

ECCV 2012

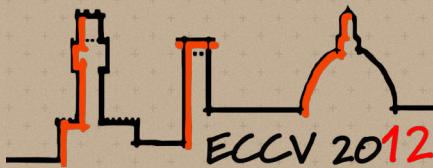
12th European Conference on Computer Vision

Main conference



Main conference

October 8th – 11th, 2012
Palazzo dei Congressi – Palazzo degli Affari
Firenze, Italy

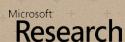


UNIVERSITY OF
CAMBRIDGE

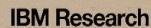
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ECCV 2012

12TH EUROPEAN CONFERENCE ON COMPUTER VISION

**WELCOME TO THE 12TH EUROPEAN
CONFERENCE ON COMPUTER VISION,
ECCV 2012, WHICH IS HELD FROM
OCTOBER 7 TO 13, IN FIRENZE, ITALY.**

The European Conference on Computer Vision is one of the top conferences for researchers in this field and is held biennially in alternation with the International Conference on Computer Vision.

It was first held in 1990 in Antibes (France) with subsequent conferences in Santa Margherita Ligure (Italy) in 1992, Stockholm (Sweden) in 1994, Cambridge (UK) in 1996, Freiburg (Germany) in 1998, Dublin (Ireland) in 2000, Copenhagen (Denmark) in 2002, Prague (Czech Republic) in 2004, Graz (Austria) in 2006, Marseille (France) in 2008, and Heraklion (Greece) in 2010. To our great delight, the 12th conference is held in Florence, Italy.

ECCV has an established tradition of very high scientific quality and an overall duration of one week. ECCV 2012 will begin with a keynote lecture from the honorary chair, Tomaso Poggio.

The main conference follows over four days with 40 orals, 368 posters, 22 demos, and 12 industrial exhibits. There are also 8 tutorials and 21 workshops held before and after the main event.

For this event we introduced some novelties. These include innovations in the review policy, the publication of a conference booklet with all paper abstracts, a mobile version of the conference program, a twitter wall during oral presentations and the full video recording of oral speakers.

This conference is the result of a great deal of hard work by many people, who have been working enthusiastically since our first meetings in 2008. We are particularly grateful to the Program Chairs, who handled the review of about 1500 submissions and co-ordinated the efforts of over 50 area chairs and about 1000 reviewers. We are also indebted to all the other chairs who, with the support of our research teams, diligently helped us manage all aspects of the main conference, tutorials, workshops, exhibits, demos, proceedings, and web presence.

Finally we thank our generous sponsors and Consulta Umbria for handling the registration of delegates and all financial aspects associated with the conference.

We hope you will enjoy ECCV 2012.
Benvenuti a Firenze!

Roberto Cipolla, Carlo Colombo and Alberto Del Bimbo
ECCV 2012 General Chairs

ECCV 2012

People

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Yasu Matsushita - Microsoft
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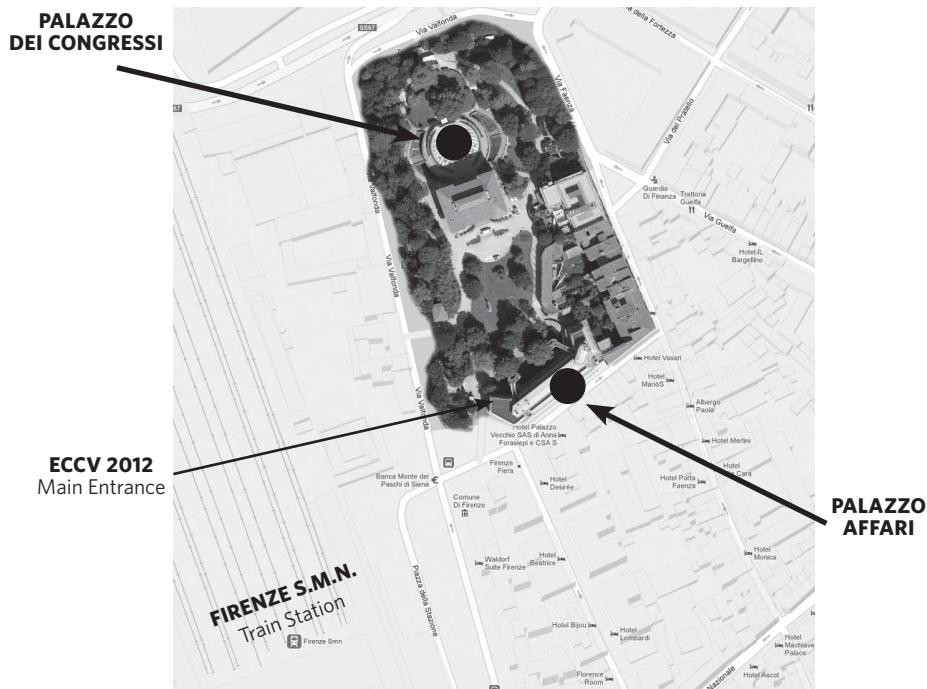
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CONFERENCE MANAGEMENT
Consulta Umbria, Perugia, Italy

ECCV 2012

Locations

Palazzo dei Congressi, Palazzo degli Affari

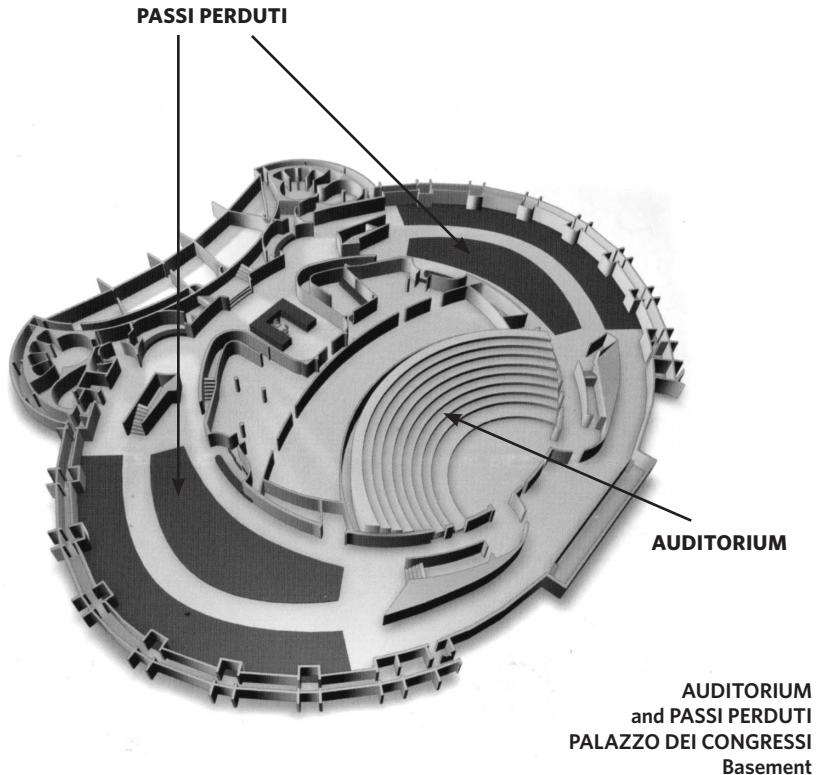




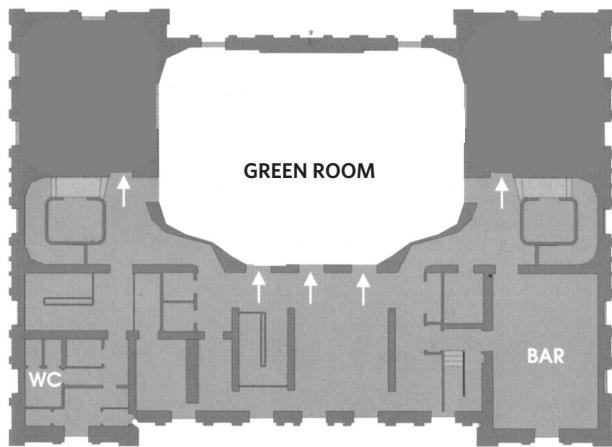
PALAZZO DEI CONGRESSI
ECCV 2012 MAIN CONFERENCE
Oral and Demo Sessions, Exhibits



