



Arun A. Ross
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Handbook of **Multibiometrics**

Handbook Of Multibiometrics International Series On Biometrics

**Adam Grzech, Jerzy Świątek, Zofia
Wilimowska, Leszek Borzowski**



Handbook Of Multibiometrics International Series On Biometrics:

Multibiometrics for Human Identification Bir Bhanu, Venu Govindaraju, 2011-04-29 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. Handbook of Multibiometrics Arun A. Ross, Karthik Nandakumar, Anil K. Jain, 2006-08-11 Details multimodal biometrics and its exceptional utility for increasingly reliable human recognition systems. Reveals the substantial advantages of multimodal systems over conventional identification methods. Handbook of Face Recognition Stan Z. Li, Anil K. Jain, 2011-08-22 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.

Advances in Biometrics Massimo Tistarelli, Mark S. Nixon, 2009-05-25 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. Handbook of Biometrics Anil K. Jain, Patrick Flynn, Arun A. Ross, 2007-10-23 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

Biometric ID Management and Multimodal Communication Julian Fierrez, Javier Ortega-Garcia, Anna Esposito, Andrzej Drygajlo, Marcos Faundez-Zanuy, 2009-09-29 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

International Conference on Advanced Computing Networking and Informatics Raj Kamal, Michael Henshaw, Pramod S. Nair, 2018-11-27 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

Touchless Fingerprint Biometrics Ruggero Donida Labati, Vincenzo Piuri, Fabio Scotti, 2015-08-14 This book offers the first comprehensive analysis of touchless fingerprint recognition technologies It gives an overview of the state of the art describes relevant industrial applications and presents new techniques to efficiently and effectively implement advanced solutions based on touchless fingerprint biometrics It considers current problems in developing high accuracy touchless recognition technology and recommends future work that can be done to address them A state of the art presentation of the field it demonstrates that applying touchless technologies to biometric recognition systems shows particular promise

Advanced Topics in Biometrics Haizhou Li, Liyuan Li, Kar-Ann Toh, 2014-05-14 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 **Security and Privacy in Biometrics** Patrizio Campisi, 2013-06-28 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 *New Trends and Developments in Biometrics* Jucheng Yang, Shan Juan Xie, 2012-11-28 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 **The 1st International Conference on Advanced Intelligent System and Informatics (AISI2015), November 28-30, 2015, Beni Suef, Egypt** Tarek Gaber, Aboul Ella Hassanien, Nashwa El-Bendary, Nilanjan Dey, 2015-11-09 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 Proceedings of the XV International symposium Symorg 2016

Ondrej Jaško, Sanja Marinković, 2016-06-03 **Computer Vision, Imaging and Computer Graphics - Theory and Applications** Gabriela Csurka, Martin Kraus, Leonid Mestetskiy, Paul Richard, José Braz, 2013-01-03 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 Encyclopedia of Information Science and Technology Mehdi Khosrow-Pour, Mehdi Khosrowpour, 2009 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

Information Systems Architecture and Technology: Proceedings of 37th International Conference on Information Systems Architecture and Technology - ISAT 2016 - Part II Adam Grzech, Jerzy Świątek, Zofia Wilimowska, Leszek Borzowski, 2016-09-23 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 Wroc aw 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

Cryptology and Network Security Sara Foresti, Giuseppe Persiano, 2016-10-30 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

Touchless Palmprint Recognition Systems Angelo Genovese, Vincenzo Piuri, Fabio Scotti, 2014-09-15 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

Information Systems Architecture and Technology: Proceedings of 36th International Conference on Information Systems Architecture and Technology - ISAT 2015 - Part III Jerzy Świątek, Leszek Borzowski, Adam Grzech, Zofia Wilimowska, 2016-02-23 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 Wrocław 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

Information Systems Security Sushil Jajoda, Chandan Mazumdar, 2015-12-16 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

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