Implementation Of Gabor Filter Code In Xilinx

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Genetic and Evolutionary Computation for Image Processing and Analysis Stefano Cagnoni 2008

Electrical & Electronics Abstracts 1997

Field-Programmable Logic and Applications Gordon Brebner 2001-08-15 This book constitutes the refereed proceedings of the 11th International Conference on Field-Programmable Logic and Application, FPL 2001, held in Belfast, Northern Ireland, UK, in August 2001. The 56 revised full papers and 15 short papers presented were carefully reviewed and selected from a total of 117 submissions. The book offers topical sections on architectural framework, place and route, architecture, DSP, synthesis, encryption, runtime reconfiguration, graphics and vision, networking, processor interaction, applications, methodology, loops and systolic, image processing, faults, and arithmetic.

Synthesis and Optimization of DSP Algorithms George Constantinides 2007-05-08 Synthesis and Optimization of DSP Algorithms describes approaches taken to synthesising structural hardware descriptions of digital circuits from high-level descriptions of Digital Signal Processing (DSP) algorithms. The book contains: -A tutorial on the subjects of digital design and architectural synthesis, intended for DSP engineers, -A tutorial on the subject of DSP, intended for digital designers, -A discussion of techniques for estimating the peak values likely to occur in a DSP system, thus enabling an appropriate signal scaling. Analytic techniques, simulation techniques, and hybrids are discussed. The applicability of different analytic approaches to different types of DSP design is covered, -The development of techniques to optimise the precision requirements of a DSP algorithm, aiming for efficient implementation in a custom parallel processor. The idea is to trade-off numerical accuracy for area or power-consumption advantages. Again, both analytic and simulation

techniques for estimating numerical accuracy are described and contrasted. Optimum and heuristic approaches to precision optimisation are discussed, -A discussion of the importance of the scheduling, allocation, and binding problems, and development of techniques to automate these processes with reference to a precision-optimized algorithm, -Future perspectives for synthesis and optimization of DSP algorithms.

Handbook of Signal Processing Systems Shuvra S. Bhattacharyya 2013-06-20 Handbook of Signal Processing Systems is organized in three parts. The first part motivates representative applications that drive and apply state-of-the art methods for design and implementation of signal processing systems; the second part discusses architectures for implementing these applications; the third part focuses on compilers and simulation tools, describes models of computation and their associated design tools and methodologies. This handbook is an essential tool for professionals in many fields and researchers of all levels.

IEEE Symposium on FPGAs for Custom Computing Machines Peter Athanas 1995

Noblesse Workshop on Non-Linear Model Based Image Analysis Stephen Marshall 1998 This book contains papers presented at the Noblesse Workshop on Non-linear model based image analysis held in Glasgow, 1-3 July 1998. Current models have mainly been developed for image coding purposes. They are rather simple and far away from being optimal and do not contribute to more complex tasks like those needed in image databases. This book meets the challenging tasks in multimedia applications by discussing new sophisticated model-based schemes for a high-level description of images and image sequences. Novel results are covered in the papers presented in this book, opening new potential fields of application like the support for building databases in multimedia applications, image archiving and image sequence coding, including such topics as:- 3D Image Models; Image/Video Restoration; Segmentation and Object Oriented Coding; Colour Image Processing; Database Retrieval; Image Models; Video Pre- and Post processing.

Advances in Neural Information Processing Systems 16 Sebastian Thrun 2004 Papers presented at the 2003 Neural Information Processing Conference by leading physicists, neuroscientists, mathematicians, statisticians, and computer scientists. The annual Neural Information Processing (NIPS) conference is the flagship meeting on neural computation. It draws a diverse group of attendees -- physicists, neuroscientists, mathematicians, statisticians, and computer scientists. The presentations are interdisciplinary, with contributions in algorithms, learning theory, cognitive science, neuroscience, brain imaging, vision, speech and signal processing, reinforcement learning and control, emerging technologies, and applications. Only thirty percent of the papers submitted are accepted for presentation at NIPS, so the quality is exceptionally high. This volume contains all the papers presented at the 2003 conference.

