

Table of Contents

Poster Session 3

Polynomial Regression on Riemannian Manifolds	1
<i>Jacob Hinkle, Prasanna Muralidharan, P. Thomas Fletcher, and Sarang Joshi</i>	
Approximate Gaussian Mixtures for Large Scale Vocabularies	15
<i>Yannis Avrithis and Yannis Kalantidis</i>	
Geodesic Saliency Using Background Priors	29
<i>Yichen Wei, Fang Wen, Wangjiang Zhu, and Jian Sun</i>	
Joint Face Alignment with Non-parametric Shape Models	43
<i>Brandon M. Smith and Li Zhang</i>	
Discriminative Bayesian Active Shape Models	57
<i>Pedro Martins, Rui Caseiro, João F. Henriques, and Jorge Batista</i>	
Patch Based Synthesis for Single Depth Image Super-Resolution	71
<i>Oisín Mac Aodha, Neill D.F. Campbell, Arun Nair, and Gabriel J. Brostow</i>	
Annotation Propagation in Large Image Databases via Dense Image Correspondence	85
<i>Michael Rubinstein, Ce Liu, and William T. Freeman</i>	
Numerically Stable Optimization of Polynomial Solvers for Minimal Problems	100
<i>Yubin Kuang and Kalle Åström</i>	
Has My Algorithm Succeeded? An Evaluator for Human Pose Estimators	114
<i>Nataraj Jammalamadaka, Andrew Zisserman, Marcin Eichner, Vittorio Ferrari, and C.V. Jawahar</i>	
Group Tracking: Exploring Mutual Relations for Multiple Object Tracking	129
<i>Genquan Duan, Haizhou Ai, Song Cao, and Shihong Lao</i>	
A Discrete Chain Graph Model for 3d+t Cell Tracking with High Misdetction Robustness	144
<i>Bernhard X. Kausler, Martin Schiegg, Bjoern Andres, Martin Lindner, Ullrich Koethe, Heike Lette, Jochen Wittbrodt, Lars Hufnagel, and Fred A. Hamprecht</i>	

Robust Tracking with Weighted Online Structured Learning	158
<i>Rui Yao, Qinfeng Shi, Chunhua Shen, Yanning Zhang, and Anton van den Hengel</i>	
Fast Regularization of Matrix-Valued Images	173
<i>Guy Rosman, Yu Wang, Xue-Cheng Tai, Ron Kimmel, and Alfred M. Bruckstein</i>	
Blind Correction of Optical Aberrations	187
<i>Christian J. Schuler, Michael Hirsch, Stefan Harmeling, and Bernhard Schölkopf</i>	
Inverse Rendering of Faces on a Cloudy Day	201
<i>Oswald Aldrian and William A.P. Smith</i>	
On Tensor-Based PDEs and Their Corresponding Variational Formulations with Application to Color Image Denoising	215
<i>Freddie Åström, George Baravdish, and Michael Felsberg</i>	
Kernelized Temporal Cut for Online Temporal Segmentation and Recognition	229
<i>Dian Gong, Gérard Medioni, Sikai Zhu, and Xuemei Zhao</i>	
Grain Segmentation of 3D Superalloy Images Using Multichannel EWCVT under Human Annotation Constraints	244
<i>Yu Cao, Lili Ju, and Song Wang</i>	
Hough Regions for Joining Instance Localization and Segmentation	258
<i>Hayko Riemenschneider, Sabine Sternig, Michael Donoser, Peter M. Roth, and Horst Bischof</i>	
Learning to Segment a Video to Clips Based on Scene and Camera Motion	272
<i>Adarsh Kowdle and Tsuhan Chen</i>	
Evaluation of Image Segmentation Quality by Adaptive Ground Truth Composition	287
<i>Bo Peng and Lei Zhang</i>	

Oral Session 3: Detection and Attributes

Exact Acceleration of Linear Object Detectors	301
<i>Charles Dubout and François Fleuret</i>	
Latent Hough Transform for Object Detection	312
<i>Nima Razavi, Juergen Gall, Pushmeet Kohli, and Luc van Gool</i>	
Using Linking Features in Learning Non-parametric Part Models	326
<i>Leonid Karlinsky and Shimon Ullman</i>	

Diagnosing Error in Object Detectors	340
<i>Derek Hoiem, Yodsawalai Chodpathumwan, and Qieyun Dai</i>	
Attributes for Classifier Feedback	354
<i>Amar Parkash and Devi Parikh</i>	
Constrained Semi-Supervised Learning Using Attributes and Comparative Attributes	369
<i>Abhinav Shrivastava, Saurabh Singh, and Abhinav Gupta</i>	

