Handbook Of Multibiometrics International Series On Biometrics

This book constitutes the research papers presented at the Joint 2101 & 2102 International Conference on Biometric ID Management and Multimodal Communication. BioID_MultiComm'09 is a joint International Conference organized cooperatively by COST Actions 2101 & 2102. COST 2101 Action is focused on 'Biometrics for Identity Documents and Smart Cards (BIDS)', while COST 2102 Action is entitled 'Cross-Modal Analysis of Verbal and Non-verbal Communication'. The aim of COST 2101 is to investigate novel technologies for unsupervised multimodal biometric authentication systems using a new generation of biometrics-enabled identity documents and smart cards. COST 2102 is devoted to develop an advanced acoustical, perceptual and psychological analysis of verbal and non-verbal communication signals originating in spontaneous face-to-face interaction, in order to identify algorithms and automatic procedures capable of recognizing human emotional states.

This book constitutes the refereed proceedings of the International Conference, VISIGRAPP 2011, the Joint Conference on Computer Vision, Theory and Applications (VISAPP), on Imaging Theory and Applications (IMAGAPP), on Computer Graphics Theory and Applications (GRAPP), and on Information Visualization Theory and Applications (IVAPP), held in Vilamoura, Portugal, in March 2011. The 15 revised full papers presented together with one invited paper were carefully reviewed and selected. The papers are organized in topical sections on computer graphics theory and applications; imaging theory and applications; information visualization theory and applications; and computer vision theory and applications.

The book is about all aspects of computing, communication, general sciences and educational research covered at the Second International Conference on Computer & Communication Technologies held during 24-26 July 2015 at Hyderabad. It hosted by CMR Technical Campus in association with Division - V (Education & Research) CSI, India. After a rigorous review only quality papers are selected and included in this book. The entire book is divided into three volumes. Three volumes cover a variety of topics which include medical imaging, networks, data mining, intelligent computing, software design, image processing, mobile computing, digital signals and speech processing, video surveillance and processing, web mining, wireless sensor networks, circuit analysis, fuzzy systems, antenna and communication systems, biomedical signal processing and applications, cloud computing, embedded systems applications and cyber security and digital forensic. The readers of these volumes will be highly benefited from the technical contents of the topics.

This book examines the context, motivation and current status of biometric systems based on the palmprint, with a specific focus on touchless and less-constrained systems. It covers new technologies in this rapidly evolving field and is one of the first comprehensive books on palmprint recognition systems. It discusses the research literature and the most relevant industrial applications of palmprint biometrics, including the low-cost solutions based on webcams. The steps of biometric recognition are described in detail, including acquisition setups, algorithms, and evaluation procedures. Constraints and limitations of current palmprint recognition systems are analyzed and discussed. The authors also introduce innovative methods for touchless and less-constrained palmprint recognition, with the aim to make palmprint biometrics easier to use in practical, daily-life applications, and overcome the typical constraints and limitations described. Touchless Palmprint Recognition Systems targets professionals and researchers working in biometrics, image processing and three-dimensional reconstruction. Advanced-level students studying biometrics and computer science will also find this material valuable as a secondary text book or reference.

12th International Conference, Salvador de Bahia, Brazil, June 18-21, 2012, Proceedings, Part I

Joint COST 2101 and 2102 International Conference, BioID_MultiComm 2009, Madrid, Spain, September 16-18, 2009, Proceedings

Handbook of Fingerprint Recognition

11th International Conference, ICISS 2015, Kolkata, India, December 16-20, 2015. Proceedings

ICANI-2018

Handbook of Biometrics

This edited volume contains technical contributions in the field of computer vision and image processing presented at the First International Conference on Computer Vision and Image Processing (CVIP 2016). The contributions are thematically divided based on their relation to operations at the lower, middle and higher levels of vision systems, and their applications. The technical contributions in the areas of sensors, acquisition, visualization and enhancement are classified as related to low-level operations. They discuss various modern topics – reconfigurable image system architecture, Scheimpflug camera calibration, real-time autofocusing, climate visualization, tone mapping, super-resolution and image resizing. The technical contributions in the areas of segmentation and retrieval are classified as related to mid-level operations. They discuss some state-of-the-art techniques – non-rigid image registration, iterative image partitioning, egocentric object detection and video shot boundary detection. The technical contributions in the areas of classification and retrieval are categorized as related to high-level operations. They discuss some state-of-the-art approaches – extreme learning machines, and target, gesture and action recognition. A non-regularized state preserving extreme learning machine is presented for natural scene classification. An algorithm for human action recognition through dynamic frame warping based on depth cues is