PALAZZO AFFARI
ECCV 2012 MAIN CONFERENCE
Poster Sessions
ECCV 2012 TUTORIALS
ECCV 2012 WORKSHOPS



October 8th - 11th
ECCV 2012 MAIN CONFERENCE
Oral and Demo Sessions, Exhibits

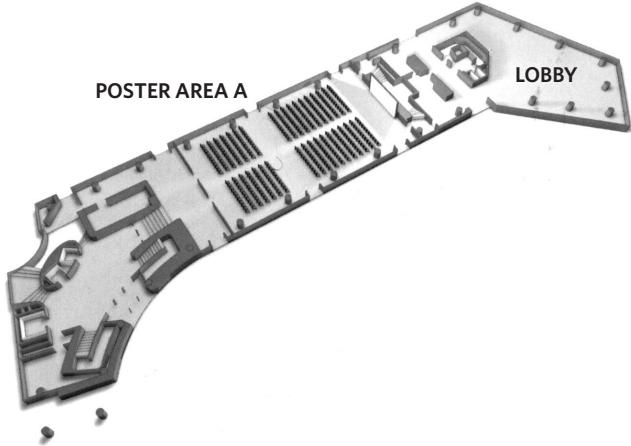


GREEN ROOM
PALAZZO DEI CONGRESSI
2nd FLOOR

October 8th - 11th
ECCV 2012 MAIN CONFERENCE
Overflow Room

PALAZZO AFFARI
Ground Floor

October 8th - 11th
ECCV 2012 MAIN CONFERENCE
Poster Sessions A

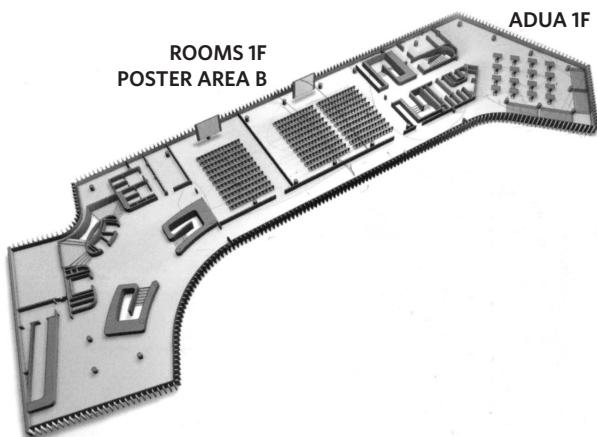


PALAZZO AFFARI
1st Floor

October 7th
ECCV 2012 TUTORIALS
ECCV 2012 WORKSHOPS

October 8th - 11th
ECCV 2012 MAIN CONFERENCE
Poster Sessions B

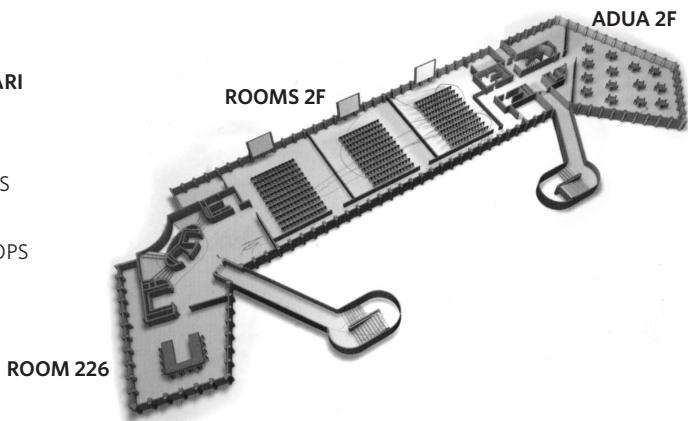
October 12th - 13th
ECCV 2012 WORKSHOPS



PALAZZO DEGLI AFFARI
2nd Floor

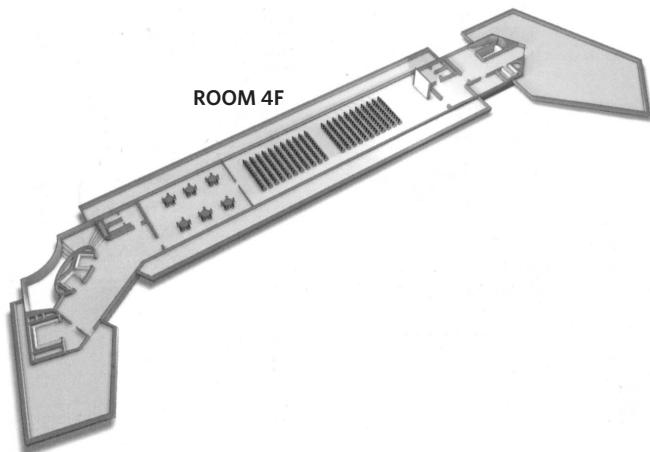
October 7th
ECCV 2012 TUTORIALS

October 12th - 13th
ECCV 2012 WORKSHOPS

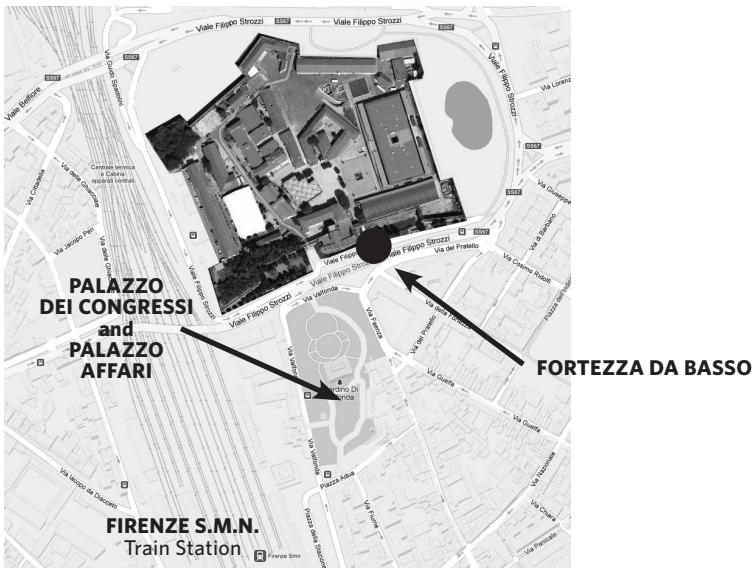


PALAZZO DEGLI AFFARI
4th Floor

October 7th
ECCV 2012 WORKSHOPS

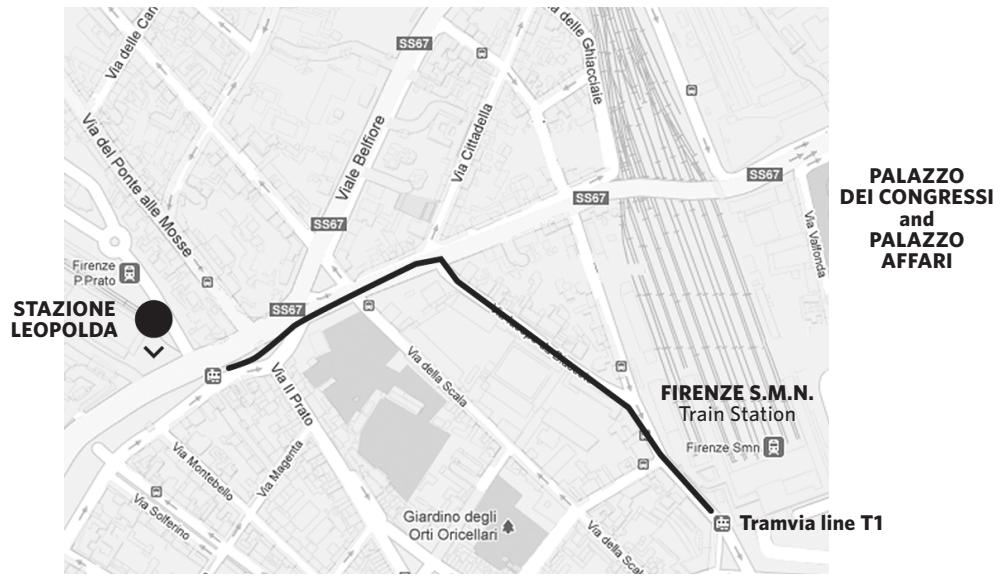


Fortezza Da Basso



FORTEZZA DA BASSO
ECCV 2012 WELCOME DINNER

Stazione Leopolda



STAZIONE LEOPOLDA
ECCV 2012 GALA DINNER

Tramvia line T1
from Station Square

ECCV 2012

Program at a glance

SUNDAY, OCTOBER 7, 2012	TUTORIALS, WORKSHOPS	see TUTORIALS & WORKSHOPS Program
MONDAY, OCTOBER 8, 2012	MAIN CONFERENCE WELCOME DINNER	pag. 30
TUESDAY, OCTOBER 9, 2012	MAIN CONFERENCE	pag. 42
WEDNESDAY, OCTOBER 10, 2012	MAIN CONFERENCE GALA DINNER	pag. 52
THURSDAY, OCTOBER 11, 2012	MAIN CONFERENCE	pag. 62
FRIDAY, OCTOBER 12, 2012	WORKSHOPS	see TUTORIALS & WORKSHOPS Program
SATURDAY, OCTOBER 13, 2012	WORKSHOPS	see TUTORIALS & WORKSHOPS Program

Legend

 = 150min  = 45min  = 30min  = 15min

Tutorials

Sunday, October 7

Code	Location	09:15-13:00
T1	Room A 2F Affari	Vision Applications on Mobile using OpenCV Gary Bradski, Victor Eruhimov, Vadim Pisarevsky
T7	Room B 2F Affari	Additive Kernels and Explicit Embeddings for Large Scale Computer Vision Problems Jianxin Wu, Andrea Vedaldi, Subhransu Maji, Florent Perronnin
T4	Room C 2F Affari	Multi-View Geometry and Computational Photography using Non-Classical Cameras Srikumar Ramalingam, Amit Agrawal
T6	Adua 1F Affari	Sparse and Low-Rank Representation for Computer Vision — Theory, Algorithms and Applications. Yi Ma, John Wright, Allen Y. Yang

09:15-13:00 / 14:30-18:15

T9	Adua 2F Affari	Similarity-Based Pattern Analysis and Recognition Edwin R. Hancock, Vittorio Murino, Marcello Pelillo, Richard Wilson
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14:30-18:15

T2	Room A 2F Affari	Internet Video Search Cees G.M. Snoek, Arnold W.M. Smeulders
T8	Room B 2F Affari	Using MATLAB for Computer Vision: Computer Vision System Toolbox and More Bruce Tannenbaum, Dima Lisin, Wittek Jachimczyk
T3	Adua 1F Affari	Modern features: advances, applications and software Andrea Vedaldi, Jiri Matas, Krystian Mikolajczyk, Tinne Tuytelaars, Cordelia Schmid, Andrew Zisserman

Workshops

Code	Location	09:15-13:00 / 14:30-18:15
WS1	Room A 1F Affari	5th Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA). Stefano Berretti, Alexander Bronstein, Michael Bronstein, Umberto Castellani
WS2	Room A 4F Affari	1st Workshop on Visual Analysis and Geo-Localization of Large-Scale Imagery Mubarak Shah, Luc Van Gool, Asaad Hakeem, Alexei Efros, Niels Haering, James Hays, Hui Cheng
WS3	Room B 1F Affari	Workshop on Web-scale Vision and Social Media Lamberto Ballan, Alex C. Berg, Marco Bertini, Cees G. M. Snoek

Main conference

Location	08:15	08.45 - 10:05	10:05 - 10.35	
Lobby P. Affari	REGISTRATION			
Auditorium P. Congressi		ECCV 2012 OPENING KEYNOTE TALK by Tomaso Poggio 	ORAL SESSION 1 <i>Theory and Application</i> 	
Passi Perduti P. Congressi				
Ground Floor P. Affari				
1st Floor P. Affari				

SESSION	read at
Opening	pag. 30
Keynote Talk	pag. 30
Oral Session 1	pag. 31

Monday, October 8

	10:40 - 13:10	14:30 - 17:00	17:05 - 18:30	19:00
			ORAL SESSION 2 <i>Learning and large-scale recognition</i> 	
		DEMO SESSION 1 		WELCOME DINNER
	POSTER SESSION 1 A 	POSTER SESSION 2 A 		Location Basilica in Fortezza da Basso
	POSTER SESSION 1 B 	POSTER SESSION 2 B 		

SESSION

read at

- | | |
|------------------------|-------------|
| Poster Session 1 A/1 B | pag. 32, 34 |
| Demo Session 1 | pag. 72 |
| Poster Session 2 A/2 B | pag. 36, 38 |
| Oral Session 2 | pag. 40 |

Main conference

Location		08.45 - 11:15	11:20 - 13.00	
Auditorium P. Congressi			ORAL SESSION 3 <i>Detection and attributes</i> 	
Passi Perduti P. Congressi		DEMO SESSION 1 		
Ground Floor P. Affari			POSTER SESSION 3 A 	
1st Floor P. Affari			POSTER SESSION 3 B 	

SESSION

read at

- | | |
|------------------------|-------------|
| Poster Session 3 A/3 B | pag. 42, 44 |
| Demo Session 1 | pag. 72 |
| Oral Session 3 | pag. 46 |

Tuesday, October 9

		14:30 - 17:00	17:05 - 18:30
			ORAL SESSION 4 <i>Actions and Activities</i> 
		DEMO SESSION 1 	
		POSTER SESSION 4 A 	
		POSTER SESSION 4 B 	

SESSION

read at

- | | |
|------------------------|-------------|
| Poster Session 4 A/4 B | pag. 47, 49 |
| Demo Session 1 | pag. 72 |
| Oral Session 4 | pag. 51 |

Main conference

Location		08.45 - 11:15	11:20 - 13.00	
Auditorium P. Congressi			ORAL SESSION 5 <i>MRFs and early vision</i> 	
Passi Perduti P. Congressi			DEMO SESSION 2 	
Ground Floor P. Affari			POSTER SESSION 5 A 	
1st Floor P. Affari			POSTER SESSION 5 B 	