Photoplethysmography Panicos A. Kyriacou 2021-11-03 Photoplethysmography: Technology, Signal Analysis, and Applications is the first comprehensive volume on the theory, principles, and technology (sensors and electronics) of photoplethysmography (PPG). It provides a detailed description of the current state-of-the-art technologies/optical components enabling the extreme miniaturization of such sensors, as well as comprehensive coverage of PPG signal analysis techniques including machine learning and artificial intelligence. The book also outlines the huge range of PPG applications in healthcare, with a strong focus on the contribution of PPG in wearable sensors and PPG for cardiovascular assessment. Presents the underlying principles and technology surrounding PPG Includes applications for healthcare and wellbeing Focuses on PPG in wearable sensors and devices Presents advanced signal analysis techniques Includes cutting-edge research, applications and future directions

Nano-CMOS Circuit and Physical Design Ban Wong 2005-04-08 Based on the authors' expansive collection of notes taken over the years, Nano-CMOS Circuit and Physical Design bridges the gap between physical and circuit design and fabrication processing, manufacturability, and yield. This innovative book covers: process technology, including sub-wavelength optical lithography; impact of process scaling on circuit and physical implementation and low power with leaky transistors; and DFM, yield, and the impact of physical implementation.

Recent Advances in Modeling and Simulation Tools for Communication Networks and Services Nejat Ince 2007-11-26 This book contains a selection of papers presented at a Symposium organized under the aegis of COST Telecommunications Action 285. The main objective of the Action is to enhance existing modeling and simulation tools and to develop new tools for research in emerging multi-service telecommuncation networks in the areas of model performance improvement, multilayer traffic modeling, and the important issue of evaluation and validation of the new modeling tools. The studies related to the activities above are carried out by members of the Action Group with contributions from invited experts/scientists from non-COST countries, academia and industry (within and outside Europe). The book is a collection of important aspects of study results achieved by this distinguished group of experts/scientists from Europe and the US. The book is divided into the following six areas: - Multilayer Modeling - Wireless and Sensor Networks - Verification and Validation - High Throughput Systems - Traffic - Applications of Simulation A useful reference work for academic researchers and practitioners, this book is the third in a series of works focusing on modeling and simulation methods, techniques, and tools in telecommunications. Previous works in this series are: Modeling and Simulation Tools for Emerging Telecommunications Networks: Needs, Trends, Challenges and Solutions, by A. Nejat Ince and Ercan Topuz (editors), Springer, 2006, 510 pages, ISBN: 978-0-387-32921-5 Modeling and Simulation Environment for Satellite and Terrestrial Communications Networks, by A. Nejat Ince (Editor), Springer, 2004, 424 pages, ISBN: 978-0-7923-7547-0

Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017) Vijay Nath 2018-07-30 The volume presents high quality papers presented at the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017). The book discusses recent trends in technology and advancement in MEMS and nanoelectronics, wireless communications, optical communication, instrumentation, signal processing, image processing, bioengineering, green energy, hybrid vehicles, environmental science, weather forecasting, cloud computing, renewable energy, RFID, CMOS sensors, actuators, transducers, telemetry systems, embedded systems, and sensor network applications. It includes original papers based on original theoretical, practical, experimental, simulations, development, application, measurement, and testing. The applications and solutions discussed in the book will serve as a good reference material for future works.

Digital Signal Processing with Field Programmable Gate Arrays U. Meyer-Baese 2013-03-09 Field Programmable Gate Arrays (FPGAs) are on the verge of revolutionising digital signal processing. Novel FPGA families are increasingly replacing ASICs and PDSPs for front-end digital signal processing algorithms. The efficient implementation of these algorithms is the main goal of this book. It starts with an overview of todays FPGA technology, devices and tools for designing DSP systems. A case study in the first chapter is the basis for more than 30 design examples. The following chapters deal with topics such as computer arithmetic concepts and the theory and the implementation of FIR and IIR filters. The VERILOG source code and a glossary are contained in the appendices. The accompanying CD-ROM contains examples in VHDL and Verilog code as well as the newest Altera 'Baseline' software.