given. Target recognition in night vision through convolutional neural network is also presented. Use of convolutional neural network in detecting static hand gesture is also discussed. Finally, the technical contributions in the areas of surveillance, coding and data security, and biometrics and document processing are considered as applications of computer vision and image processing. They discuss some contemporary applications. A few of them are a system for tackling blind curves, a quick reaction target acquisition and tracking system, an algorithm to detect for copy-move forgery based on circle block, a novel visual secret sharing scheme using affine cipher and image interleaving, a finger knuckle print recognition system based on wavelet and Gabor filtering, and a palmprint recognition based on minutiae quadruplets.

This book constitutes the refereed proceedings of the 5th International Conference on Image Analysis and Recognition, ICIAR 2008, held in Póvoa do Varzim, Portugal, in June 2008. The 110 revised full papers presented together with 2 invited papers were carefully reviewed and selected from 226 submissions. The papers are organized in topical sections on image restoration and enhancement, image and video segmentation, non-linear image processing, image and video coding and encryption, indexing and retrieval, computer vision, feature extraction and classification, shape representation and matching, object recognition, character recognition, texture and motion analysis, tracking, biomedical image analysis, biometrics, face recognition, and a special session on recent advances in multimodal biometric systems and applications.

The four-volume set LNCS 7333-7336 constitutes the refereed proceedings of the 12th International Conference on Computational Science and Its Applications, ICCSA 2012, held in Salvador de Bahia, Brazil, in June 2012. The four volumes contain papers presented in the following workshops: 7333 - advances in high performance algorithms and applications (AHPAA); bioinspired computing and applications (BIOCA); computational geometry and applicatons (CGA); chemistry and materials sciences and technologies (CMST); cities, technologies and planning (CTP); 7334 - econometrics and multidimensional evaluation in the urban environment (EMEUE); geographical analysis, urban modeling, spatial statistics (Geo-An-Mod); 7335 - optimization techniques and applications (OTA); mobile communications (MC); mobile-computing, sensind and actuation for cyber physical systems (MSA4CPS); remote sensing (RS); 7336 - software engineering processes and applications (SEPA); software quality (SQ); security and privacy in computational sciences (SPCS); soft computing and data engineering (SCDE). The topics of the fully refereed papers are structured according to the four major conference themes: 7333 - computational methods, algorithms and scientific application; 7334 - geometric modelling, graphics and visualization; 7335 - information systems and technologies; 7336 - high performance computing and networks.

This book constitutes the refereed proceedings of the 11th International Conference on Information Systems Security, ICISS 2015, held in Kolkata, India, in December 2015. The 24 revised full papers and 8 short papers presented together with 4 invited papers were carefully reviewed and selected from 133 submissions. The papers address the following topics: access control; attacks and mitigation; cloud security; crypto systems and protocols; information flow control; sensor networks and cognitive radio; and watermarking and steganography.

Information Systems Architecture and Technology: Proceedings of 37th International Conference on Information Systems Architecture and Technology – ISAT 2016 – Part II

5th International Conference, ICIAR 2008, Póvoa de Varzim, Portugal, June 25-27, 2008, Proceedings

International Joint Conference, VISIGRAPP 2011, Vilamoura, Portugal, March 5-7, 2011. Revised Selected Papers

Intelligent Techniques in Signal Processing for Multimedia Security

Selfie Biometrics

CVIP 2016, Volume 1

This resource brings together the multimodal surveillance fields leading experts, who guide researchers, designers, engineers, and developers through this multifaceted technology. It discusses the latest high-end sensors for extremely accurate surveillance, as well as low-cost sensing solutions.

Biometrics is a rapidly evolving field with applications ranging from accessing one's computer to gaining entry into a country. The deployment of large-scale biometric systems in both commercial and government applications has increased public awareness of this technology. Recent years have seen significant growth in biometric research resulting in the development of innovative sensors, new algorithms, enhanced test methodologies and novel applications. This book addresses this void by inviting some of the prominent researchers in Biometrics to contribute chapters describing the fundamentals as well as the latest innovations in their respective areas of expertise.