SESSION	read at
Poster Session 5 A/5 B	pag. 52, 54
Demo Session 2	pag. 74
Oral Session 5	pag. 56

Wednesday, October 10

		14:30 - 17:00	17:05 - 18:30	20:00
			ORAL SESSION 6 <i>Geometry and recognition</i> 	
		DEMO SESSION 2 		GALA DINNER
		POSTER SESSION 6 A 		Location Stazione Leopolda
		POSTER SESSION 6 B 		

SESSION	read at
Poster Session 6 A/6 B	pag. 57, 59
Demo Session 2	pag. 74
Oral Session 6	pag. 61

Main conference

Location		08.45 - 11:15	11:20 - 13.00	
Auditorium P. Congressi			ORAL SESSION 7 <i>Lights, action</i> 	
Passi Perduti P. Congressi		DEMO SESSION 2 		
Ground Floor P. Affari			POSTER SESSION 7 A 	
1st Floor P. Affari			POSTER SESSION 7 B 	

SESSION read at

- | | |
|------------------------|-------------|
| Poster Session 7 A/7 B | pag. 62, 64 |
| Demo Session 2 | pag. 74 |
| Oral Session 7 | pag. 66 |

Thursday, October 11

		14:30 - 17:00	17:05 - 18:30
			ORAL SESSION 8 <i>Semantic segmentation</i> 
		DEMO SESSION 2 	
		POSTER SESSION 8 A 	
		POSTER SESSION 8 B 	

SESSION	read at
Poster Session 8A/8B	pag. 67, 69
Demo Session 2	pag. 74
Oral Session 8	pag. 71

Workshops

Friday, October 12

Code	Location	09:15-13:00 / 14:30-18:15
WS4	Room A 2F Affari	WebVision: The Workshop on Computer Vision for the Web Manik Varma, Samy Bengio
WS5	Room A 1F Affari	The PASCAL Visual Object Classes Challenge 2012 (VOC2012) Workshop Chris William, John Winn, Luc Van Gool, Andrew Zisserman, Alex Berg, Fei-Fei Li
WS6	Room B 2F Affari	4th International Workshop on Video Event Categorization, Tagging and Retrieval (VECTaR 2012) . Tieniu Tan, Thomas S. Huang, Ling Shao, Jianguo Zhang, Liang Wang
WS7	Hall 226 Affari	1st International Workshop on Re-Identification (Re-Id 2012) Marco Cristani, Shaogang Gong, Yan Shuicheng
WS8	Adua 2F Affari	Workshop on Biological and Computer Vision Interfaces Olivier Faugeras, Pierre Kornprobst
WS9	Room C 2F Affari	VISART: "Where computer Vision Meets Art" Workshop Joao Paulo Costeira, Gustavo Carneiro, Nuno Pinho da Silva, Alessio Del Bue
WS10	Room B 1F Affari	2nd Workshop on Consumer Depth Cameras for Computer Vision (CDC4CV) Andrea Fossati, Juergen Gall, Helmut Grabner, Xiaofeng Ren, Kurt Konolige, Seungkyu Lee, Miles Hansard
WS11	Adua 1F Affari	Workshop on Unsolved Problems in Optical Flow and Stereo Estimation Daniel Kondermann, Bernd Jähne, Daniel Scharstein
WS12	Room C 1F Affari	"What's in a Face?" Workshop Arun Ross, Alice O'Toole, Maja Pantic, Antitza Dantcheva, Stefanos Zafeiriou

Workshops

Saturday, October 13

Code	Location	09:15-13:00
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WS4	Room A 2F Affari	WebVision: The Workshop on Computer Vision for the Web Manik Varma, Samy Bengio
WS23	Hall 226 Affari	2nd International Workshop on Benchmarking Facial Image Analysis Technologies (BeFIT 2012). Hazim Kemal Ekenel, Gang Hua, Shiguang Shan

09:15-13:00 / 14:30-18:15

WS15	Adua 2F Affari	4th Color and Photometry in Computer Vision Workshop Theo Gevers, Raimondo Schettini, Joost van de Weijer, Todd Zickler, Javier Vazquez-Corral
WS13	Room A 1F Affari	3rd Workshop on Computer Vision in Vehicle Technology: From Earth to Mars Atsushi Imaiya, Antonio M. López
WS16	Room B 1F Affari	2nd Workshop on Parts and Attributes Christoph H. Lampert, Rogerio S. Feris
WS18	Room C 2F Affari	3rd IEEE International Workshop on Analysis and Retrieval of Tracked Events and Motion in Imagery Streams (ARTEMIS 2012). Anastasios Doulamis, Nikolaos D. Doulamis, Jordi González, Thomas B. Moeslund
WS19	Room C 1F Affari	1st Workshop on Action Recognition and Pose Estimation in Still Images Vittorio Ferrari, Ivan Laptev, Josef Sivic, Bangpeng Yao
WS20	Adua 1F Affari	Workshop on Higher-Order Models and Global Constraints in Computer Vision Karteek Alahari, Dhruv Batra, Srikumar Ramalingam, Nikos Paragios, Rich Zemel
WS21	Room B 2F Affari	Workshop on Information fusion in computer vision for concept recognition Jenny Benois-Pineau, Georges Quenot, Tomas Piatrik, Bogdan Ionescu

14:30-18:15

WS22	Room A 2F Affari	QU3ST Workshop - 2.5D Sensing Technologies in Motion: The Quest for 3D David Fofi, Adrien Bartoli
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Special Events

Monday, October 8, at Welcome Dinner

Location: Fortezza da Basso

Renaissance music and dances

Performers: "La Rossignol" and "Capriccio Armonico"

Tuesday, October 9, 20:30

Location: San Miniato al Monte

Gregorian chant

Performers: "Viri Galilaei"

Wednesday, October 10, at Gala Dinner

Location: Stazione Leopolda

Harmoniemusik

Performers: "Cameristi Fiorentini"

ECCV 2012

MAIN CONFERENCE

Technical Program

Monday, October 8
Morning

OPENING

Alberto del Bimbo

Roberto Cipolla

Carlo Colombo

ECCV 2012 General Chairs

KEYNOTE TALK

The quest for a theory of vision: from the level framework (revised) to the invariances of the ventral stream

Tomaso Poggio

ORAL SESSION 1

Geometry: Theory and application

Session Chairs

Jean Ponce and Tomas Pajdla

S1-O1 - A QCQP Approach to Triangulation

Chris Aholt ; Sameer Agarwal; Rekha Thomas

S1-O2 - Reconstructing the World's Museums

Jianxiong Xiao ; Yasutaka Furukawa

POSTER SESSION 1 A

S1-P1A - *Lie Bodies: A Manifold Representation of 3D Human Shape*

Oren Freifeld ; Michael Black

S1-P2A - *Worldwide Pose Estimation Using 3D Point Clouds*

Yunpeng Li ; Noah Snavely; Daniel Huttenlocher; Pascal Fua

S1-P3A - *Improved Reconstruction of Deforming Surfaces by Cancelling Ambient Occlusion*

Thabo Beeler; Derek Bradley ; Henning Zimmer; Markus Gross

S1-P4A - *On the statistical determination of optimal camera configurations in large scale surveillance networks*

Junbin Liu ; Clinton Fookes; Tim Wark; Sridha Sridharan

S1-P5A - *The Scale of Geometric Texture*

Geoffrey Oxholm ; Prabin Bariya; Ko Nishino

S1-P6A - *Efficient Articulated Trajectory Reconstruction Using Dynamic Programming and Filters*

Jack Valmadre ; Yingying Zhu; Sridha Sridharan; Simon Lucey

S1-P7A - *Object Co-detection*

Yinzge Bao ; Yu Xiang; Silvio Savarese

S1-P8A - *Morphable Displacement Field based Image Matching for Face Recognition Across Pose*

shaoxin Li ; xin Liu; Xiujuan Chai; Haihong Zhang; Shihong Lao; Shiguang Shan

S1-P9A - *Combining Per-Frame and Per-Track Cues for Multi-Person Action Recognition*

Sameh Khamis ; Vlad Morariu; Larry Davis

S1-P10A - *Joint Image and Word Sense Discrimination For Image Retrieval*

Aurelien Lucchi ; Jason Weston

S1-P11A - *Script Data for Attribute-based Recognition of Composite Activities*

Marcus Rohrbach ; Michaela Regneri; Mykhaylo Andriluka; Sikandar Amin; Manfred Pinkal;
Bernt Schiele

S1-P12A - Undoing the Damage of Dataset Bias

Aditya Khosla ; Tinghui Zhou; Tomasz Malisiewicz; Alexei Efros; Antonio Torralba

S1-P13A - Dog Breed Classification Using Part Localization

Jiongxin Liu ; Angjoo Kanazawa; David Jacobs; Peter Belhumeur

S1-P14A - A Dictionary Learning Approach for Classification: Separating the Particularity and the Commonality

Shu Kong; Donghui Wang

S1-P15A - Learning to Efficiently Detect Repeatable Interest Points in Depth Data

Stefan Holzer ; Jamie Shotton; Pushmeet Kohli

S1-P16A - Effective Use of Frequent Itemset Mining for Image Classification

Basura Fernando ; Elisa Fromont; Tinne Tuytelaars

S1-P17A - Efficient Discriminative Projections for Compact Binary Descriptors

Tomasz Trzcinski ; Vincent Lepetit

S1-P18A - Descriptor Learning using Convex Optimisation

Karen Simonyan ; Andrea Vedaldi; Andrew Zisserman

S1-P19A - Bottom-Up Perceptual Organization of Images into Object Part Hypotheses

Maruthi Narayanan ; Benjamin Kimia

S1-P20A - Match Graph Construction for Large Image Databases

Kwang In Kim ; James Tompkin; Martin Theobald; Jan Kautz; Christian Theobalt

S1-P21A - Modeling Complex Temporal Composition of Actionlets for Activity Prediction

Kang Li ; Jie Hu; Yun Fu

S1-P22A - Learning Human Interaction by Interactive Phrases

Yu Kong ; Yunde Jia; Yun Fu

POSTER SESSION 1 B

S1-P1B - Learning to Recognize Daily Actions using Gaze

Alireza Fathi ; Yin Li; James Rehg

S1-P2B - Gait Recognition by Ranking

Raúl Martín Félez ; Tao Xiang

S1-P3B - Semi-Intrinsic Mean Shift on Riemannian Manifolds

Rui Caseiro ; João F Henriques; Pedro Martins; Jorge Batista

S1-P4B - Efficient Nonlocal Regularization for Optical Flow

Philipp Krähenbühl ; Vladlen Koltun

S1-P5B - Fast Fusion Moves for Multi-Model Estimation

Andrew Delong ; Olga Veksler; Yuri Boykov

S1-P6B - Approximate MRF Inference Using Bounded Treewidth Subgraphs

Alex Fix; Joyce Chen; Endre Boros; Ramin Zabih

S1-P7B - Recursive Bilateral Filtering

Qingxiong Yang

S1-P8B - Accelerated Large Scale Optimization by Concomitant Hashing

Yadong Mu ; John Wright; Shih-Fu Chang

S1-P9B - Graph Degree Linkage: Agglomerative Clustering on a Directed Graph

Wei Zhang ; Xiaogang Wang; Deli Zhao; Xiaoou Tang

S1-P10B - Supervised Earth Mover's Distance Learning and its Computer Vision Applications