Membrane Computing Models: Implementations Gexiang Zhang 2021-07-01 The theoretical basis of membrane computing was established in the early 2000s with fundamental research into the computational power, complexity aspects and relationships with other (un)conventional computing paradigms. Although this core theoretical research has continued to grow rapidly and vigorously, another area of investigation has since been added, focusing on the applications of this model in many areas, most prominently in systems and synthetic biology, engineering optimization, power system fault diagnosis and mobile robot controller design. The further development of these applications and their broad adoption by other researchers, as well as the expansion of the membrane computing modelling paradigm to other applications, call for a set of robust, efficient, reliable and easy-to-use tools supporting the most significant membrane computing models. This work provides comprehensive descriptions of such tools, making it a valuable resource for anyone interested in membrane computing models.

Biomedical Electronics: Approaches and Implementations Dr. Amol Deshmukh 2020-05-15 The authors have used various technologies to infuse the usage of Biomedical Electronics to ease out the issues of Medical Sciences. The Book covers the various designs and projects made for medical field. The issues and

Challenges are also discussed. The implementations which have been implemented pertaining to Biomedical Electronics include: · Design of Reconfigurable and Scalable Wireless Body Area Network · Design of Incubator for Infants using Embedded System · Disease Detection using Image Processing

Reconfigurable Computing: Architectures, Tools and Applications Pedro C. Diniz 2007-06-04 This book constitutes the refereed proceedings of the Third International Workshop on Applied Reconfigurable Computing, ARC 2007, held in Mangaratiba, Brazil, in March 2007. The 27 full papers and 10 short papers presented together with a late-comer contribution from ARC 2006 are organized in topical sections on architectures, mapping techniques and tools, arithmetic, and applications.

Statistical and Geometrical Approaches to Visual Motion Analysis Daniel Cremers 2009-07-25 This book constitutes the thoroughly refereed post-conference proceedings of the International Dagstuhl-Seminar on Statistical and Geometrical Approaches to Visual Motion Analysis, held in Dagstuhl Castle, Germany, in July 2008. The workshop focused on critical aspects of motion analysis, including motion segmentation and the modeling of motion patterns. The aim was to gather researchers who are experts in the different motion tasks and in the different techniques used; also involved were experts in the study of human and primate vision. The 15 revised full papers presented were carefully reviewed and selected from or initiated by the lectures given at the workshop. The papers are organized in topical sections on optical flow and extensions, human motion modeling, biological and statistical approaches, alternative approaches to motion analysis.

Soft Computing for Problem Solving Aruna Tiwari

Human Computer Interaction Using Hand Gestures Prashan Premaratne 2014-03-20 Human computer interaction (HCI) plays a vital role in bridging the 'Digital Divide', bringing people closer to consumer electronics control in the 'lounge'. Keyboards and mouse or remotes do alienate old and new generations alike from control interfaces. Hand Gesture Recognition systems bring hope of connecting people with machines in a natural way. This will lead to consumers being able to use their hands naturally to communicate with any electronic equipment in their 'lounge.' This monograph will include the state of the art hand gesture recognition approaches and how they evolved from their inception. The author would also detail his research in this area for the past 8 years and how the future might turn out to be using HCI. This monograph will serve as a valuable guide for researchers (who would endeavour into) in the world of HCI.

Proceedings of Integrated Intelligence Enable Networks and Computing Krishan Kant Singh Mer 2021-04-23 This book presents best selected research papers presented at the First International Conference on Integrated Intelligence Enable Networks and Computing (IIENC 2020), held from May 25 to May 27, 2020, at the Institute of Technology, Gopeshwar, India (Government Institute of Uttarakhand Government and affiliated to Uttarakhand Technical University). The

book includes papers in the field of intelligent computing. The book covers the areas of machine learning and robotics, signal processing and Internet of things, big data and renewable energy sources.

