cognition, the book addresses the topic of design of artificial cognitive architectures in the domains of robotics and artificial life. Moving from mere bio-inspired design methodology it aims to open a pathway to semiotically determined design.

Master Thesis in the field of Computer Science, grade: 1.0, University of Sunderland (School of Computing and Technology), language: English, abstract: While reading documents, you often encounter text passages advising you to refer to other documents for more information about a specific topic. These references to other documents are particularly common in technical documents, written for the sole purpose of providing the reader with as much relevant information as possible, while a system are interrelated. I.e. which other documents a document refers to or is referred by, can be extremely helpful when trying to get access to relevant information. A typical example of such a "knowledge net" providing information about document relations is CiteSeer, a digital library of academic literature. For each document in the library system, CiteSeer displays lists of related documents, such as a list of documents that the current document cites as well as a list of documents that the current document is reading academic literature but could also assist a reader of technical documents stored in a company's document management system. The idea was thus to extend an existing document management system by displaying, for each document stored in the system, a list of links to documents that the current document refers to. As information about how the documents in this system are interrelated was not available, the focus of the project underlying this thesis was on the first step towards solving this task: au names mentioned in a document have been extracted, the next step would then be to search for these documents in the system's database and, in case they have been successfully found, create links to the respective documents. The outcome of the project was a system that performs the extraction task. It is based on Conditional Random Fields, a machine learning technique introduced by Lafferty et al. (2001), and is able to extract document names from unseen documents, achieving high precision scores (88%) package provided by Sarawagi & Cohen (2005), which was adapted and extended to suit the nature of the task. As the approach is based on supervised learning, the project also involved the generation of appropriate training data.

The Nonlinear Workbook provides a comprehensive treatment of all the techniques in nonlinear dynamics together with C]+ Java and SymbolicC++ implementations. The book not only covers the theoretical aspects of the topics but also provides the practical tools. To understand the material, more than 100 worked out examples and 160 ready to run programs are included. Each chapter provides a collection of interesting problems. New topics added to the 6th edition are Swarm Intelligence, Quantum Cellular Automata, Banach fixed point theorem and applications, tau-wavelets of Haar, Boolean derivatives and applications, and Cartan forms and Lagrangian.

The Nonlinear Workbook provides a comprehensive treatment of all the techniques in nonlinear dynamics together with C++ Java and SymbolicC++ implementations. The book not only covers the theoretical aspects of the topics but also provides the practical tools. To understand the material, more than 100 worked out examples and 160 ready to run programs are included. Each chapter provides a collection of interesting problems. New topics added to the 6th edition are Swarm Intelligence, Quantum Cellular Automata, Banach fixed point theorem and applications, tau-wavelets of Haar, Boolean derivatives and applications, and Cartan forms and Lagrangian. Request Inspection Copy

A Guide to Common Tools and Databases

Handbook of Reliability Engineering

Automatic extraction and processing of document references

With Examples in R and Python

Sound, Music, and Motion

Computational Psychometrics: New Methodologies for a New Generation of Digital Learning and Assessment

Artificial Intelligence in the 21st Century

This new edition provides a comprehensive, colorful, up-to-date, and accessible presentation of AI without sacrificing theoretical foundations. It includes numerous examples, applications, full color images, and human interest boxes to enhance student interest. New chapters on robotics and machine learning are now included. Advanced topics cover neural nets, genetic algorithms, natural language processing, planning, and complex board games. A companion DVD is provided with resources, applications, and figures from the book. Numerous instructors' resources are available upon adoption. eBook Customers: Companion files are available for downloading with order number/proof of purchase by writing to the publisher at info@merclearning.com. FEATURES: • Includes new chapters on robotics and machine learning and new sections on speech understanding and metaphor in NLP • Provides a comprehensive, colorful, up to date, and accessible presentation of AI without sacrificing theoretical foundations • Uses numerous examples, applications, full color images, and human interest boxes to enhance student interest •

Introduces important AI concepts e.g., robotics, use in video games, neural nets, machine learning, and more thorough practical applications • Features over 300 figures and color images with worked problems detailing AI methods and solutions to selected exercises • Includes DVD with resources, simulations, and figures from the book • Provides numerous instructors' resources, including: solutions to exercises, Microsoft PP slides, etc.

"In this paper, we are proposing a new tool for reversing Java applications called SinJAR. SinJAR is a lightweight software written in Java aiming at inspecting bytecode at compile time and producing the structure tree of a targeted application. Besides, it is able to detect vulnerabilities and security weaknesses inside the Java code. SinJAR can be used for two purposes. The first one is sane and consists in using it to verify whether or not an application is safe and compliant with its specification. The second one is malicious and consists in spying applications through their bytecode and showing the user a readable paper, we will show how to detect SinJAR malicious actions after showing the capabilities of the tool through few ad hoc attack scenarios conducted in a real military context".-Abstract.