The field of biometrics utilizes computer models of the physical and behavioral characteristics of human beings with a view to reliable personal identification. The human characteristics of interest include visual images, speech, and indeed anything which might help to uniquely identify the individual. The other side of the biometrics coin is biometric synthesis OCo rendering biometric phenomena from their corresponding computer models. For example, we could generate a synthetic face from its corresponding computer model. Such a model could include muscular dynamics to model the full gamut of human emotions conveyed by facial expressions. This book is a collection of carefully selected papers presenting the fundamental theory and practice of various aspects of biometric data processing in the context of pattern recognition. The traditional task of biometric technologies OCo human identification by analysis of biometric. data OCo is extended to include the new discipline of biometric synthesis."

This book proposes new algorithms to ensure secured communications and prevent unauthorized data exchange in secured multimedia systems. Focusing on numerous applications' algorithms and scenarios, it offers an in-depth analysis of data hiding technologies including watermarking, cryptography, encryption, copy control, and authentication. The authors present a framework for visual data hiding technologies that resolves emerging problems of modern multimedia applications in several contexts including the medical, healthcare, education, and wireless communication networking domains. Further, it introduces several intelligent security techniques with real-time implementation. As part of its comprehensive coverage, the book discusses contemporary multimedia authentication and fingerprinting techniques,

while also proposing personal authentication/recognition systems based on hand images, surveillance system security using gait recognition, face recognition under restricted constraints such as dry/wet face conditions, and three-dimensional face identification using the approach developed here. This book equips perception technology professionals with the latest technologies, techniques, and strategies for multimedia security systems, offering a valuable resource for engineers and researchers working to develop security systems.

Touchless Fingerprint Biometrics
Multibiometrics for Human Identification
Handbook of Face Recognition
Computational Science and Its Applications -- ICCSA 2012
Trusted Biometrics under Spoofing Attacks
Enhancing Information Security and Privacy by Combining Biometrics with Cryptography

This important text/reference presents the latest secure and privacy-compliant techniques in automatic human recognition. Featuring viewpoints from an international selection of experts in the field, the comprehensive coverage spans both theory and practical implementations, taking into consideration all ethical and legal issues. Topics and features: presents a unique focus on novel approaches and new architectures for unimodal and multimodal template protection; examines signal processing techniques in the encrypted domain, security and privacy leakage assessment, and aspects of standardization; describes real-world applications, from face and fingerprint-based user recognition, to biometrics-based electronic documents, and biometric systems employing smart cards; reviews the ethical implications of the ubiquity of biometrics in everyday life, and its impact on human dignity; provides guidance on best practices for the processing of biometric data within a legal framework.

The book comprises selected papers presented at the International Conference on Advanced Computing, Networking and Informatics (ICANI 2018), organized by Medi-Caps University, India. It includes novel and original research work on advanced computing, networking and informatics, and discusses a wide variety of industrial, engineering and scientific applications of the emerging techniques in the field of computing and networking.

This four volume set of books constitutes the proceedings of the 36th International Conference Information Systems Architecture and Technology 2015, or ISAT 2015 for short, held on September 20–22, 2015 in Karpacz, Poland. The conference was organized by the Computer Science and Management Systems Departments, Faculty of Computer Science and Management, Wroclaw University of Technology, Poland. The papers included in the proceedings have been subject to a thorough review process by highly qualified peer reviewers. The accepted papers have been grouped into four parts: Part I—addressing topics including, but not limited to, systems analysis and modeling, methods for managing complex planning environment and insights from Big Data research projects. Part II—discoursing about topics including, but not limited to, Web systems, computer networks, distributed computing, and multi-agent systems and Internet of Things. Part III—discussing topics including, but not limited to, mobile and Service Oriented Architecture systems, high performance computing, cloud computing, knowledge discovery, data mining and knowledge based management. Part IV—dealing with topics including, but not limited to, finance, logistics and market problems, and artificial intelligence methods.