Poster Session 4

Renormalization Returns: Hyper-renormalization and Its Applications	384
<i>Kenichi Kanatani, Ali Al-Sharadqah, Nikolai Chernov, and Yasuyuki Sugaya</i>	
Scale Robust Multi View Stereo	398
<i>Christian Bailer, Manuel Finckh, and Hendrik P.A. Lensch</i>	
Laplacian Meshes for Monocular 3D Shape Recovery	412
<i>Jonas Östlund, Aydin Varol, Dat Tien Ngo, and Pascal Fua</i>	
Soft Inextensibility Constraints for Template-Free Non-rigid Reconstruction	426
<i>Sara Vicente and Lourdes Agapito</i>	
Spatiotemporal Descriptor for Wide-Baseline Stereo Reconstruction of Non-rigid and Ambiguous Scenes	441
<i>Eduard Trulls, Alberto Sanfeliu, and Francesc Moreno-Noguer</i>	
Elevation Angle from Reflectance Monotonicity: Photometric Stereo for General Isotropic Reflectances	455
<i>Boxin Shi, Ping Tan, Yasuyuki Matsushita, and Katsushi Ikeuchi</i>	
Local Log-Euclidean Covariance Matrix (L^2 ECM) for Image Representation and Its Applications	469
<i>Peihua Li and Qilong Wang</i>	
Ensemble Partitioning for Unsupervised Image Categorization	483
<i>Dengxin Dai, Mukta Prasad, Christian Leistner, and Luc Van Gool</i>	
Set Based Discriminative Ranking for Recognition	497
<i>Yang Wu, Michihiko Minoh, Masayuki Mukunoki, and Shihong Lao</i>	
A Global Hypotheses Verification Method for 3D Object Recognition . . .	511
<i>Aitor Aldoma, Federico Tombari, Luigi Di Stefano, and Markus Vincze</i>	

Are You Really Smiling at Me? Spontaneous versus Posed Enjoyment Smiles	525
<i>Hamdi Dibekioğlu, Albert Ali Salah, and Theo Gevers</i>	
Efficient Monte Carlo Sampler for Detecting Parametric Objects in Large Scenes	539
<i>Yannick Verdié and Florent Lafarge</i>	
Supervised Geodesic Propagation for Semantic Label Transfer	553
<i>Xiaowu Chen, Qing Li, Yafei Song, Xin Jin, and Qinpeng Zhao</i>	
Bayesian Face Revisited: A Joint Formulation	566
<i>Dong Chen, Xudong Cao, Liwei Wang, Fang Wen, and Jian Sun</i>	
Beyond Bounding-Boxes: Learning Object Shape by Model-Driven Grouping	580
<i>Antonio Monroy and Björn Ommer</i>	
In Defence of Negative Mining for Annotating Weakly Labelled Data ...	594
<i>Parthipan Siva, Chris Russell, and Tao Xiang</i>	
Describing Clothing by Semantic Attributes	609
<i>Huizhong Chen, Andrew Gallagher, and Bernd Girod</i>	
Graph Matching via Sequential Monte Carlo	624
<i>Yumin Suh, Minsu Cho, and Kyoung Mu Lee</i>	
Jet-Based Local Image Descriptors	638
<i>Anders Boesen Lindbo Larsen, Sune Darkner, Anders Lindbjerg Dahl, and Kim Steenstrup Pedersen</i>	
Abnormal Object Detection by Canonical Scene-Based Contextual Model	651
<i>Sangdon Park, Wonsik Kim, and Kyoung Mu Lee</i>	
Shapecollage: Occlusion-Aware, Example-Based Shape Interpretation ...	665
<i>Forrester Cole, Phillip Isola, William T. Freeman, Frédo Durand, and Edward H. Adelson</i>	
Interactive Facial Feature Localization	679
<i>Vuong Le, Jonathan Brandt, Zhe Lin, Lubomir Bourdev, and Thomas S. Huang</i>	
Propagative Hough Voting for Human Activity Recognition	693
<i>Gang Yu, Junsong Yuan, and Zicheng Liu</i>	
Spatio-Temporal Phrases for Activity Recognition	707
<i>Yimeng Zhang, Xiaoming Liu, Ming-Ching Chang, Weina Ge, and Tsuhan Chen</i>	

Complex Events Detection Using Data-Driven Concepts	722
<i>Yang Yang and Mubarak Shah</i>	
Directional Space-Time Oriented Gradients for 3D Visual Pattern Analysis	736
<i>Ehsan Norouznezhad, Mehrtash T. Harandi, Abbas Bigdeli, Mahsa Baktash, Adam Postula, and Brian C. Lovell</i>	
Learning to Recognize Unsuccessful Activities Using a Two-Layer Latent Structural Model	750
<i>Qiang Zhou and Gang Wang</i>	
Action Recognition Using Subtensor Constraint	764
<i>Qiguang Liu and Xiaochun Cao</i>	
Globally Optimal Closed-Surface Segmentation for Connectomics	778
<i>Bjoern Andres, Thorben Kroeger, Kevin L. Briggman, Winfried Denk, Natalya Korogod, Graham Knott, Ulrich Koethe, and Fred A. Hamprecht</i>	
Reduced Analytical Dependency Modeling for Classifier Fusion	792
<i>Andy Jinhua Ma and Pong Chi Yuen</i>	
Learning to Match Appearances by Correlations in a Covariance Metric Space.....	806
<i>Stawomir Bak, Guillaume Charpiat, Etienne Corvée, François Brémond, and Monique Thonnat</i>	
On the Convergence of Graph Matching: Graduated Assignment Revisited	821
<i>Yu Tian, Junchi Yan, Hequan Zhang, Ya Zhang, Xiaokang Yang, and Hongyuan Zha</i>	
Image Annotation Using Metric Learning in Semantic Neighbourhoods	836
<i>Yashaswi Verma and C.V. Jawahar</i>	
Dynamic Programming for Approximate Expansion Algorithm.....	850
<i>Olga Veksler</i>	
Real-Time Compressive Tracking.....	864
<i>Kaihua Zhang, Lei Zhang, and Ming-Hsuan Yang</i>	
Author Index	879