In recent decades, the study of signal processing has become increasingly complex, with new techniques and applications constantly being developed for the processing, transformation, and interpretation of signals. This book provides a comprehensive introduction to the traditional and modern methods used in signal processing. It is designed to impart to the reader the mathematical techniques used in modelling signals and systems, encompassing standard mathematical tools as well as newer techniques such as wavelets and neural networks. C++ and Java implementations furnish these descriptions. The book offers an excellent balance of theory and application, beginning with a complete framework of discrete-time signal processing.

This book constitutes the refereed proceedings of the 8th International Conference on Intelligent Data Analysis, IDA 2009, held in Lyon, France, August 31 – September 2, 2009. The 33 revised papers, 18 full oral presentations and 15 poster and short oral presentations, presented were carefully reviewed and selected from almost 80 submissions. All current aspects of this interdisciplinary field are addressed; for example interactive tools to guide and support data analysis in complex scenarios, increasing availability of automatically collected data, tools that intelligently support and assist human analysts, how to control clustering results and isotonic classification trees. In general the areas covered include statistics, machine learning, data mining, classification and pattern recognition, clustering, applications, modeling, and interactive dynamic data visualization.

Mathematical Tools in Signal Processing with C++ & Java Simulations

Proceedings of CICT 2019

Statistical Modeling

22nd International Conference, UMAP 2014, Aalborg, Denmark, July 7-11, 2014. Proceedings

8th International Symposium on Intelligent Data Analysis, IDA 2009, Lyon, France, August 31 - September 2, 2009. Proceedings

Intelligent Support for Computer Science Education

8th International Conference, IVA 2008, Tokyo, Japan, September 1-3, 2008. Proceedings

The study of nonlinear dynamical systems has advanced tremendously in the last 20 years, making a big impact on science and technology. This book provides all the techniques and methods used in nonlinear dynamics. The concepts and underlying mathematics are discussed in detail. The numerical and symbolic methods are implemented in C++, SymbolicC++ and Java. Object-oriented techniques are also applied. The book contains more than 150 ready-to-run programs. The text has also been designed for a one-year course at both the junior and senior levels in nonlinear dynamics. The topics discussed in the book are part of e-learning and distance learning courses conducted by the International School for Scientific Computing, University of Johannesnburg.

An effective reliability programme is an essential component of every product's design, testing and efficient production. From the failure analysis of a microelectronic device to software fault tolerance and from the accelerated life testing of mechanical components to hardware verification, a common underlying philosophy of reliability applies. Defining both fundamental and applied work across the entire systems reliability arena, this state-of-the-art reference presents methodologies for quality, maintainability and dependability. Featuring: Contributions from 60 leading reliability experts in academia and industry giving comprehensive and authoritative coverage. A distinguished international Editorial Board ensuring clarity and precision throughout. Extensive references to the theoretical foundations, recent research and future directions described in each chapter. Comprehensive subject index providing maximum utility to the reader. Applications and examples across all branches of engineering including IT, power, automotive and aerospace sectors. The handbook's cross-disciplinary scope will ensure that it serves as an indispensable tool for researchers in industrial, electrical, electronics, computer, civil, mechanical and systems engineering. It will also aid professional engineers to find creative reliability solutions and management to evaluate systems reliability and to improve processes. For student research projects it will be the ideal starting point whether addressing basic questions in communications and electronics or learning advanced applications in micro-electro-mechanical systems (MEMS), manufacturing and high-assurance engineering systems.

This book includes a selection of papers from the 2018 World Conference on Information Systems and Technologies (WorldCIST'18), held in Naples, Italy on March27-29, 2018. WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and the challenges of modern information systems and technologies research together with their technological development and applications. The main topics covered are: A) Information and Knowledge Management; B) Organizational Models and Information Systems; C) Software and Systems Modeling; D) Software Systems, Architectures, Architectures and Tools; E) Multimedia Systems and Applications; F) Computer Networks, Mobility and Pervasive Systems; G) Intelligent and Decision Support Systems; H) Big Data Analytics and Applications; I) Human-Computer Interaction; J) Ethics, Computers & Security; K) Health Informatics; L) Information Technologies in Education; M) Information Technologies in Radiocommunications; N) Technologies for Biomedical Applications.