A major new professional reference work on fingerprint security systems and technology from leading international researchers in the field. Handbook provides authoritative and comprehensive coverage of all major topics, concepts, and methods for fingerprint security systems. This unique reference work is an absolutely essential resource for all biometric security professionals, researchers, and systems administrators.

Information Systems Architecture and Technology: Proceedings of 36th International Conference on Information Systems Architecture and Technology – ISAT 2015 – Part III

IC3T 2015, Volume 3

Handbook of Research on Threat Detection and Countermeasures in Network Security

15th International Conference, CANS 2016, Milan, Italy, November 14-16, 2016, Proceedings

Advances in Biometrics

Security and Privacy in Biometrics

In today's security-conscious society, real-world applications for authentication or identification require a highly accurate system for recognizing individual humans. The required level of performance cannot be achieved through the use of a single biometric such as face, fingerprint, ear, iris, palm, gait or speech. Fusing multiple biometrics enables the indexing of large databases, more robust performance and enhanced coverage of populations. Multiple biometrics are also naturally more robust against attacks than single biometrics. This book addresses a broad spectrum of research issues on multibiometrics for human identification, ranging from sensing modes and modalities to fusion of biometric samples and combination of algorithms. It covers publicly available multibiometrics databases, theoretical and empirical studies on sensor fusion techniques in the context of biometrics authentication, identification and performance evaluation and prediction.

Details multimodal biometrics and its exceptional utility for increasingly reliable human recognition systems. Reveals the substantial advantages of multimodal systems over conventional identification methods.

Cyber attacks are rapidly becoming one of the most prevalent issues in the world. As cyber crime continues to escalate, it is imperative to explore new approaches and technologies that help ensure the security of the online community. The Handbook of Research on Threat Detection and Countermeasures in Network Security presents the latest methodologies and trends in detecting and preventing network threats. Investigating the potential of current and emerging security technologies, this publication is an all-inclusive reference source for academicians, researchers, students, professionals, practitioners, network analysts, and technology specialists interested in the simulation and application of computer network protection.

Offering the first comprehensive analysis of touchless fingerprint-recognition technologies, Touchless Fingerprint Biometrics gives an overview of the state of the art and describes relevant industrial applications. It also presents new techniques to efficiently and effectively implement advanced solutions based on touchless fingerprinting.The most

Biometric ID Management and Multimodal Communication

5th International Conference, ICISP 2012, Agadir, Morocco, June 28-30, 2012. Proceedings

Pattern Recognition and Image Analysis

Image Analysis and Recognition

Reshaping the Future Through Sustainable Business Development and Entepreneurship

Sensors, Algorithms, and Systems

This book constitutes the refereed proceedings of the 5th International Conference on Image and Signal Processing, ICISP 2012, held in Agadir, Morocco, in June 2012. The 75 revised full papers presented were carefully reviewed and selected from 158 submissions. The contributions are grouped into the following topical sections: multi/hyperspectral imaging; image itering and coding; signal processing; biometric; watermarking and texture; segmentation and retieval; image processing; pattern recognition.

This highly anticipated new edition provides a comprehensive account of face recognition research and technology, spanning the full range of topics needed for designing operational face recognition systems. After a thorough introductory chapter, each of the following chapters focus on a specific topic, reviewing background information, up-to-date techniques, and recent results, as well as offering challenges and future directions. Features: fully updated, revised and expanded, covering the entire spectrum of concepts, methods, and algorithms for automated face detection and recognition systems; provides comprehensive coverage of face detection, tracking, alignment, feature extraction, and recognition technologies, and issues in evaluation, systems, security, and applications; contains numerous step-by-step algorithms; describes a broad range of applications; presents contributions from an international selection of experts; integrates numerous supporting graphs, tables, charts, and performance data.

This book constitutes the refereed proceedings of the 15th International Conference on Cryptology and Network Security, CANS 2016, held in Milan, Italy, in November 2016. The 30 full papers presented together with 18 short papers and 8 poster papers were carefully reviewed and selected from 116 submissions. The papers are organized in the following topical sections: cryptanalysis of symmetric key; side channel attacks and implementation; lattice-based cryptography, virtual private network; signatures and hash; multi party computation; symmetric cryptography and authentication; system security, functional and homomorphic encryption; information theoretic security; malware and attacks; multi party computation and functional encryption; and network security, privacy, and authentication.