Digital Signal Processing with Field Programmable Gate Arrays Uwe Meyer-Baese 2013-03-09 Starts with an overview of today's FPGA technology, devices, and tools for designing state-of-the-art DSP systems. A case study in the first chapter is the basis for more than 30 design examples throughout. The following chapters deal with computer arithmetic concepts, theory and the implementation of FIR and IIR filters, multirate digital signal processing systems, DFT and FFT algorithms, and advanced algorithms with high future potential. Each chapter contains exercises. The VERILOG source code and a glossary are given in the appendices, while the accompanying CD-ROM contains the examples in VHDL and Verilog code as well as the newest Altera "Baseline" software. This edition has a new chapter on adaptive filters, new sections on division and floating point arithmetics, an up-date to the current Altera software, and some new exercises.

Architectures for Computer Vision Hong Jeong 2014-08-05 This book provides comprehensive coverage of 3D vision systems, from vision models and state-of-the-art algorithms to their hardware architectures for implementation on DSPs, FPGA and ASIC chips, and GPUs. It aims to fill the gaps between computer vision algorithms and real-time digital circuit implementations, especially with Verilog HDL design. The organization of this book is vision and hardware module directed, based on Verilog vision modules, 3D vision modules, parallel vision architectures, and Verilog designs for the stereo matching system with various parallel architectures. Provides Verilog vision simulators, tailored to the design and testing of general vision chips Bridges the differences between C/C++ and HDL to encompass both software realization and chip implementation; includes numerous examples that realize vision algorithms and general vision processing in HDL Unique in providing an organized and complete overview of how a real-time 3D vision system-on-chip can be designed Focuses on the digital VLSI aspects and implementation of digital signal processing tasks on hardware platforms such as ASICs and FPGAs for 3D vision systems, which have not been comprehensively covered in one single book Provides a timely view of the pervasive use of vision systems and the challenges of fusing information from different vision modules Accompanying website includes software and HDL code packages to enhance further learning and develop advanced systems A solution set and lecture slides are provided on the book's companion website The book is aimed at graduate students and researchers in computer vision and embedded systems, as well as chip and FPGA designers. Senior undergraduate students specializing in VLSI design or computer vision will also find the book to be helpful in understanding advanced applications.

Proceedings of International Conference on Artificial Intelligence, Smart Grid and Smart City Applications L. Ashok Kumar 2020-03-12 Due to the complexity, and heterogeneity of the smart grid and the high volume of information to be processed, artificial intelligence techniques and computational intelligence appear to be some of the enabling technologies for its future development and

success. The theme of the book is "Making pathway for the grid of future" with the emphasis on trends in Smart Grid, renewable interconnection issues, planning-operation-control and reliability of grid, real time monitoring and protection, market, distributed generation and power distribution issues, power electronics applications, computer-IT and signal processing applications, power apparatus, power engineering education and industry-institute collaboration. The primary objective of the book is to review the current state of the art of the most relevant artificial intelligence techniques applied to the different issues that arise in the smart grid development.

Real-Time Computer Vision Christopher M. Brown 1995-03-30 This first book on real-time computer vision will interest all involved in the design and programming of visually guided systems.

Proceedings 2005

Advances in Signal Processing and Intelligent Recognition Systems Sabu M. Thampi 2015-12-24 This Edited Volume contains a selection of refereed and revised papers originally presented at the second International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2015), December 16-19, 2015, Trivandrum, India. The program committee received 175 submissions. Each paper was peer reviewed by at least three or more independent referees of the program committee and the 59 papers were finally selected. The papers offer stimulating insights into biometrics, digital watermarking, recognition systems, image and video processing, signal and speech processing, pattern recognition, machine learning and knowledge-based systems. The book is directed to the researchers and scientists engaged in various field of signal processing and related areas.

