Handbook of Fingerprint Recognition (Springer Professional Computing)

Davide Maltoni, Dario Maio, Anil K. Jain, Salil Prabhakar
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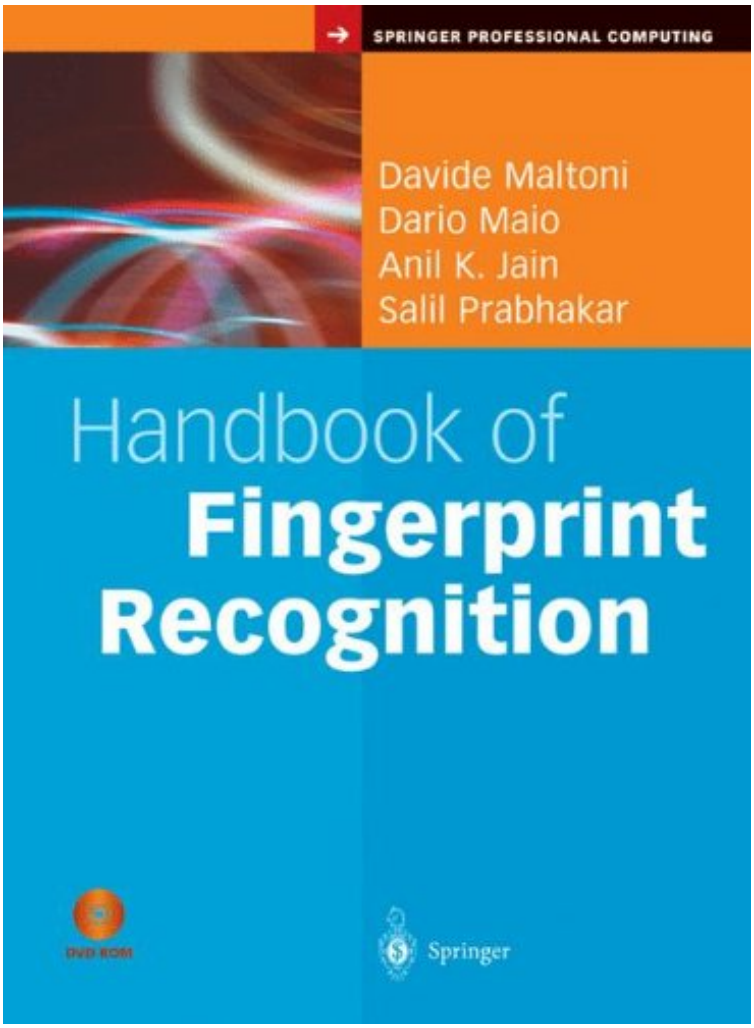

#3357353 in Books 2005-03-10Original language:EnglishPDF # 1 9.13 x .85 x 7.69l, 1.91 #File Name: 0387954317348 pages | File size: 20.Mb

Davide Maltoni, Dario Maio, Anil K. Jain, Salil Prabhakar : Handbook of Fingerprint Recognition (Springer Professional Computing) before purchasing it in order to gage whether or not it would be worth my time, and all praised Handbook of Fingerprint Recognition (Springer Professional Computing):

1 of 1 people found the following review helpful. Outstanding biometrics technical bookBy William A. BarrettAs a teacher and part-time research professor in the field of biometrics, I can recommend this book to anyone interested in the technical aspects of digital fingerprint biometrics.It is studded with references to the key papers in the field.You will also find a chapter on security and spoofing issues, which reviews everything from gel methods for faking a fingerprint through coding, encryption and the possibility of intercepting code transmissions to a server.The book

comes with software on a CDROM, an artificial fingerprint generator. One of the chapters reviews this generator and discusses its performance relative to collections of real fingerprints -- in particular, it can be used to generate a large set of mutated prints of a "same" finger, something needed for an authentics distribution, that most biometric data sets lack.Those interested in other biometrics (face, iris, hand shape, etc.) will find a brief discussion of these in the first chapter.Warning: while most non-technical readers will find this a useful reference book, it does not hesitate to discuss in depth the mathematical statistics and software issues involved in fingerprint biometrics.1 of 1 people found the following review helpful. Excellent Handbook with amazingly well documented detailsBy J. ByersThis is the best book on fingerprint recognition that I have read. This covers every aspect of fingerprint biometrics. Algorithms are provided with excellent analysis. Everything has exact references.This was not just informative, but thorough. I well informed on Biometrics Identification. Nevertheless, this "handbook" informed me about processed developed recently that I have not seen before.A good reference that I will keep on my desk for easy access.1 of 1 people found the following review helpful. Excellent Book!!!!By Francis PsailaThere's a lot of good reviews about this book, so there's not much to add.I'm working in this business and never before read a book as detailed and clear as this one about Fingerprint Recognition.Excellent for the inquisitive and a lot to learn for those already with know how.