Wavelet methods have become a widely spread tool in signal and image process ing tasks. This book deals with statistical applications, especially wavelet based smoothing. The methods described in this text are examples of non-linear and non parametric curve fitting. The book aims to contribute to the field both among statis ticians and in the application oriented world (including but not limited to signals and images). Although it also contains extensive analyses of some existing methods, it has no intention whatsoever to be a complete overview of the field: the text would show too much bias towards my own algorithms. I rather present new material and own insights in the questions involved with wavelet based noise reduction. On the other hand, the presented material does cover a whole range of methodologies, and in that sense, the book may serve as an introduction into the domain of wavelet smoothing. Throughout the text, three main properties show up ever again: sparsity, locality and multiresolution. Nearly all wavelet based methods exploit at least one of these properties in some or the other way. These notes present research results of the Belgian Programme on Interuniver sity Poles of Attraction, initiated by the Belgian State, Prime Minister's Office for Science, Technology and Culture. The scientific responsibility rests with me. My research was financed by a grant (1995 - 1999) from the Flemish Institute for the Promotion of Scientific and Technological Research in the Industry (IWT).

6th International Symposium, SSCC 2018, Bangalore, India, September 19–22, 2018, Revised Selected Papers

Discovering, Analyzing, Visualizing and Presenting Data

A CRF-based approach

Research and Applications in Global Supercomputing

Artificial Intelligence Applications and Innovations

Data Science and Big Data Analytics

Proceedings of the 11th International Conference On Broad-Band Wireless Computing, Communication and Applications (BWCCA–2016) November 5–7, 2016, Korea

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.

The abundance of information and increase in computing power currently enables researchers to tackle highly complex and challenging computational problems. Solutions to such problems are now feasible using advances and innovations from the area of Artificial Intelligence. The general focus of the AIAI conference is to provide insights on how Artificial Intelligence may be applied in real-world situations and serve the study, analysis and modeling of theoretical and practical issues. This volume contains papers selected for presentation at the 6th IFIP Conference on Artificial Intelligence Applications and Innovations (AIAI 2010) and held in Larnaca, Cyprus, during October 6-7, 2010. IFIP AIAI 2010 was co-organized by the University of Cyprus and the Cyprus University of Technology and was sponsored by the Cyprus Tourism Organization. AIAI 2010 is the official conference of the WG12.5 "Artificial Intel- gence Applications" working group of IFIP TC12, the International Federation for Information Processing Technical Committee on Artificial Intelligence (AI). AIAI is a conference that grows in significance every year attracting researchers from different countries around the globe. It maintains high quality, standards and welcomes research papers describing technical advances and engineering and ind- trial applications of intelligent systems. AIAI 2010 was not confined to introducing how AI may be applied in real-life situations, but also included innovative methods, techniques, tools and ideas of AI expressed at the algorithmic or systemic level.

Biotechnology can be defined as the manipulation of biological process, systems, and organisms in the production of various products. With applications in a number of fields such as biomedical, chemical, mechanical, and civil engineering, research on the development of biologically inspired materials is essential to further advancement. Biotechnology: Concepts, Methodologies, Tools, and Applications is a vital reference source for the latest research findings on the application of biotechnology in medicine, engineering, agriculture, food production, and other areas. It also examines the economic impacts of biotechnology use. Highlighting a range of topics such as pharmacogenomics, biomedical engineering, and bioinformatics, this multi-volume book is ideally designed for engineers, pharmacists, medical professionals, practitioners, academicians, and researchers interested in the applications of biotechnology. Rapidly generating and processing large amounts of data, supercomputers are currently at the leading edge of computing technologies. Supercomputers are employed in many different fields, establishing them as an integral part of the computational sciences. Research and Applications in Global Supercomputing investigates current and emerging research in the field, as well as the application of this technology to a variety of areas. Highlighting a broad range of concepts, this publication is a comprehensive reference source for professionals, researchers, students, and practitioners interested in the various topics pertaining to supercomputing and how this technology can be applied to solve problems in a multitude of disciplines.

Handbook of Research on Cyber Crime and Information Privacy

Spoken Language Support for Software Development

A Practical Guide to Developing Social Simulation

Foundations, Applications, and Roadmaps

Sequence Analysis in a Nutshell: A Guide to Tools

Guide to Vulnerability Analysis for Computer Networks and Systems

Social Interaction, Globalization and Computer-Aided Analysis

This book constitutes the refereed proceedings of the Fourth International Symposium on NASA Formal Methods, NFM 2012, held in Norfolk, VA, USA, in April 2012. The 36 revised regular papers presented together with 10 short papers, 3 invited talks were carefully reviewed and selected from 93 submissions. The topics are organized in topical sections on theorem proving, symbolic execution, model-based engineering, real-time and stochastic systems, model checking, abstraction and abstraction refinement, compositional verification techniques, static and dynamic semantics, requirements analysis and applications of formal techniques.

This book constitutes the thoroughly refereed proceedings of the 22nd International Conference on User Modeling, Adaption and Personalization, held in Aalborg, Denmark, in July 2014. The 23 long and 19 short papers of the research paper track were carefully reviewed and selected from 146 submissions. The papers cover the following topics: large scale personalization, adaptation and recommendation; Personalization for individuals, groups and populations; modeling individuals, groups and communities; Web dynamics and personalization; adaptive web-based user awareness and control; Affective aspects: UMAP underpinning by psychology models; privacy; perceived security and trust; behavior change and persuasion.