Fan Wang ; Leonidas Guibas

S1-P11B - Global Optimization of Object Pose and Motion from a Single Rolling Shutter Image with Automatic 2D-3D Matching

Ludovic Magerand ; Adrien Bartoli; Omar Ait-Aider; Daniel Pizarro

S1-P12B - Online Learning of Linear Predictors for Real-Time Tracking

Stefan Holzer ; Marc Pollefeys; Slobodan Ilic; David Joseph Tan; Nassir Navab

S1-P13B - Online Learned Discriminative Part-Based Appearance Models for Multi-Human Tracking
Bo Yang ; Ram Nevatia

S1-P14B - Exposure Stacks of Live Scenes with Hand-held Cameras
Jun Hu; Orazio Gallo ; Kari Pulli

S1-P15B - Dual-Force Metric Learning for Robust Distracter-Resistant Tracker
Zhibin Hong ; Xue Mei; Dacheng Tao

S1-P16B - Shape and Reflectance from Natural Illumination
Geoffrey Oxholm ; Ko Nishino

S1-P17B - Frequency Analysis of Transient Light Transport with Applications in Bare Sensor Imaging
Di Wu; Gordon Wetzstein ; Christopher Barsi; Thomas Willwacher; Matthew O'Toole; Nikhil Naik;
Qionghai Dai; Kyros Kutulakos; Ramesh Raskar

S1-P18B - Nonuniform Lattice Regression for Modeling the Camera Imaging Pipeline
Hai Ting Lin ; Zheng Lu; Seon Joo Kim; Michael S. Brown

S1-P19B - Context-Based Automatic Local Image Enhancement
Sung Ju Hwang ; Ashish Kapoor; Sing Bing Kang

S1-P20B - Segmentation with non-linear regional constraints via line-search cuts
Lena Gorelick ; Frank Schmidt; Yuri Boykov; Andrew Delong; Aaron Ward

S1-P21B - Hausdorff Distance Constraint for Multi-Surface Segmentation
Frank Schmidt ; Yuri Boykov

S1-P22B - Background Subtraction Using Low Rank and Group Sparsity Constraints
Xinyi Cui ; Junzhou Huang; Shaoting Zhang; Dimitris Metaxas

S1-P23B - Free Hand-Drawn Sketch Segmentation
Zhenbang Sun; Changhu Wang ; Liqing Zhang; Lei Zhang

S1-P24B - Auto-grouped Sparse Representation for Visual Analysis
Jiashi Feng ; Xiaotong Yuan; zilei Wang; Huan Xu; Shuicheng Yan

Afternoon

POSTER SESSION 2 A

S2-P1A - Background Inpainting for Videos with Dynamic Objects and a Free-moving Camera

Miguel Granados ; Kwang In Kim; James Tompkin; Jan Kautz; Christian Theobalt

S2-P2A - Optimal Templates for NonRigid Surface Reconstruction

Markus Moll ; Luc Van Gool

S2-P3A - Learning Domain Knowledge for Facade Labelling

Dengxin Dai ; Mukta Prasad; Gerhard Schmit; Luc Van Gool

S2-P4A - Simultaneous Shape and Pose Adaption of Articulated Models using Linear Optimization

Matthias Straka ; Stefan Hauswiesner; Matthias Rüther; Horst Bischof

S2-P5A - Robust Fitting for Multiple View Geometry

Olof Enqvist ; Erik Ask; Fredrik Kahl; Kalle Åström

S2-P6A - Improving Image-Based Localization by Active Correspondence Search

Torsten Sattler ; Bastian Leibe; Leif Kobbelt

S2-P7A - From Meaningful Contours to Discriminative Object Shape

Pradeep krishna Yarlagadda ; Bjorn Ommer

S2-P8A - A Particle Filter Framework for Contour Detection

Nicolas Widynski ; Max Mignotte

S2-P9A - TriCoS: A Tri-level Class-Discriminative Co-Segmentation Method for Image Classification

Yuning Chai ; Esa Rahtu; Andrew Zisserman; Victor Lempitsky; Luc Van Gool

S2-P10A - Multi-view Discriminant Analysis

Meina Kan ; Shiguang Shan; Haihong Zhang; Shihong Lao; xilin Chen

S2-P11A -Multi-scale Patch based Collaborative Representation for Face Recognition with Margin Distribution Optimization

Pengfei Zhu; Lei Zhang ; Qinghua Hu; Simon Shiu

S2-P12A - Object detection using strongly-supervised deformable part models
Hossein Azizpour; Ivan Laptev

S2-P13A - Efficient Misalignment-Robust Representation for Real-Time Face Recognition
Meng Yang; Lei Zhang ; David Zhang

S2-P14A - Monocular Object Detection using 3D Geometric Primitives
Peter Carr ; Yaser Sheikh; Iain Matthews

S2-P15A - Object-centric spatial pooling for image classification
Olga Russakovsky ; Yuanqing Lin; Kai Yu; Li Fei-fei

S2-P16A - Statistics of Patch Offsets for Image Completion
Kaiming He ; Jian Sun

S2-P17A - Spectral Demons - Image Registration via Global Spectral Correspondence
Herve Lombaert ; Leo Grady; Xavier Pennec; Nicholas Ayache; Farida Cheriet

S2-P18A - MatchMiner: Efficient Spanning Structure Mining in Large Image Collections
Yin Lou ; Noah Snavely; Johannes Gehrke

S2-P19A - V1-Inspired Features Induce a Weighted Margin in SVMs
Hilton Bristow ; Simon Lucey

S2-P20A - Unsupervised Discovery of Mid-Level Discriminative Patches
Saurabh Singh; Abhinav Gupta ; Alexei Efros

S2-P21A - Self-Similar Sketch
Andrea Vedaldi ; Andrew Zisserman

S2-P22A - Depth Matters: Influence of Depth Cues on Visual Saliency
Lang Congyan; Tam Nguyen ; harish Katti; Karthik Yadati; Mohan Kankanhalli; Shuicheng Yan

POSTER SESSION 2 B

S2-P1B - Quaternion-based Spectral Saliency Detection for Eye Fixation Prediction

Boris Schauerte ; Rainer Stiefelhagen

S2-P2B - Human Activities as Stochastic Kronecker Graphs

Sinisa Todorovic

S2-P3B - Facial Action Transfer with Personalized Bilinear Regression

Dong Huang ; Fernando De la Torre

S2-P4B - Point of Gaze Estimation through Corneal Surface Reflection in an Active Illumination Environment

Atsushi Nakazawa ; Christian Nitschke

S2-P5B - Order-Preserving Sparse Coding For Sequence Classification

Bingbing Ni ; Pierre Moulin; Shuicheng Yan

S2-P6B - Min-Space Integral Histogram

Séverine Dubuisson ; Christophe Gonzales

S2-P7B - On Learning Higher-Order Consistency Potentials for Multi-class Pixel Labeling

Kyoungup Park ; Stephen Gould

S2-P8B - Sparse Coding and Dictionary Learning for Symmetric Positive Definite Matrices: A Kernel Approach

Mehrtash Harandi ; Conrad Sanderson; Richard Hartley; Brian Lovell

S2-P9B - Learning Class-to-Image Distance via Large Margin and L1-norm Regularization

Zhengxiang Wang ; Shenghua Gao; Liang-Tien Chia

S2-P10B - Taxonomic Multi-class Prediction and Person Layout using Efficient Structured Ranking

Arpit Mittal ; Matthew Blaschko; Andrew Zisserman; Phil Torr

S2-P11B - Robust Point Matching Revisited: A Concave Optimization Approach

Wei Lian; Lei Zhang

S2-P12B - Learning Discriminative Spatial Relations for Detector Dictionaries: an Application to Pedestrian Detection

Enver Sangineto ; Marco Cristani; Alessio Del Bue; Vittorio Murino

S2-P13B - Learning Deformations with Parallel Transport

Donglai Wei ; Dahua Lin; John Fisher III

S2-P14B - Multi-channel Shape-Flow Kernel Descriptors for Robust Video Event Detection and Retrieval

Pradeep Natarajan ; Shuang Wu; Shiv Vitaladevuni; Xiaodan Zhuang; Unsang Park; Rohit Prasad; Premkumar Natarajan

S2-P15B - Tracking Using Motion Patterns for Very Crowded Scenes

Xuemei Zhao ; Dian Gong; Gerard Medioni

S2-P16B - Long-Range Spatio-Temporal Modeling of Video with Application to Fire Detection

Avinash Ravichandran ; Stefano Soatto

S2-P17B - GMCP-Tracker: Global Multi-object Tracking Using Generalized Minimum Clique Graphs

Amir Roshan Zamir ; Afshin Dehghan; Mubarak Shah

S2-P18B - Heliometric Stereo: Shape from Sun Position

Austin Abrams ; Christopher Hawley; Robert Pless

S2-P19B - Shape from Single Scattering for Translucent Objects

Chika Inoshita ; Yasuhiro Mukaigawa; Yasu Matsushita; Yasushi Yagi

S2-P20B - Scale Invariant Optical Flow

Li Xu; Zhenlong Dai; jiaya Jia

S2-P21B - Structured Image Segmentation using Kernelized Features

Aurelien Lucchi ; Yunpeng Li; Kevin Smith; Pascal Fua

S2-P22B - Salient Object Detection: A Benchmark

Ali Borji ; Dicky Sihite; Laurent Itti

S2-P23B - Automatic Segmentation of Unknown Objects, with Application to Baggage Security

Leo Grady; Vivek Singh ; Timo Kohlberger; Christopher Alvino; Claus Bahlmann

S2-P24B - Multi-Scale Clustering of Frame-to-Frame Correspondences for Motion Segmentation

Ralf Dragon ; Bodo Rosenhahn; Joern Ostermann

ORAL SESSION 2

Learning and large-scale recognition

Session Chairs

Andrea Vedaldi and Michal Irani

S2-O1 - Fourier Kernel Learning

Eduard-Gabriel Bazavan ; Fuxin Li; Cristian Sminchisescu

S2-O2 - Efficient Optimization For Low-Rank Integrated Bilinear Classifiers

Takumi Kobayashi ; Nobuyuki Otsu

S2-O3 - Metric Learning for Large Scale Image Classification: Generalizing to New Classes at Near-Zero Cost

Thomas Mensink ; Jakob Verbeek; Gabriela Csurka; Florent Perronnin

S2-O4 - Leafsnap: A Computer Vision System for Automatic Plant Species Identification

Neeraj Kumar ; David Jacobs; Peter Belhumeur; Arijit Biswas; Joao Soares

S2-O5 - Large Scale Visual Geo-Localization of Images in Mountainous Terrain

Georges Baatz ; Olivier Saurer; Kevin Koeser; Marc Pollefeys

**Tuesday, October 9
morning**

POSTER SESSION 3 A

S3-P1A - Covariance Propagation and Next Best View Planning for 3D Reconstruction

Sebastian Haner ; Anders Heyden

S3-P2A - Dilated Divergence based Scale-Space Representation for Curve Analysis

Max W.K. Law ; Keng-Yeow Tay; Andrew Leung; Gregory Garvin; Shuo Li

S3-P3A - A Parameterless Line Segment and Elliptical Arc Detector with Enhanced Ellipse Fitting

