

Table of Contents

Motion Capture and Pose Estimation

Marker-Less 3D Feature Tracking for Mesh-Based Human Motion Capture	1
<i>Edilson de Aguiar, Christian Theobalt, Carsten Stoll, and Hans-Peter Seidel</i>	
Boosted Multiple Deformable Trees for Parsing Human Poses	16
<i>Yang Wang and Greg Mori</i>	
Gradient-Enhanced Particle Filter for Vision-Based Motion Capture	28
<i>Daniel Grest and Volker Krüger</i>	
Multi-activity Tracking in LLE Body Pose Space	42
<i>Tobias Jaeggli, Esther Koller-Meier, and Luc Van Gool</i>	
Exploiting Spatio-temporal Constraints for Robust 2D Pose Tracking ...	58
<i>Grégory Rogez, Ignasi Rius, Jesús Martínez-del-Rincón, and Carlos Orrite</i>	
Efficient Upper Body Pose Estimation from a Single Image or a Sequence	74
<i>Matheen Siddiqui and Gérard Medioni</i>	
Real-Time and Markerless 3D Human Motion Capture Using Multiple Views	88
<i>Brice Michoud, Erwan Guillou, and Saïda Bouakaz</i>	
Modeling Human Locomotion with Topologically Constrained Latent Variable Models	104
<i>Raquel Urtasun, David J. Fleet, and Neil D. Lawrence</i>	
Silhouette Based Generic Model Adaptation for Marker-Less Motion Capturing	119
<i>Martin Sunkel, Bodo Rosenhahn, and Hans-Peter Seidel</i>	

Body and Limb Tracking and Segmentation

3D Hand Tracking in a Stochastic Approximation Setting	136
<i>Desmond Chik, Jochen Trumpf, and Nicol N. Schraudolph</i>	
Nonparametric Density Estimation with Adaptive, Anisotropic Kernels for Human Motion Tracking	152
<i>Thomas Brox, Bodo Rosenhahn, Daniel Cremers, and Hans-Peter Seidel</i>	

Multi Person Tracking Within Crowded Scenes	166
<i>Andrew Gilbert and Richard Bowden</i>	
Joint Appearance and Deformable Shape for Nonparametric Segmentation	180
<i>Sylvain Boltz, Éric Debreuve, and Michel Barlaud</i>	
Robust Spectral 3D-Bodypart Segmentation Along Time	196
<i>Fabio Cuzzolin, Diana Mateus, Edmond Boyer, and Radu Horaud</i>	
Articulated Object Registration Using Simulated Physical Force/Moment for 3D Human Motion Tracking	212
<i>Bingbing Ni, Stefan Winkler, and Ashraf Kassim</i>	
An Ease-of-Use Stereo-Based Particle Filter for Tracking Under Occlusion	225
<i>Ser-Nam Lim and Larry Davis</i>	
 Activity Recognition	
Semi-Latent Dirichlet Allocation: A Hierarchical Model for Human Action Recognition	240
<i>Yang Wang, Payam Sabzmejdani, and Greg Mori</i>	
Recognizing Activities with Multiple Cues	255
<i>Rahul Biswas, Sebastian Thrun, and Kikuo Fujimura</i>	
Human Action Recognition Using Distribution of Oriented Rectangular Patches	271
<i>Nazlı İkizler and Pınar Duygulu</i>	
Human Motion Recognition Using Isomap and Dynamic Time Warping	285
<i>Jaron Blackburn and Eraldo Ribeiro</i>	
Behavior Histograms for Action Recognition and Human Detection	299
<i>Christian Thureau</i>	
Learning Actions Using Robust String Kernels	313
<i>Changjiang Yang, Yanlin Guo, Harpreet S. Sawhney, and Rakesh Kumar</i>	
Author Index	329