

Contents

1	Introduction	1
	Stan Z. Li and Anil K. Jain	
Part I Face Image Modeling and Representation		
2	Face Recognition in Subspaces	19
	Gregory Shakhnarovich and Baback Moghaddam	
3	Face Subspace Learning	51
	Wei Bian and Dacheng Tao	
4	Local Representation of Facial Features	79
	Joni-Kristian Kämäräinen, Abdenour Hadid, and Matti Pietikäinen	
5	Face Alignment Models	109
	Phil Tresadern, Tim Cootes, Chris Taylor, and Vladimir Petrović	
6	Morphable Models of Faces	137
	Reinhard Knothe, Brian Amberg, Sami Romdhani, Volker Blanz, and Thomas Vetter	
7	Illumination Modeling for Face Recognition	169
	Ronen Basri and David Jacobs	
8	Face Recognition Across Pose and Illumination	197
	Ralph Gross, Simon Baker, Iain Matthews, and Takeo Kanade	
9	Skin Color in Face Analysis	223
	J. Birgitta Martinkauppi, Abdenour Hadid, and Matti Pietikäinen	
10	Face Aging Modeling	251
	Unsang Park and Anil K. Jain	

Part II Face Recognition Techniques

11 Face Detection	277
Stan Z. Li and Jianxin Wu	
12 Facial Landmark Localization	305
Xiaoqing Ding and Liting Wang	
13 Face Tracking and Recognition in Video	323
Rama Chellappa, Ming Du, Pavan Turaga, and Shaohua Kevin Zhou	
14 Face Recognition at a Distance	353
Frederick W. Wheeler, Xiaoming Liu, and Peter H. Tu	
15 Face Recognition Using Near Infrared Images	383
Stan Z. Li and Dong Yi	
16 Multispectral Face Imaging and Analysis	401
Andreas Koschan, Yi Yao, Hong Chang, and Mongi Abidi	
17 Face Recognition Using 3D Images	429
I.A. Kakadiaris, G. Passalis, G. Toderici, E. Efraty, P. Perakis, D. Chu, S. Shah, and T. Theoharis	
18 Facial Action Tracking	461
Jörgen Ahlberg and Igor S. Pandzic	
19 Facial Expression Recognition	487
Yingli Tian, Takeo Kanade, and Jeffrey F. Cohn	
20 Face Synthesis	521
Yang Wang, Zicheng Liu, and Baining Guo	

Part III Performance Evaluation: Machines and Humans

21 Evaluation Methods in Face Recognition	551
P. Jonathon Phillips, Patrick Grother, and Ross Micheals	
22 Dynamic Aspects of Face Processing in Humans	575
Heinrich H. Bühlhoff, Douglas W. Cunningham, and Christian Wallraven	
23 Face Recognition by Humans and Machines	597
Alice J. O’Toole	

Part IV Face Recognition Applications

24 Face Recognition Applications	617
Thomas Huang, Ziyou Xiong, and Zhenqiu Zhang	
25 Large Scale Database Search	639
Michael Brauckmann and Christoph Busch	

26	Face Recognition in Forensic Science	655
	Nicole A. Spaun	
27	Privacy Protection and Face Recognition	671
	Andrew W. Senior and Sharathchandra Pankanti	
Index	693



<http://www.springer.com/978-0-85729-931-4>

Handbook of Face Recognition

Li, S.Z.; Jain, A. (Eds.)

2011, XXV, 699 p. 293 illus., 190 illus. in color.,

Hardcover

ISBN: 978-0-85729-931-4