Viorica Patraucean ; Pierre Gurdjos; Rafael Grompone von Gioi

S3-P4A - Detecting and Reconstructing 3D Mirror Symmetric Objects

Sudipta Sinha; Krishnan Ramnath; Rick Szeliski

S3-P5A - 3D Reconstruction of Dynamic Scenes with Multiple Handheld Cameras

Hanqing Jiang; Haomin Liu; Ping Tan; Guofeng Zhang ; Hujun Bao

S3-P6A - Joint Face Alignment: Rescue Bad Alignments with Good Ones by Regularized Re-fitting

Xiaowei Zhao ; Xiujuan Chai; Shiguang Shan

S3-P7A - Dynamic Facial Expression Recognition using Longitudinal Facial Expression Atlases

Yimo Guo ; Guoying Zhao; Matti Pietikäinen

S3-P8A - Crosstalk Cascades for Frame-Rate Pedestrian Detection

Piotr Dollar ; Ron Appel; Wolf Kienzle

S3-P9A - Query Specific Fusion for Image Retrieval

shaoting Zhang ; Ming Yang; Timothee Cour; Kai Yu; Dimitris Metaxas

S3-P10A - Size Matters: Exhaustive Geometric Verification for Image Retrieval

Henrik Stewenius ; Steinar Gunderson; Julien Pilet

S3-P11A - Scene Aligned Pooling for Complex Video Recognition

Liangliang Cao ; Yadong Mu; Apostol Natsev; Shih-Fu Chang; Gang Hua; John Smith

S3-P12A - Discovering Latent Domains for Multisource Domain Adaptation

Judy Hoffman ; Kate Saenko; Brian Kulis; Trevor Darrell

S3-P13A - Visual Recognition using Local Quantized Patterns

Sibt ul Hussain ; Bill Triggs

S3-P14A - Randomized Spatial Partition for Scene Recognition

Yuning Jiang ; Junsong Yuan; Gang YU

S3-P15A - Nested Sparse Quantization for Efficient Feature Coding

Xavier Boix ; Gemma Roig; Christian Leistner; Luc Van Gool

S3-P16A - Comparative Evaluation of Binary Features

Jared Heinly ; Enrique Dunn; Jan-Michael Frahm

S3-P17A - Negative evidences and co-occurrences in image retrieval: the benefit of PCA and whitening

Hervé Jégou ; Ondrej Chum

S3-P18A - WaSH: Weighted a-Shapes for Local Feature Detection

Christos Varytimidis ; Konstantinos Rapantzikos; Yannis Avrithis

S3-P19A - Sparselet Models for Efficient Multiclass Object Detection

Hyun Oh Song ; Stefan Zickler; Tim Althoff; Ross Girshick; Christopher Geyer; Mario Fri; Pedro Felzenszwalb; Trevor Darrell

S3-P20A - Nested Pictorial Structures

Steve Gu ; Ying Zheng; Carlo Tomasi

S3-P21A - Performance Capture of Interacting Characters with Handheld Kinects

Genzhi Ye ; Yebin Liu; Nils Hasler; Xiangyang Ji; Qionghai Dai; Christian Theobalt

S3-P22A - Dynamic Eye Movement Datasets and Learnt Saliency Models for Visual Action Recognition

Stefan Mathe ; Cristian Sminchisescu

POSTER SESSION 3 B

S3-P1B - Coherent Filtering: Detecting Coherent Motions from Crowd Clutters

Bolei Zhou ; Xiaou Tang; Xiaogang Wang

S3-P2B - Robust 3D Action Recognition with Random Occupancy Patterns

Jiang Wang ; Zicheng Liu; Jan Chorowski; Zhuoyuan Chen; Ying Wu

S3-P3B - Directional Space-Time Oriented Gradients for 3D Visual Pattern Analysis

Ehsan Norouznezhad ; Mehrtash Harandi; Abbas Bigdeli; Mahsa Baktash; Adam Postula; Brian Lovell

S3-P4B - Polynomial Regression on Riemannian Manifolds

Jacob Hinkle ; Prasanna Muralidharan; P Thomas Fletcher; Sarang Joshi

S3-P5B - Geodesic Saliency Using Background Priors

Yichen Wei ; Fang Wen; Wangjiang Zhu; Jian Sun

S3-P6B - Joint Face Alignment with Non-Parametric Shape Models

Brandon Smith ; Li Zhang

S3-P7B - Discriminative Bayesian Active Shape Models

Pedro Martins ; Rui Caseiro; João F Henriques; Jorge Batista

S3-P8B - Patch Based Synthesis for Single Depth Image Super-Resolution

Oisin Mac Aodha ; Neill Campbell; Arun Nair; Gabriel Brostow

S3-P9B - Annotation Propagation in Large Image Databases via Dense Image Correspondence

Michael Rubinstein ; Ce Liu; William Freeman

S3-P10B - Numerically Stable Optimization of Polynomial Solvers for Minimal Problems

Yubin Kuang ; Kalle Åström

S3-P11B - Has My Algorithm Succeeded? An Evaluator for Human Pose Estimators

Nataraj Jammalamadaka ; Andrew Zisserman; Marcin Eichner; Vittorio Ferrari; Jawahar C. V.

S3-P12B - Group Tracking: Exploring Mutual Relations for Multiple Object Tracking

Genquan Duan ; Haizhou Ai; Song Cao; Shihong Lao

S3-P13B - A Discrete Chain Graph Model for 3d+t Cell Tracking with High Misdetection Robustness

Bernhard Kausler ; Martin Schiegg; Bjoern Andres; Martin Lindner; Ullrich Koethe; Heike Leitte; Jochen Wittbrodt; Lars Hufnagel; Fred Hamprecht

S3-P14B - Robust Tracking with Weighted Online Structured Learning

Rui Yao ; Qinfeng Shi; Chunhua Shen; Yanning Zhang; Anton van den hengel

S3-P15B - Fast Regularization of Matrix-Valued Images

Guy Rosman ; Yu Wang; Xue-Cheng Tai; Ron Kimmel; Alfred Bruckstein

S3-P16B - Blind Correction of Optical Aberrations

Christian Schuler ; Michael Hirsch; Stefan Harmeling; Bernhard Schölkopf

S3-P17B - Inverse Rendering of Faces on a Cloudy Day

Oswald Aldrian ; William A. P. Smith

S3-P18B - On Tensor-Based PDEs and their Corresponding Variational Formulations with Application to Color Image Denoising

Freddie Åström ; George Baravdish; Michael Felsberg

S3-P19B - Kernelized Temporal Cut for Online Temporal Segmentation and Recognition

Dian Gong ; Gerard Medioni; Sikai Zhu; Xuemei Zhao

S3-P20B - Grain Segmentation of 3D Superalloy Images Using Multichannel EWCVT under Human Annotation Constraints

Yu Cao ; Lili Ju; Song Wang

S3-P21B - Hough Regions for Joining Instance Localization and Segmentation

Hayko Riemenschneider ; Sabine Sternig; Michael Donoser; Peter Roth; Horst Bischof

S3-P22B - Learning to Segment a Video to Clips Based on Scene and Camera Motion

Adarsh Kowdle ; Tsuhan Chen

S3-P23B - Evaluation of Image Segmentation Quality by Adaptive Ground Truth Composition

Bo Peng; Lei Zhang

ORAL SESSION 3

Detection and attributes

Session Chairs

Antonio Torralba and Stefan Carlsson

S3-O1 - Exact Acceleration of Linear Object Detectors

Charles Dubout ; François Fleuret

S3-O2 - Latent Hough Transform for Object Detection

Nima Razavi ; Juergen Gall; Pushmeet Kohli; Luc Van Gool

S3-O3 - Using linking features in learning non-parametric part models

Leonid Karlinsky ; Shimon Ullman

S3-O4 - Diagnosing Error in Object Detectors

Derek Hoiem ; Yodsawalai Chodpathumwan; Qieyun Dai

S3-O5 - Attributes for classifier feedback

Amar Prakash; Devi Parikh

S3-O6 - Constrained Semi-Supervised Learning using Attributes and Comparative Attributes

Abhinav Shrivastava ; Saurabh Singh; Abhinav Gupta

Afternoon

POSTER SESSION 4 A

S4-P1A - Renormalization Returns: Hyper-renormalization and Its Applications

Kenichi Kanatani ; Ali Al-Sharadqah; Nikolai Chernov; Yasuyuki Sugaya

S4-P2A - Scale Robust Multi View Stereo

Christian Bailer; Manuel Finckh ; Hendrik Lensch

S4-P3A - Laplacian Meshes for Monocular 3D Shape Recovery

Jonas Östlund ; Aydin Varol; Dat Tien Ngo; Pascal Fua

S4-P4A - Soft Inextensibility Constraints for Template-Free Non-rigid Reconstruction

Sara Vicente ; Lourdes Agapito

S4-P5A - Spatiotemporal Descriptor for Wide-Baseline Stereo Reconstruction of Non-Rigid and Ambiguous Scenes

Eduard Trulls Fortuny ; Alberto Sanfeliu; Francesc Moreno-Noguer

S4-P6A - Elevation Angle from Reflectance Monotonicity: Photometric Stereo for General Isotropic Reflectances

Boxin Shi ; Ping Tan; Yasu Matsushita; Katsushi Ikeuchi

S4-P7A - Local Log-Euclidean Covariance Matrix (L^2ECM) for Image Representation and Its Applications

Peihua Li ; Qilong Wang

S4-P8A - Ensemble Partitioning for Unsupervised Image Categorization

Dengxin Dai ; Mukta Prasad; Christian Leistner; Luc Van Gool

S4-P9A - Set Based Discriminative Ranking for Recognition

Yang Wu ; Michihiko Minoh; Masayuki Mukunoki; Shihong Lao

S4-P10A - A Global Hypotheses Verification Method for 3D Object Recognition

Aitor Aldoma ; Federico Tombari; Luigi Di Stefano; Markus Vincze

S4-P11A - Are You Really Smiling at Me? Spontaneous versus Posed Enjoyment Smiles
Hamdi Dibeklioglu ; Albert Salah; Theo Gevers

S4-P12A - Efficient Monte Carlo sampler for detecting parametric objects in large scenes
Yannick Verdié; Florent Lafarge

S4-P13A - Supervised Geodesic Propagation for Semantic Label Transfer
Xiaowu Chen; Qing Li ; Yafei Song; Xin Jin; Qinping Zhao

S4-P14A - Bayesian Face Revisited: A Joint Formulation
Dong Chen ; Xudong Cao; Liwei Wang; Fang Wen; Jian Sun

S4-P15A - Beyond Bounding-Boxes: Learning Object Shape by Model-driven Grouping
Juan Antonio Monroy ; Bjorn Ommer

S4-P16A - In Defence of Negative Mining for Annotating Weakly Labelled Data
Parthipan Siva ; Chris Russell; Tao Xiang

S4-P17A - Describing Clothing by Semantic Attributes
Huizhong Chen ; andrew Gallagher; Bernd Girod

S4-P18A - Graph Matching via Sequential Monte Carlo
Yumin Suh; Minsu Cho; Kyoung Mu Lee