Advances in Multimedia Information Processing - PCM 2008 Yueh-Min Ray Huang 2008-12-11 Welcome to the proceedings of 9th Pacific-Rim Conference on Multimedia (PCM 2008) held at the National Cheng Kung University, Tainan, Taiwan during Dec- ber 9–13, 2008. The first PCM was held in Sydney in 2000. Since then, it has been held successfully around the Pacific Rim, including Beijing in 2001, Hsinchu in 2002, Singapore in 2003, Tokyo in 2004, Jeju in 2005, Zhejiang in 2006, Hong Kong in 2007 and finally Tainan. PCM is a major annual international conference bringing together researchers, developers, and educators in the field of multimedia from around the world. It covers a wide spectrum of multimedia research, from state-of-the-art theoretical breakthroughs to the practical systems of multimedia analysis and processing. PCM 2008 featured a comprehensive program including tutorials, keynote talks, regular oral presentations, special sessions, and poster sessions. This year, we - cepted 79 papers out of 210 submissions, giving an acceptance rate of 37%. In addition, 39 papers were accepted for poster presentation. The submissions were categorized into five different tracks: multimedia compression, communication and networking, multimedia processing, analysis and retrieval, multimedia databases, systems, and applications, multimedia human–computer interfaces, multimedia security and digital right management, with a total of

210 submissions from 18 countries and regions. Among the five tracks, "multimedia analysis and retrieval" received the most submissions (34% of the submissions). We kindly appreciate the great effort made by the Program Committee members and the additional reviewers in the reviewing of submissions.

Embedded Computer Vision Branislav Kisacanin 2008-09-26 As a graduate student at Ohio State in the mid-1970s, I inherited a unique c- puter vision laboratory from the doctoral research of previous students. They had designed and built an early frame-grabber to deliver digitized color video from a (very large) electronic video camera on a tripod to a mini-computer (sic) with a (huge!) disk drive—about the size of four washing machines. They had also - signed a binary image array processor and programming language, complete with a user's guide, to facilitate designing software for this one-of-a-kindprocessor. The overall system enabled programmable real-time image processing at video rate for many operations. I had the whole lab to myself. I designed software that detected an object in the eldofview,trackeditsmovementsinrealtime,anddisplayedarunningdescription of the events in English. For example: "An object has appeared in the upper right corner...Itismovingdownandtotheleft...Nowtheobjectisgettingcloser...The object moved out of sight to the left"—about like that. The algorithms were simple, relying on a suf cient image intensity difference to separate the object from the background (a plain wall). From computer vision papers I had read, I knew that vision in general imaging conditions is much more sophisticated. But it worked, it was great fun, and I was hooked.

FPGA Architecture Ian Kuon 2008 FPGA Architecture: Survey and Challenges reviews the historical development of programmable logic devices, the fundamental programming technologies that the programmability is built on, and then describes the basic understandings gleaned from research on architectures. It is an invaluable reference for engineers and computer scientists. It is also an excellent primer for senior or graduate-level students in electrical engineering or computer science.

Pattern Recognition, Machine Intelligence and Biometrics Patrick S. P. Wang 2012-02-13 "Pattern Recognition, Machine Intelligence and Biometrics" covers the most recent developments in Pattern Recognition and its applications, using artificial intelligence technologies within an increasingly critical field. It covers topics such as: image analysis and fingerprint recognition; facial expressions and emotions; handwriting and signatures; iris recognition; hand-palm gestures; and multimodal based research. The applications span many fields, from engineering, scientific studies and experiments, to biomedical and diagnostic applications, to personal identification and homeland security. In addition, computer modeling and simulations of human behaviors are addressed in this collection of 31 chapters by top-ranked professionals from all over the world in the field of PR/AI/Biometrics. The book is intended for researchers and graduate students in Computer and Information Science, and in Communication and Control Engineering. Dr. Patrick S. P. Wang is a Professor Emeritus at the College of Computer and Information Science, Northeastern University, USA,

Zijiang Chair of ECNU, Shanghai, and NSC Visiting Chair Professor of NTUST, Taipei.

