1.	Record Nr.	UNINA9911015866603321
	Autore	Zhang David
	Titolo	Advanced Palmprint Authentication / / by David Zhang, Dandan Fan, Xu Liang, Bob Zhang
	Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
	ISBN	981-9671-01-9
	Edizione	[1st ed. 2025.]
	Descrizione fisica	1 online resource (506 pages)
	Altri autori (Persone)	FanDandan LiangXu ZhangBob
	Disciplina	006.248
	Soggetti	Biometric identification Computer vision Pattern recognition systems Machine learning Biometrics Computer Vision Automated Pattern Recognition Machine Learning
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Chapter 1 Towards Next-Generation Palmprint Recognition -- Part I CONTACT-BASED PALMPRINT RECOGNITION -- Chapter 2 Jointly Heterogeneous Palmprint Discriminant Feature Learning -- Chapter 3 Rich Orientation Coding for Large-Scale Palmprint Image Analysis -- Chapter 4 Hybrid Fusion Combining Palmprint and Palm Vein for Large-scale Palm-based Recognition -- Part II CONTACTLESS PALMPRINT RECOGNITION -- Chapter 5 Keypoint Localization Neural Network for Touchless Palmprint Recognition Based on Edge-Aware Regression -- Chapter 6 Hand-Geometry Aware Image Quality Assessment Framework for Contactless Palmprint Recognition -- Chapter 7 Touchless Palmprint Recognition Based on 3D Gabor Template and Block Feature Refinement -- Chapter 8 Aligned Multilevel Gabor Convolution Network for Palmprint Recognition -- Chapter 9 Contactless Palmprint

Sommario/riassunto	This book presents a comprehensive exploration of palmprint recognition, synthesizing over a decade of research in contact-based, contactless, 3D, and multispectral systems. As one of the earliest approaches in biometrics, contact-based palmprint systems have evolved significantly, achieving greater portability and accuracy, even when handling large-scale datasets. In contrast, contactless systems, which allow users to position their palms near the camera without physical contact, offer a hygienic, user-friendly alternative that has quickly gained popularity in various applications. Additionally, the advancement of 3D palmprint recognition and the introduction of cutting-edge sensors, such as line-scan and multicamera systems, have further enhanced the accuracy and reliability of these systems. This book is structured into 13 chapters, divided into three key sections. The first part delves into contact-based systems, emphasizing their growing efficiency and performance in both small devices and large-scale scenarios. The second part provides in-depth coverage of contactless systems, detailing essential processes like palmprint acquisition, ROI localization, feature extraction, and matching techniques. The third section examines the latest developments in multiple sensing systems, focusing on 3D and multispectral recognition. Targeted at researchers and engineers in biometrics, particularly those specializing in palmprint recognition, this book offers valuable insights and practical algorithms for enhancing system performance. It is also an excellent resource for readers with a broader interest in biometric technologies, offering a rich understanding of the latest trends and innovations in the field.