S4-P19A - Jet-Based Local Image Descriptors
Anders Boesen Lindbo Larsen ; Sune Darkner; Anders Dahl; Kim Pedersen

S4-P20A - Abnormal Object Detection by Canonical Scene-based Contextual Model
Sangdon Park; Wonsik Kim; Kyoung Mu Lee

S4-P21A - Shapecollage: occlusion-aware, example-based shape interpretation
Forrester Cole ; Phillip Isola; William Freeman; Fredo Durand; Edward Adelson

S4-P22A - Interactive Facial Feature Localization
Vuong Le ; Jonathan Brandt; Zhe Lin; Lubomir Bourdev; Thomas Huang

POSTER SESSION 4 B

S4-P1B - Propagative Hough Voting for Human Activity Recognition

Gang Yu ; Junsong Yuan; Zicheng Liu

S4-P2B - Spatio-Temporal Phrases for Activity Recognition

Yimeng Zhang ; Xiaoming Liu; Ming-Ching Chang; Weina Ge; Tsuhan Chen

S4-P3B - Complex Events Detection using Data-driven Concepts

Yang Yang ; Mubarak Shah

S4-P4B - Learning to Recognize Unsuccessful Activities Using a Two-Layer Latent Structural Model

Qiang Zhou ; Gang Wang

S4-P5B - Action Recognition Using Subtensor Constraint

Qiguang Liu; Xiaochun Cao

S4-P6B - Approximate Gaussian Mixtures for Large Scale Vocabularies

Yannis Avrithis ; Yannis Kalantidis

S4-P7B - Globally Optimal Closed-surface Segmentation for Connectomics

Bjoern Andres; Thorben Kroeger ; Kevin Briggman; Winfried Denk; Natalya Korogod; Graham Knott; Ullrich Koethe; Fred Hamprecht

S4-P8B - Reduced Analytical Dependency Modeling for Classifier Fusion

Andy Jinhua Ma; Pong Yuen

S4-P9B - Learning to Match Appearances by Correlations in a Covariance Metric Space

Slawomir Bak ; Guillaume Charpiat; Etienne Corvee; Francois Bremond; Monique Thonnat

S4-P10B - On the Convergence of Graph Matching: Graduated Assignment Revisited

Yu Tian; Junchi Yan ; Hequan Zhang; Ya Zhang; Xiaokang Yang; Hongyuan Zha

S4-P11B - Image Annotation Using Metric Learning in Semantic Neighbourhoods

Yashaswi Verma ; Jawahar C. V.

S4-P12B - Dynamic Programming for Approximate Expansion Algorithm

Olga Veksler

S4-P13B - Real-time Compressive Tracking

Kaihua Zhang; Lei Zhang ; Ming-Hsuan Yang

S4-P14B - Tracking feature points in uncalibrated images with radial distortion

Miguel Lourenço ; João Pedro Barreto

S4-P15B - Divergence-free motion estimation

Isabelle Herlin ; Dominique Béreziat; Nicolas Mercier; Sergiy Zhuk

S4-P16B - Visual Tracking via Adaptive Tracker Selection with Multiple Features

Ju Hong Yoon; Du Yong Kim; Kuk-Jin Yoon

S4-P17B - Image Enhancement using Calibrated Lens Simulations

YiChang Shih ; Brian Guenter; Neel Joshi

S4-P18B - Color Constancy, Intrinsic Images, and Shape Estimation

Jonathan Barron ; Jitendra Malik

S4-P19B - A Fast Illumination and Deformation Insensitive Image Comparison Algorithm Using Wavelet-Based Geodesics

Anne Jorstad ; David Jacobs; Alain Trouvé

S4-P20B - Large-Scale Gaussian Process Classification with Flexible Adaptive Histogram Kernels

Erik Rodner ; Alexander Freytag; Paul Bodesheim; Joachim Denzler

S4-P21B - Background Subtraction with Dirichlet Processes

Tom Haines ; Tao Xiang

S4-P22B - Mobile Product Image Search by Automatic Query Object Extraction

Xiaohui Shen ; Zhe Lin; Jonathan Brandt; Ying Wu

S4-P23B - Analyzing the Subspace Structure of Related Images: Concurrent Segmentation of Image Sets

Lopamudra Mukherjee ; Vikas Singh; Jia Xu; Maxwell Collins

S4-P24B - Artistic image classification: an analysis on the PRINTART database

Gustavo Carneiro ; Nuno Pinho da Silva; Alessio Del Bue; Joao Costeira

ORAL SESSION 4

Actions and activities

Session Chairs

Michael J. Black and Ivan Laptev

S4-O1 - Detecting Actions, Poses, and Objects with Relational Phraselets

Chaitanya Desai ; Deva Ramanan

S4-O2 - Action Recognition with Exemplar Based 2.5D Graph Matching

Bangpeng Yao ; Li Fei-fei,

S4-O3 - Cost-Sensitive Top-Down/Bottom-Up Inference for Multiscale Activity Recognition

Mohamed Amer ; Dan Xie; Mingtian Zhao; Yaofei Feng; Behrooz Mahasseni; Sinisa Todorovic; Song-Chun Zhu

S4-O4 - Activity Forecasting

Kris Kitani ; James Bagnell; Martial Hebert

S4-O5 - A Unified Framework for Multi-Target Tracking and Collective Activity Recognition

Wongun Choi ; Silvio Savarese

**Wednesday, October 10
morning**

POSTER SESSION 5 A

S5-P1A - Camera Pose Estimation Using First-Order Curve Differential Geometry

Ricardo Fabbri ; Peter Giblin; Benjamin Kimia

S5-P2A - Beyond Feature Points: Structured Prediction for Monocular Non-rigid 3D Reconstruction

Mathieu Salzmann ; Raquel Urtasun

S5-P3A - Learning Spatially-Smooth Mappings in Non-Rigid Structure from Motion

Onur Hamsici; Paulo Gotardo ; Aleix Martinez

S5-P4A - In Defence of RANSAC for Outlier Rejection in Deformable Registration

Quoc-Huy Tran ; Tat-Jun Chin; Gustavo Carneiro; Michael S. Brown; David Suter

S5-P5A - A Tensor Voting Approach for Multi-View 3D Scene Flow Estimation and Refinement

Jaesik Park ; Tae Hyun Oh; Jiyoung Jung; Yu-Wing Tai; In So Kweon

S5-P6A - Two-view Underwater Structure and Motion for Cameras under Flat Refractive Interfaces

Lai Kang ; Lingda Wu; Yee-Hong Yang

S5-P7A - Reading Ancient Coins: Automatically Identifying Denarii using Obverse Legend Seeded Retrieval

Ognjen Arandjelovic

S5-P8A - Robust and Practical Face Recognition via Structured Sparsity

Kui Jia ; Tsung-Han Chan; Yi Ma

S5-P9A - Recognizing Materials from Virtual Examples

Wenbin Li ; Mario Fritz

S5-P10A - Scene Recognition on the Semantic Manifold

Roland Kwitt ; Nuno Vasconcelos; Nikhil Rasiwasia

S5-P11A - *Unsupervised Temporal Commonality Discovery*

Wen-Sheng Chu ; Feng Zhou; Fernando De la Torre

S5-P12A - *Finding People Using Scale, Rotation and Articulation Invariant Matching*

Hao Jiang

S5-P13A - *Measuring Image Distances via Embedding in a Semantic Manifold*

Chen Fang; Lorenzo Torresani

S5-P14A - *Efficient Point-to-Subspace Query in L1 with Application to Robust Face Recognition*

Ju Sun ; Yuqian Zhang; John Wright

S5-P15A - *Recognizing Complex Events using Large Margin Joint Low-Level Event Model*

Hamid Izadinia ; Mubarak Shah

S5-P16A - *Multi-Component Models for Object Detection*

Chunhui Gu ; Pablo Arbelaez; Yuanqing Lin; Kai Yu; Jitendra Malik

S5-P17A - *Discriminative Decorrelation for Clustering and Classification*

Bharath Hariharan ; Jitendra Malik; Deva Ramanan

S5-P18A - *Beyond Spatial Pyramids: A New Feature Extraction Framework with Dense Spatial Sampling for Image Classification*

Shengye Yan ; Xinxing Xu; Dong Xu; Steve Lin; Xuelong Li

S5-P19A - *Subspace Learning in Krein Spaces: Complete Kernel Fisher Discriminant Analysis with Indefinite Kernels*

Stefanos Zafeiriou

S5-P20A - *A Novel Material-aware Feature Descriptor for Volumetric Image Registration in Diffusion Tensor Space*

Shuai Li ; Qinping Zhao; shengfa Wang; Tingbo Hou; Aimin Hao; Hong Qin

S5-P21A - *Efficient Closed-Form Solution to Generalized Boundary Detection*

Marius Leordeanu ; Rahul Sukthankar; Cristian Sminchisescu

S5-P22A - *Attribute Learning for Understanding Unstructured Social Activity*

Yanwei Fu ; Timothy Hospedales; Tao Xiang; Shaogang Gong

POSTER SESSION 5 B

S5-P1B - Statistical Inference of Motion in the Invisible

Haroon Idrees ; Imran Saleemi; Mubarak Shah

S5-P2B - Going With the Flow: Pedestrian Efficiency in Crowded Scenes

Louis Kratz; Ko Nishino

S5-P3B - Reconstructing 3D Human Pose from 2D Image Landmarks.

Varun Ramakrishna ; Takeo Kanade; Yaser Sheikh

S5-P4B - Fast Tiered Labeling with Topological Priors

Ying Zheng ; Steve Gu; Carlo Tomasi

S5-P5B - TreeCANN - k-d tree Coherence Approximate Nearest Neighbor Algorithm

Igor Odonetsky ; Shai Avidan

S5-P6B - Robust Regression

Dong Huang ; Ricardo Cabral; Fernando De la Torre

S5-P7B - Domain Adaptive Dictionary Learning

Qiang Qiu ; Vishal Patel; Pavan Turaga; Rama Chellappa

S5-P8B - A Robust and Efficient Doubly Regularized Metric Learning Approach

Meizhu Liu ; Baba Vemuri

S5-P9B - A Discriminative Data-Dependent Mixture-Model Approach for Multiple Instance Learning in Image Classification

Qifan Wang ; Luo Si; Dan Zhang

S5-P10B - No Bias Left Behind: Covariate Shift Adaptation for Discriminative 3D Pose Estimation

Makoto Yamada ; Leonid Sigal; Michalis Raptis

S5-P11B - Labeling Images by Integrating Sparse Multiple Distance Learning and Semantic Context Modeling

Chuanjun Ji; Xiangdong Zhou ; Lan Lin; Weidong Yang

S5-P12B - Exploiting the Circulant Structure of Tracking-by-detection with Kernels

João F Henriques ; Rui Caseiro; Pedro Martins; Jorge Batista

S5-P13B - Online Spatio-temporal Structural Context Learning for Visual Tracking
Longyin Wen ; Zhaowei Cai; Zhen Lei; Dong Yi; Stan Z. Li

S5-P14B - Automatic Tracking of a Large Number of Moving Targets in 3D
Ye Liu ; Hui Li; Yan Qiu Chen

