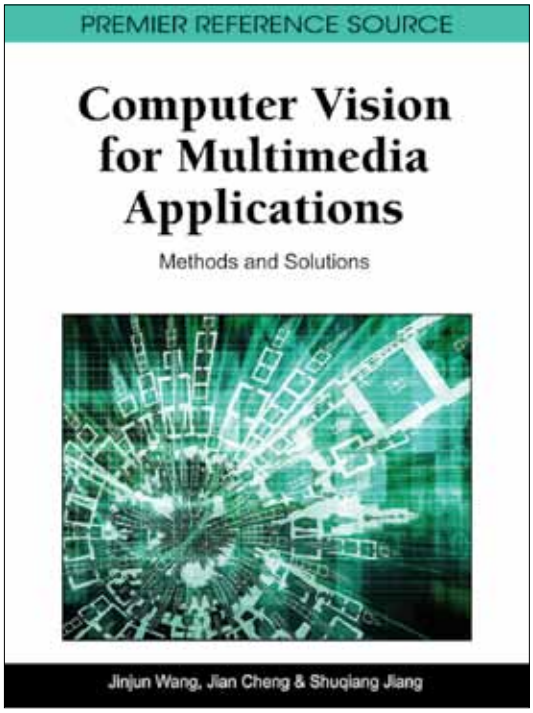
An Excellent Addition to Your Library!

Released: October 2010

Computer Vision for Multimedia Applications: Methods and Solutions



ISBN: 9781609600242; © 2011; 354 pp.
Print: US $180.00 | Perpetual: US $255.00 | Print + Perpetual: US $360.00

Jinjun Wang (NEC Laboratories America, Inc., USA),
Jian Cheng (Chinese Academy of Sciences, China)
and Shuqiang Jiang (Chinese Academy of Sciences, China)

Although a number of methods for solving computer vision tasks exist, these methods are often task-specific and can seldom be generalized over a wide range of applications. In addition, many computer vision algorithms have not been thoroughly studied.

Computer Vision for Multimedia Applications: Methods and Solutions includes the latest developments in computer vision methods applicable to various problems in multimedia computing. This publication presents discussions on new ideas, as well as problems in computer vision and multimedia computing. It will serve as an important reference in multimedia and computer vision for academicians, researchers, and academic libraries.

Topics Covered:

- 3D modeling
- Broadcasting technologies
- Computer vision in human computer interaction
- Content-based multimedia retrieval
- Image synthesis
- Motion analysis in multimedia
- Multimedia content adaption in wireless environment
- Multimedia visual content representation
- Object analysis in multimedia
- Video segmentation

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Jinjun Wang received a B.E. and M.E. degree from Huazhong University of Science and Technology, China, in 2000 and 2003. He received a Ph.D degree from Nanyang Technological University, Singapore, in 2006. From 2006 to 2009, Dr. Wang was with NEC Laboratories America, Inc. as a postdoctoral research scientist and in 2010, he joined Epson Research and Development, Inc. as a senior research scientist. His research interests include pattern classification, image/video enhancement and editing, content-based image/video annotation and retrieval, semantic event detection, etc. He has published over 30 journal and conference papers in those areas and has six US patents pending. Dr. Wang served as Technical Program Committee Member of major international multimedia conferences, including ACM MM'08, IEEE PCM'09, IEEE MMM'09/'10, IEEE 3D-TV'09/'10, etc. He also served as peer reviewer of many journals and conferences.

IGI GLOBAL
DISSEMINATOR OF KNOWLEDGE
www.igi-global.com

Publishing Academic Excellence
at the Pace of Technology Since 1988

Section 1: Computer Vision for Human Computer Interaction

Chapter 1
Intelligent Vision Systems for Landmark-Based Vehicle Navigation
Wu Wen (Carnegie Mellon University, USA)
Yang Jie (Carnegie Mellon University, USA)
Chen Xilin (Chinese Academy of Sciences, China)

Chapter 2
Spontaneous Facial Expression Analysis and Synthesis for Interactive Facial Animation
Zhang Yongmian (Rensselaer Polytechnic Institute, USA)
Chen Jixu (Rensselaer Polytechnic Institute, USA)
Tong Yan (GE Global Research, USA)
Ji Qiang (Rensselaer Polytechnic Institute, USA)

