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		Biometrics
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	Nota di contenuto	Biometric Technologies for Forensic Science and Policing: State of the Art -- Part I: Analysis of Fingerprints and Fingermarks -- Capture and Analysis of Latent Marks -- Automated Fingerprint Identification Systems: From Fingerprints to Fingermarks -- Challenges for Fingerprint Recognition: Spoofing, Skin Diseases and Environmental Effects -- Altered Fingerprint Detection -- Part II: Face and Video Analysis -- Face Sketch Recognition via Data-Driven Synthesis -- Recent Developments in Video-Based Face Recognition -- Face Recognition Technologies for Evidential Evaluation of Video Traces -- Human Factors in Forensic Face Identification -- Part III: Human Motion, Speech and Behavioral Analysis -- Biometric Evidence in Forensic Automatic Speaker Recognition -- On Using Soft Biometrics in Forensic Investigation -- Locating People in Surveillance Video Using Soft Biometric Traits -- Contact-Free Heartbeat Signal for Human

Identification and Forensics -- Part IV: Statistical Analysis of Forensic Biometric Data -- From Biometric Scores to Forensic Likelihood Ratios -- Dynamic Signatures as Forensic Evidence: A New Expert Tool Including Population Statistics -- Part V: Ethical and Legal Issues -- Ethics and Policy of Forensic Biometrics.

Sommario/riassunto	This comprehensive handbook addresses the sophisticated forensic threats and challenges that have arisen in the modern digital age, and reviews the new computing solutions that have been proposed to tackle them. These include identity-related scenarios which cannot be solved with traditional approaches, such as attacks on security systems and the identification of abnormal/dangerous behaviors from remote cameras, for which advanced identification technologies and pattern recognition algorithms can offer novel ways to provide proof of identity. Topics and features: Presents the first dedicated volume on biometrics for forensic science and criminal investigations Contains contributions from an international selection of preeminent authorities, including members of the EU COST Action "Biometrics and Forensics for the Digital Age" Provides an in-depth analysis of the state of the art, together with a broad review of the available technologies and their potential applications Discusses potential future developments in the adoption of advanced technologies for the automated or semi-automated analysis of forensic traces Presents a particular focus on the acquisition and processing of data from real-world forensic cases Offers an holistic perspective, integrating work from different research institutions and combining viewpoints from both biometric technologies and forensic science This innovative volume will inspire and inform professionals, young researchers and graduate students interested in the use of cutting-edge biometric technologies in the service of criminal investigations. Dr. Massimo Tistarelli is a Professor of Computer Science in the Department of Communication Science and Information Technology at the University of Sassari. Dr. Christophe Champod is a Professor of Forensic Science in the School of Criminal Justice at the University of Lausanne.