S5-P15B - Towards optimal non-rigid surface tracking
Martin Klaudiny ; Chris Budd; Adrian Hilton

S5-P16B - Full Body Performance Capture under Uncontrolled and Varying Illumination: A Shading-based Approach
Chenglei Wu ; Kiran Varanasi; Christian Theobalt

S5-P17B - Automatic Exposure Correction of Consumer Photographs
Lu Yuan ; Jian Sun

S5-P18B - Image Guided Tone Mapping with Locally Nonlinear Model
Huxiang Gu ; Ying Wang; Shiming Xiang; Gaofeng Meng; Chunhong Pan

S5-P19B - A comparison of the statistical properties of IQA databases relative to a set of newly captured high-definition images
Javier Silvestre-Blanes ; Ian Van Der Linde; Rubén Pérez-Lloréns

S5-P20B - Supervised Assessment of Segmentation Hierarchies
Jordi Pont-Tuset ; Ferran Marques

S5-P21B - Image Labeling on a Network: Using Social-Network Metadata for Image Classification
Julian McAuley ; Jure Leskovec

S5-P22B - Segmentation Based Particle Filtering for Real-Time 2D Object Tracking
Vasileios Belagiannis ; Falk Schubert; Nassir Navab; Slobodan Ilic

S5-P23B - Online Video Segmentation by Bayesian Split-Merge Clustering
Juho Lee ; Suha Kwak; Bohyung Han; Seungjin Choi

S5-P24B - Joint Classification-Regression Forests for Spatially Structured Multi-Object Segmentation
Ben Glocker ; Olivier Pauly; Ender Konukoglu; Antonio Criminisi

ORAL SESSION 5

MRFs and early vision

Session Chairs

Ramin Zabih and Laurent Itti

S5-O1 - Diverse M-Best Solutions in Markov Random Fields

Dhruv Batra ; Payman Yadollahpour; Abner Guzman-Rivera; Greg Shakhnarovich

S5-O2 - Generic Cuts: An Efficient Algorithm for Optimal Inference in Higher Order MRF-MAP

Chetan Arora ; Subhashis Banerjee; Prem Kalra; S.N. Maheshwari

S5-O3 - Filter-Based Mean-Field Inference for Random Fields with Higher-Order Terms and Product Label-Spaces

Jonathan Warrell ; Phil Torr; Vibhav Vineet

S5-O4 - Continuous Markov Random Fields for Robust Stereo Estimation

Koichiro Yamaguchi; Tamir Hazan; David McAllester; Raquel Urtasun

S5-O5 - Good Regions to Deblur

Zhe Hu ; Ming-Hsuan Yang

S5-O6 - Patch Complexity, Finite Pixel Correlations and Optimal Denoising

Anat Levin ; Boaz Nadler; Fredo Durand; William Freeman

Afternoon

POSTER SESSION 6 A

S6-P1A - Guaranteed Ellipse Fitting with the Sampson Distance

Zygmunt Szpak ; Wojciech Chojnacki; Anton van den Hengel

S6-P2A - A Locally Linear Regression Model for Boundary Preserving Regularization in Stereo Matching

Shengqi Zhu ; Li Zhang; Hailin Jin

S6-P3A - A Novel Fast Method for L^{infinity} Problems in Multiview Geometry

Zhijun Dai ; Yihong Wu; Fengjun Zhang; Hongan Wang

S6-P4A - Visibility Probability Structure from SfM Datasets and Applications

Siddharth Choudhary ; P J Narayanan

S6-P5A - A Generative Model for Online Depth Fusion

Oliver Woodford ; George Vogiatzis

S6-P6A - Depth Recovery Using an Adaptive Color-Guided Auto-Regressive Model

Jingyu Yang; Xincheng Ye; Kun Li ; Chunping Hou

S6-P7A - Learning Hybrid Part Filters for Scene Recognition

Yingbin Zheng; Yu-Gang Jiang ; Xiangyang Xue

S6-P8A - Parametric Manifold of an Object under Different Viewing Directions

Xiaozheng Zhang ; Yongsheng Gao; Terry Caelli

S6-P9A - Fast approximations to structured sparse coding and applications to object classification

Arthur Szlam ; Karol Gregor; Yann LeCun

S6-P10A - Displacement Template with Divide-& -Conquer Algorithm for Significantly Improving Descriptor based Face Recognition Approaches

Liang Chen ; Ling Yan; Yonghuai Liu; Lixin Gao; Xiaoqin Zhang

S6-P11A - Latent Pyramidal Regions for Recognizing Scenes

Fereshteh Sadeghi ; Marshall Tappen

S6-P12A - Augmented Attribute Representations

Viktoria Sharmanska ; Novi Quadrianto; Christoph Lampert

S6-P13A - Exploring the Spatial Hierarchy of Mixture Models for Human Pose Estimation

Yuandong Tian ; C. Lawrence Zitnick; Srinivasa Narasimhan

S6-P14A - People Orientation Recognition by Mixtures of Wrapped Distributions on Random Trees

Davide Baltieri ; Roberto Vezzani; Rita Cucchiara

S6-P15A - Hybrid Classifiers for Object Classification with a Rich Background

Margarita Osadchy ; Daniel Keren; Bella Specktor

S6-P16A - Unsupervised and Supervised Visual Codes with Restricted Boltzmann Machines

Hanlin Goh ; Nicolas Thome; Matthieu Cord; Joo-Hwee Lim

S6-P17A - A new biologically inspired color image descriptor

Jun Zhang; Youssef Barhomi; Thomas Serre

S6-P18A - Finding Correspondence from Multiple Images via Sparse and Low-rank Decomposition

Zinan Zeng ; Tsung-Han Chan; Kui Jia; Dong Xu

S6-P19A - Multidimensional Spectral Hashing

Yair Weiss; Rob Fergus ; Antonio Torralba

S6-P20A - What Makes a Good Detector? — Structured Priors for Learning From Few Examples

Tianshi Gao ; Michael Stark; Daphne Koller

S6-P21A - A Convolutional Treelets Binary Feature Approach to Fast Keypoint Recognition

Chenxia Wu ; Jianke Zhu; Jiemi Zhang; Chun Chen; Deng Cai

S6-P22A - Categorizing Turn-Taking Interactions

Karthir Prabhakar; James Rehg

POSTER SESSION 6 B

S6-P1B - Local Expert Forest of Score Fusion for Video Event Classification

Jingchen Liu ; Scott McCloskey; Yanxi Liu

S6-P2B - View-Invariant Action Recognition using Latent Kernelized Structural SVM

Xinxiao Wu ; Yunde Jia

S6-P3B - Trajectory-Based Modeling of Human Actions with Motion Reference Points

Yu-Gang Jiang ; Qi Dai; Xiangyang Xue; Wei Liu; Chong-Wah Ngo

S6-P4B - PatchMatchGraph: Building a Graph of Dense Patch Correspondences for Label Transfer

Stephen Gould ; Yuhang Zhang

S6-P5B - A Unifying Theory of Active Discovery and Learning

Timothy Hospedales ; Shaogang Gong; Tao Xiang

S6-P6B - Extracting 3D Scene-consistent Object Proposals and Depth from Stereo Images

Michael Bleyer; Christoph Rhemann ; Carsten Rother

S6-P7B - Repairing Sparse Low-Rank Texture

Xiao Liang ; Xiang Ren; Zhengdong Zhang; Yi Ma

S6-P8B - Active Frame Selection for Label Propagation in Videos

Sudheendra Vijayanarasimhan; Kristen Grauman

S6-P9B - Non-causal Temporal Prior for Video Deblocking

Deqing Sun ; Ce Liu

S6-P10B - Text Image Deblurring Using Text-specific Properties

Hojin Cho; Jue Wang; Seungyong Lee

S6-P11B - Sequential Spectral Learning to Hash with Multiple Representations

Saehoon Kim ; Yoonseop Kang; Seungjin Choi

S6-P12B - Two-Granularity Tracking: Mediating Trajectory and Detection Graphs for Tracking under Occlusions

Katerina Fragkiadaki ; Weiyu Zhang

S6-P13B - Taking Mobile Multi-Object Tracking to the Next Level: People, Unknown Objects, and Carried Items

Dennis Mitzel ; Bastian Leibe

S6-P14B - Dynamic Context for Tracking Behind Occlusions

Fei Xiong; Octavia Camps ; Mario Sznajer

S6-P15B - To Track or To Detect? An Ensemble Framework for Optimal Selection

Xu Yan; Xuqing Wu; Ioannis A Kakadiaris; Shishir Shah

S6-P16B - Spatial and Angular Variational Super-resolution of 4D Light Fields

Sven Wanner; Bastian Goldluecke

S6-P17B - Blur-Kernel Estimation from Spectral Irregularities

Amit Goldstein ; Raanan Fattal

S6-P18B - Deconvolving PSFs for A Better Motion Deblurring using Multiple Images

Xiang Zhu ; Filip Sroubek; Peyman Milanfar

S6-P19B - Depth and Deblurring from a Spectrally-varying Depth-of-Field

Ayan Chakrabarti ; Todd Zickler

S6-P20B - Segmentation over Detection by Coupled Global and Local Sparse Representations

Wei Xia ; Zheng Song; Jiashi Feng; Loong Fah Cheong; Shuicheng Yan

S6-P21B - Moving Object Segmentation Using Motor Signals

Changhai Xu; Jingen Liu ; Benjamin Kuipers

S6-P22B - Block-sparse RPCA for Consistent Foreground Detection

Zhi Gao ; Loong Fah Cheong; Mo Shan

S6-P23B - A Generative Model for Simultaneous Estimation of Human Body Shape and Pixel-level Segmentation

Ingmar Rauschert ; Robert Collins

S6-P24B - Visual Dictionary Learning for Joint Object Categorization and Segmentation

Aastha Jain; Luca Zappella; Patrick McClure; Rene Vidal

ORAL SESSION 6

Geometry and recognition

Session Chairs

Aude Oliva and Silvio Savarese

S6-O1 - *People Watching: Human Actions as a Cue for Single View Geometry*

David Fouhey ; Vincent Delaitre; Alyosha Efros; Abhinav Gupta; Ivan Laptev; Josef Sivic

S6-O2 - *Indoor Segmentation and Support Inference from RGBD Images*

Nathan Silberman ; Rob Fergus; Derek Hoiem; Pushmeet Kohli

S6-O3 - *Beyond the line of sight: labeling the underlying surfaces*

Ruiqi Guo ; Derek Hoiem

S6-O4 - *Depth Extraction from Video Using Non-parametric Sampling*

Kevin Karsch ; Ce Liu; Sing Bing Kang

S6-O5 - *Multiple View Object Cosegmentation using Appearance and Stereo Cues*

Adarsh Kowdle ; Sudipta Sinha; Rick Szeliski

**Thursday, October 11
morning**

POSTER SESSION 7 A

S7-P1A - Manifold Statistics for Essential Matrices

Gijs Dubbelman ; Leo Dorst; Henk Pijls

S7-P2A - Elastic Shape Matching of Parameterized Surfaces Using Square Root Normal Fields

