

Table of Contents

Towards Category-Level Object Recognition

I Introduction

Object Recognition in the Geometric Era: a Retrospective	3
<i>Joseph L. Mundy</i>	
Dataset Issues in Object Recognition	30
<i>J. Ponce, T.L. Berg, M. Everingham, D.A. Forsyth, M. Hebert, S. Lazebnik, M. Marszalek, C. Schmid, B.C. Russell, A. Torralba, C.K.I. Williams, J. Zhang, A. Zisserman</i>	
Industry and Object Recognition: Applications, Applied Research and Challenges	51
<i>Yutaka Hirano, Christophe Garcia, Rahul Sukthankar, Anthony Hoogs</i>	

II Recognition of specific objects

What and Where: 3D Object Recognition with Accurate Pose	69
<i>Iryna Gordon, David G. Lowe</i>	
Object Recognition using Local Affine Frames on Maximally Stable Extremal Regions	85
<i>Štěpán Obdržálek, Jiří Matas</i>	
3D Object Modeling and Recognition from Photographs and Image Sequences	109
<i>Fred Rothganger, Svetlana Lazebnik, Cordelia Schmid, Jean Ponce</i>	
Video Google: Efficient Visual Search of Videos	132
<i>Josef Sivic, Andrew Zisserman</i>	
Simultaneous Object Recognition and Segmentation by Image Exploration	151
<i>Vittorio Ferrari, Tinne Tuytelaars, Luc Van Gool</i>	

III Recognition of object categories

Comparison of Generative and Discriminative Techniques for Object Detection and Classification	179
<i>Ilkay Ulusoy, Christopher M. Bishop</i>	
Synergistic Face Detection and Pose Estimation with Energy-Based Models	203
<i>Margarita Osadchy, Yann Le Cun, Matthew L. Miller</i>	
Generic Visual Categorization Using Weak Geometry	214
<i>Gabriela Csurka, Christopher R. Dance, Florent Perronnin, Jutta Willamowski</i>	
Components for Object Detection and Identification	233
<i>Bernd Heisele, Iyaylo Riskov, Christian Morgenstern</i>	
Cross Modal Disambiguation	246
<i>Kobus Barnard, Keiji Yanai, Matthew Johnson, Prasad Gabbur</i>	
Translating Images to Words for Recognizing Objects in Large Image and Video Collections	266
<i>Pinar Duygulu, Muhammet Baştan, David Forsyth</i>	
A Semi-Supervised Learning Approach to Object Recognition with Spatial Integration of Local Features and Segmentation Cues	285
<i>Peter Carbonetto, Gyuri Dorkó, Cordelia Schmid, Hendrik Kück, Nando de Freitas</i>	
Towards the Optimal Training of Cascades of Boosted Ensembles	309
<i>S. Charles Brubaker, Jianxin Wu, Jie Sun, Matthew D. Mullin, James M. Rehg</i>	
Visual Classification by a Hierarchy of Extended Fragments	330
<i>Shimon Ullman, Boris Epshtein</i>	
Shared Features for Multiclass Object Detection	355
<i>Antonio Torralba, Kevin P. Murphy, William T. Freeman</i>	
Generative Models for Labeling Multi-Object Configurations in Images ..	373
<i>Yali Amit, Alain Trouvé</i>	
Object detection and localization using local and global features	393
<i>Kevin Murphy, Antonio Torralba, Daniel Eaton, William Freeman</i>	
The Trace Model for Object Detection and Tracking	413
<i>Sachin Gangaputra, Donald Geman</i>	

IV Recognition of object categories with geometric relations

A Discriminative Framework for Texture and Object Recognition Using Local Image Features	435
<i>Svetlana Lazebnik, Cordelia Schmid, Jean Ponce</i>	
A Sparse Object Category Model for Efficient Learning and Complete Recognition	456
<i>Rob Fergus, Pietro Perona, Andrew Zisserman</i>	
Object Recognition by Combining Appearance and Geometry	476
<i>David Crandall, Pedro Felzenszwalb, Daniel Huttenlocher</i>	
Shape Matching and Object Recognition	496
<i>Alexander C. Berg, Jitendra Malik</i>	
An Implicit Shape Model for Combined Object Categorization and Segmentation	521
<i>Bastian Leibe, Ales Leonardis, Bernt Schiele</i>	
Statistical Models of Shape and Texture for Face Recognition	536
<i>Timothy F. Cootes, David Cristinacce, Vladimir Petrović</i>	

V Joint Recognition and Segmentation

Image Parsing: Unifying Segmentation, Detection, and Recognition	555
<i>Zhuowen Tu, Xiangrong Chen, Alan Yuille, Song Chun Zhu</i>	
Sequential Learning of Layered Models from Video	585
<i>Michalis K. Titsias, Christopher K. I. Williams</i>	
An Object Category Specific MRF for Segmentation	603
<i>M. Pawan Kumar, Philip H.S. Torr, Andrew Zisserman</i>	