With their proven individuality and stability over time, fingerprints continue to be the most widely used physiological characteristic in systems that automatically recognize a person's identity. This handbook on automatic fingerprint recognition provides in-depth coverage of the most recent advances and practices. Readers will find comprehensive and authoritative coverage of all the major concepts, topics, and security methods associated with fingerprint recognition systems. Coverage includes: sensing, feature extraction and matching, synthetic fingerprint image generation, indexing, and multimodal systems. Features Benefits: * Covers the latest research in fingerprint-based recognition algorithms and techniques * Provides introductory material on all components and modules of a fingerprint recognition system *Examines design of secure fingerprint systems * Contains helpful chapter overviews and summaries and consistent notation, for ease of use and accessibility * Includes a DVD containing both the FVC2002 and FVC2000 fingerprint databases (full versions) and a demo version of SFinGe software (for synthetic fingerprint image generation) * Integrates numerous supporting graphs, tables, charts, and performance data * Supplies an extensive annotated bibliography of citations and literature sources. This comprehensive and authoritative reference, written by leading international researchers, covers all critical aspects of fingerprint security systems and technology. It is an absolutely essential resource for all biometric security professionals, researchers, practitioners, developers, and systems administrators. About the Authors Davide Maltoni is associate professor in the Dept. of Electronics, Informatics and Systems (DEIS) at the University of Bologna, where he also co-directs the Biometrics Systems Laboratory (BioLab). Dario Maio is professor in the University of Bolognas DEIS, chair of Cesena campus and director of the BioLab. Anil K. Jain is university-distinguished professor in the department of computer science and engineering at Michigan State University. He is a fellow of the IEEE and IAPR and holds six patents on algorithms for fingerprint recognition. Salil Prabhakar leads the algorithms research group at DigitalPersona Inc., where he works on fingerprint-based biometric solutions.

From the reviews: "...a useful reference for all biometric security professionals and researchers. The four coauthors have a distinguished combination of academic and professional experience....Overall, readers will be pleased with the style and substance of this book." -Computing s "This is a comprehensive reviews of its topic . The thoroughness of the treatment of biometric methods is not obvious from the title. This feature will make the book particularly valuable in some robotics contexts. The intended audience includes researchers, practicing engineers, and students . The book is suggested as a reference book for a graduate course on biometrics. The material is clearly presented . This will certainly be a standard reference work in its field." (Alex M. Andrew, Robotica, Vol. 22, 2004) "The book is the first reference on automatic fingerprint recognition and provides an in-depth survey of the fingerprint state-of-the-art, presenting the most recent advances in fingerprints . is ideally suited to researchers and students in biometrics, pattern recognition, forensics, image processing, and computer vision. In addition, it will be essential to developers of biometric solutions, biometric users as well as to project managers and system integrators and administrators involved in the analysis, design, and management of finger-print-based biometric systems." (Computer Spectrum, Issue 4, 2003)From the Back CoverWith their proven distinctiveness and stability over time, fingerprints continue to be the most widely used anatomical characteristic in systems that automatically recognize a person's identity.This markedly enhanced second edition provides in-depth coverage of the recent advances and practices in fingerprint recognition. Readers will find comprehensive and authoritative coverage of all the major concepts, topics, and systems and security issues associated with fingerprint recognition systems. Written with the same formula that made the success of the first edition, this unique professional reference includes state-of-the-art techniques in fingerprint matching, and covers developments in sensor technology, performance evaluation, international standards, and system security. Features Benefits:* Covers the latest research in fingerprint recognition algorithms and techniques * s recent guidelines for scanner quality evaluation and certification, and provides examples of new fingerprint sensors * Provides introductory

material on all components and modules of a fingerprint recognition system* Covers evaluations of fingerprint recognition algorithms and interoperability, including: FpVTE, MINEX, FVC2004 and FVC2006 * Integrates numerous supporting graphs, tables, charts, and performance data *Examines the design of secure fingerprint systems * Supplies an extensive annotated bibliography of citations and literature sources.* Contains helpful chapter overviews and summaries and consistent notation, for ease of use and accessibilityThe revised edition of this indispensible reference, written by leading international researchers, covers all critical aspects of fingerprint security systems and technology. It is an essential resource for all security and biometrics professionals, researchers, practitioners, developers, and systems administrators, and can serve as an easy-to-read reference for a graduate course on biometrics.Davide Maltoni is associate professor in the Department of Electronics, Informatics and Systems (DEIS) at the University of Bologna, where he also co-directs the Biometrics Systems Laboratory (BioLab).Dario Maio is full professor in the University of Bolognas DEIS and a co-director of the BioLab. He holds two patents on fingerprint liveness detection.Anil K. Jain is university-distinguished professor in the Department of Computer Science and Engineering at Michigan State University. He is a fellow of the IEEE, ACM and IAPR and holds six patents on algorithms for fingerprint recognition.Salil Prabhakar is the Chief Scientist of DigitalPersona Inc., a leading provider of fingerprint identity solutions for consumers, enterprises, and custom application developers.Key Topics* Fingerprint individuality* Fingerprint sensing * Biometric fusion* Synthetic fingerprint generation * Minutiae detection* Fingerprint system security * Performance evaluation* Feature extraction, matching, and indexing.