This book deals with "crypto-biometrics", a relatively new and multi-disciplinary area of research (started in 1998). Combining biometrics and cryptography provides multiple advantages, such as, revocability, template diversity, better verification accuracy, and generation of cryptographically usable keys that are strongly linked to the user identity. In this text, a thorough review of the subject is provided and then some of the main categories are illustrated with recently proposed systems by the authors. Beginning with the basics, this text deals with various aspects of crypto-biometrics, including review, cancelable biometrics, cryptographic key generation from biometrics, and crypto-biometric key sharing protocols. Because of the thorough treatment of the topic, this text will be highly beneficial to researchers and industry professionals in information security and privacy. Table of Contents: Introduction / Cancelable Biometric System / Cryptographic Key Regeneration Using Biometrics / Biometrics-Based Secure Authentication Protocols / Concluding Remarks

Image and Signal Processing
Handbook of Iris Recognition
Advanced Pattern Recognition Technologies with Applications to Biometrics
Handbook of Remote Biometrics
Florence, Italy, October 7-13, 2012, Proceedings, Part III
The 1st International Conference on Advanced Intelligent System and Informatics (AISI2015), November 28-30, 2015, Beni Suef, Egypt

For many years technical and medical diagnostics has been the area of intensive scientific research. It covers well-established topics as well as emerging developments in control engineering, artificial intelligence, applied mathematics, pattern recognition and statistics. At the same time, a growing number of applications of different fault diagnosis methods, especially in electrical, mechanical, chemical and medical engineering, is being observed. This monograph contains a collection of 44 carefully selected papers contributed by experts in technical and medical diagnostics, and constitutes a comprehensive study of the field. The aim of the book is to show the bridge between technical and medical diagnostics based on artificial intelligence methods and techniques. It is divided into four parts: I. Soft Computing in Technical Diagnostics, II. Medical Diagnostics and Biometrics, III. Robotics and Computer Vision, IV. Various Problems of Technical Diagnostics. The monograph will be of interest to scientists as well as academics dealing with the problems of designing technical and medical diagnosis systems. Its target readers are also junior researchers and students of computer science, artificial intelligence, control or robotics. Biometrics is the study of methods for uniquely recognizing humans based on one or more intrinsic physical or behavioral traits. After decades of research activities, biometrics, as a recognized scientific discipline, has advanced considerably both in practical technology and theoretical discovery to meet the increasing need of biometric deployments. In this book, the editors provide both a concise and accessible introduction to the field as well as a detailed coverage on the unique research problems with their solutions in a wide spectrum of biometrics research ranging from voice, face, fingerprint, iris, handwriting, human behavior to multimodal biometrics. The contributions also present the pioneering efforts and state-of-the-art results, with special focus on practical issues concerning system development. This book is a valuable reference for established researchers and it also gives an excellent introduction for beginners to understand the challenges.

The definitive work on iris recognition technology, this comprehensive handbook presents a broad overview of the state of the art in this exciting and rapidly evolving field. Revised and updated from the highly-successful original, this second edition has also been considerably expanded in scope and content, featuring four completely new chapters. Features: provides authoritative insights from an international selection of preeminent researchers from government, industry, and academia; reviews issues covering the full spectrum of the iris recognition process, from acquisition to encoding; presents surveys of topical areas, and discusses the frontiers of iris research, including

cross-wavelength matching, iris template aging, and anti-spoofing; describes open source software for the iris recognition pipeline and datasets of iris images; includes new content on liveness detection, correcting off-angle iris images, subjects with eye conditions, and implementing software systems for iris recognition.

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

Multimodal Surveillance

New Trends and Developments in Biometrics

for Surveillance and Security

Proceedings of the Second International Conference on Computer and Communication Technologies

International Conference on Advanced Computing Networking and Informatics

8th Iberian Conference, IbPRIA 2017, Faro, Portugal, June 20-23, 2017, Proceedings

This book constitutes the refereed proceedings of the Third International Conference on Biometrics, ICB 2009, held in Alghero, Italy, June 2-5, 2009. The 36 revised full papers and 93 revised poster papers presented were carefully reviewed and selected from 250 submissions. Biometric criteria covered by the papers are assigned to face, speech, fingerprint and palmprint, multibiometrics and security, gait, iris, and other biometrics. In addition there are 4 papers on challenges and competitions that currently are under way, thus presenting an overview on the evaluation of biometrics.