Chapter 3
A Modular Framework for Vision-Based Human Computer Interaction
Iannizzotto Giancarlo (University of Messina, Italy)
La Rosa Francesco (University of Messina, Italy)

Chapter 4
Robust Human Face Tracking in Eigenspace for Perceptual Human-Robot Interaction
Jiang Richard M. (Loughborough University, UK)
Sadka Abdul H. (Brunel University, UK)

Chapter 5
3D Face Modeling for Multi-Feature Extraction for Intelligent Systems
Riaz Zahid (Technische Universität München, Germany)
Gedikli Suat (Technische Universität München, Germany)
Beetz Michael (Technische Universität München, Germany)
Radig Bernd (Technische Universität München, Germany)

Section 2: Computer Vision for Multimedia Content Summary and Retrieval

Chapter 6
Video Summarization by Redundancy Removing and Content Ranking
Wang Tao (Intel Labs China, China)
Gao Yue (Intel Labs China, China & Tsinghua University, China)
Wang Patricia P. (Intel Labs China, China)
Hu Wei (Intel Labs China, China)
Li Jianguo (Intel Labs China, China)
Du Yangzhou (Intel Labs China, China)
Zhang Yimin (Intel Labs China, China)

Chapter 7
Multi-Sensored Vision for Autonomous Production of Personalized Video Summary
Chen Fan (Université catholique de Louvain, Belgium)
Delannay Damien (Université catholique de Louvain, Belgium)
De Vleeschouwer Christophe (Université catholique de Louvain, Belgium)
Parisot Pascaline (Université catholique de Louvain, Belgium)

Chapter 8
A Perceptual Approach for Image Representation and Retrieval:
Abbadeni Noureddine (King Saud University, Saudi Arabia)

Section 3: Computer Vision for Multimedia Content Analysis

Chapter 9
Event Detection in Sports Video Based on Generative-Discriminative Models
Fan Guoliang (Oklahoma State University, USA)
Ding Yi (Oklahoma State University, USA)

Chapter 10
Content-Based Video Scene Clustering and Segmentation
Lu Hong (Fudan University, China)
Xue Xiangyang (Fudan University, China)

Chapter 11
Vision Based Hand Posture Recognition
Wang Kongqiao (Nokia Research Center, China)
Fang Yikai (Nokia Research Center, China)
Chai Xiujuan (Chinese Academy of Sciences, China)

Section 4: Multimedia Authentication

Chapter 12
Detecting Image Forgeries using Geometric Cues
Wu Lin (Tianjin University, China)
Wang Yang (Tianjin University, China)

Chapter 13
Salient Region Detection for Biometric Watermarking
Ma Bin (Beihang University, China)
Li Chun-lei (Beihang University, China & Zhongyuan Institute of Technology, China)
Wang Yun-hong (Beihang University, China)
Bai Xiao (Beihang University, China)

Section 5: Biologically Inspired Multimedia Computing

Chapter 14
Bio-Inspired Scheme for Classification of Visual Information
Dong Le (University of Electronic Science and Technology of China, China)
Izquierdo Ebroul (University of London, UK)
Ge Shuzhi Sam (University of Electronic Science and Technology of China, China)

Chapter 15
Ant-Inspired Visual Saliency Detection in Image
Tian Jing (South China University of Technology, China)
Yu Weiyu (South China University of Technology, China)

Chapter 16
Modeling Visual Saliency in Images and Videos
Hu Yiqun (Nanyang Technological University, Singapore)
Gopalakrishnan Viswanath (Nanyang Technological University, Singapore)
Rajan Deepu (Nanyang Technological University, Singapore)

Order Your Copy Today!

Name: _____

Organization: _____

Address: _____

City, State, Zip: _____

Country: _____

Tel: _____

Fax: _____

E-mail: _____

☐ Enclosed is check payable to IGI Global in US Dollars, drawn on a US-based bank

☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express

3 or 4 Digit Security Code: _____

Name on Card: _____

Account #: _____

Expiration Date: _____