Conference Record 2001

Feedback-Based Orthogonal Digital Filters Mukund Padmanabhan 2012-12-06 Feedback-Based Orthogonal Digital Filters: Theory, Applications, and Implementation develops the theory of a feedback-based orthogonal digital filter and examines several applications where the filter topology leads to a simple and efficient solution. The development of the filter structure is linked to concepts in observer theory. Several signal processing problems can be represented as estimation problems, where a parametric representation of the input is used, to try and replicate it locally. This estimation problem can be solved using an identity observer, and the filter topology falls in this framework. Hence the filter topology represents a universal building block that can find application in several problems, such as spectral estimation, time-recursive computation of transforms, etc. Further, because of the orthogonality constraints satisfied by the structure, it also represents a robust solution under finite precision conditions. The book also presents the observer-based viewpoint of several signal processing problems, and shows that problems that are typically treated independently in the literature are in fact linked and can be cast in a single unified framework. In addition to examining the theoretical issues, the book describes practical issues related to a hardware implementation of the building block, in both the digital and analog domain. On the digital side, issues relating to implementation using semi-custom chips (FPGA's), and ASIC design are examined. On the analog side, the design and testing of a fabricated chip, that functions as a multi-sinusoidal phase-locked-loop, are described. Feedback-Based Orthogonal Digital Filters serves as an excellent reference. May be used as a text for advanced courses on the subject.

Sound and Music Computing Tapio Lokki 2018-06-26 This book is a printed edition of the Special Issue "Sound and Music Computing" that was published in Applied Sciences

Computing Systems for Autonomous Driving Weisong Shi 2021-11-15 This book on computing systems for autonomous driving takes a comprehensive look at the state-of-the-art computing technologies, including computing frameworks, algorithm deployment optimizations, systems runtime optimizations, dataset and benchmarking, simulators, hardware platforms, and smart infrastructures. The objectives of level 4 and level 5 autonomous driving require colossal improvement in the computing for this cyber-physical system. Beginning with a definition of computing systems for autonomous driving, this book introduces promising research topics and serves as a useful starting point for those interested in starting in the field. In addition to the current landscape, the authors examine the remaining open challenges to achieve L4/L5 autonomous driving. Computing Systems for Autonomous Driving provides a good introduction for researchers and prospective practitioners in the field. The book can also

serve as a useful reference for university courses on autonomous vehicle technologies.This book on computing systems for autonomous driving takes a comprehensive look at the state-of-the-art computing technologies, including computing frameworks, algorithm deployment optimizations, systems runtime optimizations, dataset and benchmarking, simulators, hardware platforms, and smart infrastructures. The objectives of level 4 and level 5 autonomous driving require colossal improvement in the computing for this cyber-physical system. Beginning with a definition of computing systems for autonomous driving, this book introduces promising research topics and serves as a useful starting point for those interested in starting in the field. In addition to the current landscape, the authors examine the remaining open challenges to achieve L4/L5 autonomous driving. Computing Systems for Autonomous Driving provides a good introduction for researchers and prospective practitioners in the field. The book can also serve as a useful reference for university courses on autonomous vehicle technologies.

Digital Signal Processing with Field Programmable Gate Arrays Uwe Meyer-Baese 2004 Field-Programmable Gate Arrays (FPGAs) are revolutionizing digital signal processing as novel FPGA families are replacing ASICs and PDSPs for front-end digital signal processing algorithms. So the efficient implementation of these algorithms is critical and is the main goal of this book. It starts with an overview of today's FPGA technology, devices, and tools for designing state-of-the-art DSP systems. A case study in the first chapter is the basis for more than 30 design examples throughout. The following chapters deal with computer arithmetic concepts, theory and the implementation of FIR and IIR filters, multirate digital signal processing systems, DFT and FFT algorithms, and advanced algorithms with high future potential. Each chapter contains exercises. The VERILOG source code and a glossary are given in the appendices, while the accompanying CD-ROM contains the examples in VHDL and Verilog code as well as the newest Altera "Baseline" software. This edition has a new chapter on adaptive filters, new sections on division and floating point arithmetics, an up-date to the current Altera software, and some new exercises.