The three volume set LNCS 7583, 7584 and 7585 comprises the Workshops and Demonstrations which took place in connection with the European Conference on Computer Vision, ECCV 2012, held in Firenze, Italy, in October 2012. The total of 179 workshop papers and 23 demonstration papers was carefully reviewed and selected for inclusion in the proceedings. They where held at workshops with the following themes: non-rigid shape analysis and deformable image alignment; visual analysis and geo-localization of large-scale imagery; Web-scale vision and social media; video event categorization, tagging and retrieval; re-identification; biological and computer vision interfaces; where computer vision meets art; consumer depth cameras for computer vision; unsolved problems in optical flow and stereo estimation; what's in a face?; color and photometry in computer vision; computer vision in vehicle technology: from earth to mars; parts and attributes; analysis and retrieval of tracked events and motion in imagery streams; action recognition and pose estimation in still images; higher-order models and global constraints in computer vision; information fusion in computer vision for concept recognition; 2.5D sensing technologies in motion: the quest for 3D; benchmarking facial image analysis technologies.

This book constitutes the refereed proceedings of the 8th Iberian Conference on Pattern Recognition and Image Analysis, IbPRIA 2017, held in Faro, Portugal, in June 2017. The 60 regular papers presented in this volume were carefully reviewed and selected from 86 submissions. They are organized in topical sections named: Pattern Recognition and Machine Learning; Computer Vision; Image and Signal Processing; Medical Image; and Applications.

This book highlights the field of selfie biometrics, providing a clear overview and presenting recent advances and challenges. It also discusses numerous selfie authentication techniques on mobile devices. Biometric authentication using mobile devices is becoming a convenient and important means of verifying identity for secured access and services such as telebanking and electronic transactions. In this context, face and ocular biometrics in the visible spectrum has gained increased attention from the research community. However, device mobility and operation in uncontrolled environments mean that facial and ocular images captured with mobile devices exhibit substantial degradation as a result of adverse lighting conditions, specular reflections and motion and defocus blur. In addition, low spatial resolution and the small sensor of front-facing mobile cameras further degrade the sample quality, reducing the recognition accuracy of face and ocular recognition technology when integrated into smartphones. Presenting the state of the art in mobile biometric research and technology, and offering an overview of the potential problems in real-time integration of biometrics in mobile devices, this book is a valuable resource for final-year undergraduate students, postgraduate students, engineers, researchers and academics in various fields of computer engineering.

Third International Conferences, ICB 2009, Alghero, Italy, June 2-5, 2009, Proceedings

Synthesis and Analysis in Biometrics

Touchless Palmprint Recognition Systems

Image Pattern Recognition

Information Systems Security

Computer Vision -- ECCV 2012. Workshops and Demonstrations

The conference topics address different theoretical and practical aspects, and implementing solutions for intelligent systems and informatics disciplines including bioinformatics, computer science, medical informatics, biology, social studies, as well as robotics research. The conference also discuss and present solutions to the cloud computing and big data mining which are considered hot research topics. The conference papers discussed different topics – techniques, models, methods, architectures, as well as multi aspect, domain-specific, and new solutions for the above disciplines. The accepted papers have been grouped into five parts: Part I—Intelligent Systems and Informatics, addressing topics including, but not limited to, medical application, predicting student performance, action classification, and detection of dead stained microscopic cells, optical character recognition, plant identification, rehabilitation of disabled people. Part II—Hybrid Intelligent Systems, addressing topics including, but not limited to, EMG signals, text classification, geomagnetic inverse problem, email filtering. Part III—Multimedia Computing and Social Networks, addressing topics including, but not limited to, augmented reality, telepresence robot, video flash matting, community detection, quality images, face thermal image extraction, MRI tumor segmentation. Part V—Cloud

Computing and Big Data Mining, discussing topics including, but not limited to, mining on microblogs, query optimization, big data classification, access control, friendsourcing, and assistive technology. Part VI—Swarm Optimization and Its Applications, addressing topics including, but not limited to, solving set covering problem, adaptive PSO for CT liver segmentation, water quality assessment, attribute reduction, fish detection, solving manufacturing cell design problem.