Intelligent Support for Computer Science Education presents the authors' research journey into the effectiveness of human tutoring, with the goal of developing educational technology that can be used to improve introductory Computer Science education at the undergraduate level. Nowadays, Computer Science education is central to the concerns of society, as attested by the penetration of information technology in all aspects of our lives; consequently, in the last few years interest in Computer Science at all levels of schooling, especially at the college level as data structures and recursion are difficult for novices to grasp. Key Features: Includes a comprehensive and succinct overview of the Computer Science education landscape at all levels of education. Provides in-depth analysis of one-on-one human tutoring dialogues in introductory Computer Science at college level. Describes a scalable, plug-in based Intelligent Tutoring System architecture, portable to different topics and pedagogical strategies. Presents systematic, controlled evaluation of different versions of the system in ecologically valid settings (18 students behavior when interacting with the system). This book will be of special interest to the Computer Science education community, specifically instructors of introductory courses at the college level, and Advanced Placement (AP) courses at the high school level. Additionally, all the authors' work is relevant to the Educational Technology community, especially to those working in Intelligent Tutoring Systems, their interfaces, and Educational Data Mining, in particular as applied to human-human pedagogical interactions and to user interaction with educational systems.

This work pulls together all of the vital information about the most commonly used databases, analytical tools, and tables used in sequence analysis.

Biotechnology: Concepts, Methodologies, Tools, and Applications

Models@run.time

Software Source Code

Intelligent Communication, Control and Devices

User Modeling, Adaptation and Personalization

Advances on Broad-Band Wireless Computing, Communication and Applications

Cognitive Architectures

This professional guide and reference examines the challenges of assessing security vulnerabilities in computing infrastructure. Various aspects of vulnerability assessment are covered in detail, including recent advancements in reducing the requirement for expert knowledge through novel applications of artificial intelligence. The work also offers a series of case studies on how to develop and perform vulnerability assessment techniques using start-of-the-art intelligent mechanisms. Topics and features: provides tutorial activities and thought-provoking questions in each chapter, together with numerous case studies; introduces the fundamentals of vulnerability assessment, and reviews the state of the art of research in this area; discusses vulnerability assessment frameworks, including frameworks for industrial control and cloud systems; examines a range of applications that make use of artificial intelligence to enhance the vulnerability assessment processes; presents visualisation techniques that can be used to assist the vulnerability assessment process. In addition to serving the needs of security practitioners and researchers, this accessible volume is also ideal for students and instructors seeking a primer on artificial intelligence for vulnerability assessment, or a supplementary text for courses on computer security, networking, and artificial intelligence.

This book constitutes the thoroughly refereed post-conference proceedings of the 10th International Symposium on Computer Music Modeling and Retrieval, CMMR 2013, held in Marseille, France, in October 2013. The 38 conference papers presented were carefully reviewed and selected from 94 submissions. The chapters reflect the interdisciplinary nature of this conference with following topics: augmented musical instruments and gesture recognition, music and emotions: representation, recognition, and audience/performers studied, the art of sonification, when auditory cues shape human sensorimotor performance, music and sound data mining, interactive sound synthesis, non-stationarity, dynamics and mathematical modeling, image-sound interaction, auditory perception and cognitive inspiration, and modeling of sound and music computational musology.

This book gathers selected research papers presented at the First International Conference on Embedded Systems and Artificial Intelligence (ESAI 2019), held at Sidii Mohamed Ben Abdellah University, Fez, Morocco, on 2–3 May 2019. Highlighting the latest innovations in Computer Science, Artificial Intelligence, Information Technologies, and Embedded Systems, the respective papers will encourage and inspire researchers, industry professionals, and policymakers to put these methods into practice.

The Nonlinear Workbook provides a comprehensive treatment of all the techniques in nonlinear dynamics together with C++, Java and SymbolicC++ implementations. The book not only covers the theoretical aspects of the topics but also provides the practical tools. To understand the material, more than 100 worked out examples and 150 ready to run programs are included. New topics added to the fifth edition are Langton's ant, chaotic data communication, self-controlling feedback, differential forms and optimization, T-norms and T-conorms with applications.

Advances in Computational Intelligence and Communication Technology
RoboCup 2018: Robot World Cup XXII
Advances in Intelligent Data Analysis VIII
Security in Computing and Communications
10th International Symposium, CMMR 2013, Marseille, France, October 15-18, 2013. Revised Selected Papers
Trends and Advances in Information Systems and Technologies
Pedagogy Enhanced by Artificial Intelligence