Computer Vision and Applications Bernd Jahne 2000-05-24 Based on the highly successful 3-volume reference Handbook of Computer Vision and Applications, this concise edition covers in a single volume the entire spectrum of computer vision ranging form the imaging process to high-end algorithms and applications. This book consists of three parts, including an application gallery. Bridges the gap between theory and practical applications Covers modern concepts in computer vision as well as modern developments in imaging sensor technology Presents a unique interdisciplinary approach covering different areas of modern science

Next Generation Artificial Vision Systems Anil Bharath 2008-01-01 This milestone interdisciplinary work brings you to the cutting edge of emerging technologies inspired by human sight, ranging from semiconductor photoreceptors based on novel organic polymers and retinomorphic processing circuitry to low-powered devices that replicate spatial and temporal processing in the brain.

Moreover, it is the first work of its kind that integrates the full range of physiological, engineering, and mathematical issues and advances together in a single source. Emphasizing both the devices and the software simulation point of view, this definitive book provides state-of-the-art retinal cell and primary visual cortex (V1) models that reflect our rapidly advancing understanding of human visual signal communication networks. It explores design and fabrication considerations behind real-world implementations, including organic light sensors that mimic human rods and cones, analog circuitry to perform retinal processing, algorithm design for motion detection and tracking, wavelet-based visual detection systems, and interest point detectors. You get the latest techniques for resolution and motion detection enhancement, including both the design and applications of biologically motivated spatio-temporal filtering of visual data, as well as a statistical framework for studying object detection in a phase-invariant manner and tools for describing local object invariants. Moreover, this trail-blazing work includes insight into the challenges that lie ahead in this cutting-edge field.

Data and Communication Networks Lakhmi C. Jain 2018-12-29 The book constitutes selected high quality papers presented in International Conference on Computing, Power and Communication Technologies 2018 (GUCON 2018) organised by Galgotias University, India, in September 2018. It discusses issues in electrical, computer and electronics engineering and technologies. The selected papers are organised into three sections - cloud computing and computer networks; data mining and big data analysis; and bioinformatics and machine learning. In-depth discussions on various issues under these topics provides an interesting compilation for researchers, engineers, and students.

Proceedings of the 8th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (SETIT18), Vol. 1 Med Salim Bouhlel 2020 This two-volume book presents an unusually diverse selection of research papers, covering all major topics in the fields of information and communication technologies and related sciences. It provides a wide-angle snapshot of current themes in information and power engineering, pursuing a cross-disciplinary approach to do so. The book gathers revised contributions that were presented at the 2018 International Conference: Sciences of Electronics, Technologies of Information and Telecommunication (SETIT'18), held on 20-22 December 2018 in Hammamet, Tunisia. This eighth installment of the event attracted a wealth of submissions, and the papers presented here were selected by a committee of experts and underwent additional, painstaking revision. Topics covered include: · Information Processing · Human-Machine Interaction · Computer Science · Telecommunications and Networks · Signal Processing · Electronics · Image and Video This broad-scoped approach is becoming increasingly popular in scientific publishing. Its aim is to encourage scholars and professionals to overcome disciplinary barriers, as demanded by current trends in the industry and in the consumer market, which are rapidly leading toward a convergence of data-driven applications, computation, telecommunication, and energy awareness. Given its coverage, the book will benefit graduate students, researchers and practitioners who need to keep up

with the latest technological advances.

Smart Multicore Embedded Systems Massimo Torquati 2013-11-09 This book provides a single-source reference to the state-of-the-art of high-level programming models and compilation tool-chains for embedded system platforms. The authors address challenges faced by programmers developing software to implement parallel applications in embedded systems, where very often they are forced to rewrite sequential programs into parallel software, taking into account all the low level features and peculiarities of the underlying platforms. Readers will benefit from these authors' approach, which takes into account both the application requirements and the platform specificities of various embedded systems from different industries. Parallel programming tool-chains are described that take as input parameters both the application and the platform model, then determine relevant transformations and mapping decisions on the concrete platform, minimizing user intervention and hiding the difficulties related to the correct and efficient use of memory hierarchy and low level code generation.