The development of technologies for the identi?cation of individuals has driven the interest and curiosity of many people. Spearheaded and inspired by the Bertillon coding system for the classi?cation of humans based on physical measurements, scientists and engineers have been trying to invent new devices and classi?cation systems to capture the human identity from its body measurements. One of the main limitations of the precursors of today's biometrics, which is still present in the vast majority of the existing biometric systems, has been the need to keep the device in close contact with the subject to capture the biometric measurements. This clearly limits the applicability and convenience of biometric systems. This book presents an important step in addressing this limitation by describing a number of methodologies to capture meaningful biometric information from a distance. Most materials covered in this book have been presented at the International Summer School on Biometrics which is held every year in Alghero, Italy and which has become a ?agship activity of the IAPR Technical Committee on Biometrics (IAPR TC4). The last four chapters of the book are derived from some of the best p- sentations by the participating students of the school. The educational value of this book is also highlighted by the number of proposed exercises and questions which will help the reader to better understand the proposed topics.

"This book focuses on two kinds of advanced biometric recognition technologies, biometric data discrimination and multi-biometrics"--Provided by publisher.

In recent years, biometrics has developed rapidly with its worldwide applications for daily life. New trends and novel developments have been proposed to acquire and process many different biometric traits. The ignored challenges in the past and potential problems need to be thought together and deeply integrated. The key objective of the book is to keep up with the new technologies on some recent theoretical development as well as new trends of applications in biometrics. The topics covered in this book reflect well both aspects of development. They include the new development in forensic speaker recognition, 3D and thermo face recognition, finger vein recognition, contact-less biometric system, hand geometry recognition, biometric performance evaluation, multi-biometric template protection, and novel subfields in the new challenge fields. The book consists of 13 chapters. It is divided into four sections, namely, theory and method, performance evaluation, security and template protection, and other applications. The book was reviewed by editors Dr. Jucheng Yang and Dr. Shanjuan Xie. We deeply appreciate the efforts of our guest editors: Dr. Norman Poh, Dr. Loris Nanni, Dr. Dongsun Park, Dr. Sook Yoon and Ms. Congcong Xiong, as well as a number of anonymous reviewers.

Handbook of Biometric Anti-Spoofing

Cryptology and Network Security

Proceedings of International Conference on Computer Vision and Image Processing

Symposium proceedings - XV International symposium Symorg 2016

Encyclopedia of Information Science and Technology

Advanced Topics in Biometrics

Presenting the first definitive study of the subject, this Handbook of Biometric Anti-Spoofing reviews the state of the art in covert attacks against biometric systems and in deriving countermeasures to these attacks. Topics and features: provides a detailed introduction to the field of biometric anti-spoofing and a thorough review of the associated literature; examines spoofing attacks against five biometric modalities, namely, fingerprints, face, iris, speaker and gait; discusses anti-spoofing measures for multi-model biometric systems; reviews evaluation methodologies, international standards and legal and ethical issues; describes current challenges and suggests directions for future research; presents the latest work from a global selection of experts in the field, including members of the TABULA RASA project.

This four volume set of books constitutes the proceedings of the 2016 37th International Conference Information Systems Architecture and Technology (ISAT), or ISAT 2016 for short, held on September 18–20, 2016 in Karpacz, Poland. The conference was organized by the Department of Management Systems and the Department of Computer Science, Wrocław University of Science and Technology, Poland. The papers included in the proceedings have been subject to a thorough review process by highly qualified peer reviewers. The accepted papers have been grouped into four parts: Part I—addressing topics including, but not limited to, systems analysis and modeling, methods for managing complex planning environment and insights from Big Data research projects. Part II—discoursing about topics including, but not limited to, Web systems, computer networks, distributed computing, and mulit-agent systems and Internet of Things. Part III—discussing topics including, but not limited to, mobile and Service Oriented Architecture systems, high performance computing, cloud computing, knowledge discovery, data mining and knowledge based management. Part IV—dealing with topics including, but not limited to, finance, logistics and market problems, and artificial intelligence methods.

Intelligent Systems in Technical and Medical Diagnostics

Advances and Challenges

Handbook of Multibiometrics

Computer Vision, Imaging and Computer Graphics - Theory and Applications