Ian Jermyn; Sebastian Kurtek ; Eric Klassen; Anuj Srivastava

S7-P3A - N-tuple Color Segmentation for Multi-View Silhouette Extraction

Abdelaziz Djelouah ; Jean-Sebastien Franco; edmond boyer; François Le Clerc; Patrick Perez

S7-P4A - Motion-Aware Structured Light Using Spatio-Temporal Decodable Patterns

Yuichi Taguchi ; Amit Agrawal; Oncel Tuzel

S7-P5A - Refractive Calibration of Underwater Cameras

Anne Jordt-Sedlazeck ; Reinhard Koch

S7-P6A - Detection of Independently Moving Objects in Non-planar Scenes via Multi-Frame

Monocular Epipolar Constraint

Soumyabrata Dey ; Vladimir Reilly; Imran Saleemi; Mubarak Shah

S7-P7A - Shape from Angle Regularity

Aamer Zaheer; Maheen Rashid; Sohaib Khan

S7-P8A - Pose Invariant Approach for Face Recognition At Distance

Eslam Mostafa ; Asem Ali; Naif Alajlan ; Aly Farag

S7-P9A - Minimal Correlation Classification

Noga Levy ; Lior Wolf

S7-P10A - Contextual Object Detection using Set-based Classification

Ramazan Gokberk Cinbis ; Stan Sclaroff

S7-P11A - Age Invariant Face Verification with Relative Craniofacial Growth Model
Tao Wu ; Rama Chellappa

S7-P12A - Inferring gene interaction networks from ISH images via kernelized graphical models
Kriti Puniyani ; Eric Xing

S7-P13A - Random Forest for Image Annotation
Hao Fu ; Qian Zhang; Guoping Qiu

S7-P14A - (MP)²T: Multiple People Multiple Parts Tracker
Hamid Izadinia ; Imran Saleemi; Wenhui Li; Mubarak Shah

S7-P15A - Mixture Component Identification and Learning for Visual Recognition
Omid Aghazadeh ; Hossein Azizpour; Josephine Sullivan; Stefan Carlsson

S7-P16A - Image Retrieval with Structured Object Queries Using Latent Ranking SVM
Tian Lan ; Weilong Yang; Yang Wang; Greg Mori

S7-P17A - A probabilistic derivative measure based on the distribution of intensity difference
Youngbae Hwang ; In So Kweon

S7-P18A - Pairwise Rotation Invariant Co-occurrence Local Binary Pattern
Xianbiao Qi ; Rong Xiao; Lei Zhang; Jun Guo

S7-P19A - Per-patch Descriptor Selection using Surface and Scene Properties
Ivo Everts ; Jan van Gemert; Theo Gevers

S7-P20A - Mixed-Resolution Patch-Matching
Harshit Sureka ; P J Narayanan

S7-P21A - Exploiting Sparse Representations for Robust Analysis of Noisy Complex Video Scenes
Gloria Zen ; Elisa Ricci; Nicu Sebe

S7-P22A - KAZE Features
Pablo Fernández Alcantarilla ; Adrien Bartoli; Andrew Davison

POSTER SESSION 7 B

S7-P1B - *Online Moving Camera Background Subtraction*

Ali Elqursh ; Ahmed Elgammal

S7-P2B - *Coregistration: Simultaneous Alignment and Modeling of Articulated 3D Shape*

David Hirshberg; Matthew Loper; Eric Rachlin ; Michael Black

S7-P3B - *Motion Interchange Patterns for Action Recognition in Unconstrained Videos*

Orit Kliper-Gross; Yaron Gurovich; Tal Hassner ; Lior Wolf

S7-P4B - *A Non-parametric Hierarchical Model to Discover Behavior Dynamics from Tracks*

Julian Kooij; Gwenn Englebienne; Dariu Gavrila

S7-P5B - *Scene semantics from long-term observation of people*

Vincent Delaitre ; David Fouhey; Ivan Laptev; Josef Sivic; Abhinav Gupta; Alexei Efros

S7-P6B - *Efficient Exact Inference for 3D Indoor Scene Understanding*

Alexander Schwing ; Raquel Urtasun

S7-P7B - *Seam Segment Carving: Retargeting Images to Irregularly-Shaped Image Domains*

Shaoyu Qi ; Jeffrey Ho

S7-P8B - *Estimation of Intrinsic Image Sequences from Image+Depth Video*

Kyong Joon Lee; Qi Zhao; Xin Tong; Minmin Gong; Shahram Izadi; Sang Uk Lee

S7-P9B - *Bayesian Blind Deconvolution with General Sparse Image Priors*

S. Derin Babacan ; Rafael Molina; Minh Do; Aggelos Katsaggelos

S7-P10B - *3D² PM - 3D Deformable Part Models*

Bojan Pepik ; Peter Gehler; Michael Stark; Bernt Schiele

S7-P11B - *Efficient Similarity Derived From Kernel-based Transition Probability*

Takumi Kobayashi ; Nobuyuki Otsu

S7-P12B - *A Convex Discrete-Continuous Approach for Markov Random Fields*

Christopher Zach ; Pushmeet Kohli

S7-P13B - Generalized Roof Duality for Multi-Label Optimization: Optimal Lower Bounds and Persistency

Thomas Windheuser ; Hiroshi Ishikawa; Daniel Cremers

S7-P14B - Sparse Embedding: A Framework For Sparsity Promoting Dimensionality Reduction

Hien Nguyen ; Vishal Patel; Nasser Nasrabadi; Rama Chellappa

S7-P15B - Automatic Localization of Balloon Markers and Guidewire in Rotational Fluoroscopy with Application to 3D Stent Reconstruction

Yu Wang ; Terrence Chen; Peng Wang; Christopher Rohkohl; Dorin Comaniciu

S7-P16B - Improving NCC-based Direct Visual Tracking

Glaucio Scandaroli ; Rogerio Richa; Maxime Meilland

S7-P17B - Simultaneous Compaction and Factorization of Sparse Image Motion Matrices

Susanna Ricco ; Carlo Tomasi

S7-P18B - Low-Rank Sparse Learning for Robust Visual Tracking

Tianzhu Zhang ; Bernard Ghanem; Si Liu; Narendra Ahuja

S7-P19B - Towards Optimal Design of Time and Color Multiplexing Codes

Tsung-Han Chan ; Kui Jia; Eliot Wycoff; Chong-Yung Chi; Yi Ma

S7-P20B - Dating Historical Color Images

Frank Palermo ; Alexei Efros; James Hays

S7-P21B - Rainbow Flash Camera: Depth Edge Extraction Using Complementary Colors

Yuchi Taguchi

S7-P22B - Stixels motion estimation without optical flow computation

Bertan Günyel ; Rodrigo Benenson; Radu Timofte; Luc Van Gool

S7-P23B - Video Matting Using Multi-frame Nonlocal Matting Laplacian

Inchang Choi ; Minhaeng Lee; Yu-Wing Tai

S7-P24B - Super-Resolution-based inpainting

Olivier Le Meur ; Christine Guillemot

S7-P25B - Fast Planar Correlation Clustering for Image Segmentation

Julian Yarkony; Alexander Ihler; Charless Fowlkes

ORAL SESSION 7

Lights, action

Session Chairs

Bernt Schiele and David A. Forsyth

S7-01 - Reflectance and Natural Illumination from a Single Image

Stephen Lombardi ; Ko Nishino

S7-02 - Frequency-Space Decomposition and Acquisition of Light Transport under Spatially Varying Illumination

Dikpal Reddy ; Ravi Ramamoorthi; Brian Curless

S7-03 - A Naturalistic Open Source Movie for Optical Flow Evaluation

Daniel Butler ; Jonas Wulff; Garrett Stanley; Michael Black

S7-04 - Streaming Hierarchical Video Segmentation

Chenliang Xu; Caiming Xiong; Jason Corso

S7-05 - Motion Capture of Hands in Action using Discriminative Salient Points

Luca Ballan ; Aparna Taneja; Juergen Gall; Luc Van Gool; Marc Pollefeys

S7-06 - Photo Sequencing

Tali Basha ; Shai Avidan; Yael Moses

Afternoon

POSTER SESSION 8 A

S8-P1A - Co-inference for Multi-modal Scene Analysis

Daniel Munoz ; James Bagnell; Martial Hebert

S8-P2A - A Unified View on Deformable Shape Factorizations

Roland Angst ; Marc Pollefeys

S8-P3A - Finding the exact rotation between two images independently of the translation

Laurent Kneip ; Roland Siegwart; Marc Pollefeys

S8-P4A - A new set of quartic trivariate polynomial equations for stratified camera self-calibration under zero-skew and constant parameters assumptions

Adlane Habed ; Kassem Al Ismaeil; David Fofi

S8-P5A - A minimal solution for camera calibration using independent pairwise correspondences

Francisco Vasconcelos ; João Pedro Barreto; edmond boyer

S8-P6A - Real-Time Human Pose Tracking from Range Data

Varun Ganapathi ; Christian Plagemann; Daphne Koller; Sebastian Thrun

S8-P7A - Large-lexicon attribute-consistent text recognition in natural images

Tatiana Novikova; Olga Barinova ; Pushmeet Kohli; Victor Lempitsky

S8-P8A - Dictionary-based Face Recognition from Video

Yi-Chen Chen ; Vishal Patel; Jonathon Phillips; Rama Chellappa

S8-P9A - Relaxed Pairwise Learned Metric for Person Re-Identification

Martin Hirzer ; Peter Roth; Martin Köstinger; Horst Bischof

S8-P10A - Connecting Missing Links: Object Discovery from Sparse Observations Using 5 Million Product Images

Hongwen Kang ; Martial Hebert; Alexei Efros; Takeo Kanade

S8-P11A - Disentangling factors of variation for facial expression recognition

Salah Rifai ; Yoshua Bengio; Aaron Courville; Pascal Vincent; Mehdi Mirza

S8-P12A - Simultaneous Image Classification and Annotation via Biased Random Walk on Tri-relational Graph

Xiao Cai ; Hua Wang; Heng Huang; Chris Ding

S8-P13A - Spring Lattice Counting Grids: Scene recognition using deformable positional constraints

Alessandro Perina ; Nebojsa Jojic

S8-P14A - Hand Pose Estimation and Hand Shape Classification using Multi-layered Randomized Decision Forests

Cem Keskin ; Furkan Kiraç; Yunus Emre Kara; Lale Akarun

S8-P15A - Information Theoretic Learning for Pixel-based Visual Agents

Marco Gori; Stefano Melacci; Marco Lippi; Marco Maggini

S8-P16A - Attribute Discovery via Predictable Discriminative Binary Codes

Mohammad Rastegari ; Ali Farhadi; David Forsyth

S8-P17A - Local Higher-Order Statistics (LHS) for Texture Categorization and Facial Analysis

Gaurav Sharma; Sibt ul Hussain ; Frederic Jurie

S8-P18A - SEEDS: Superpixels Extracted via Energy-Driven Sampling

Michael Van den Bergh ; Xavier Boix; Gemma Roig; Benjamin de Capitani; Luc Van Gool

S8-P19A - Recording and playback of camera shake: benchmarking blind deconvolution with a real-world database

Rolf Koehler ; Michael Hirsch; Betty Mohler; Bernhard Schölkopf; Stefan Harmeling

S8-P20A - Learning-Based Symmetry Detection in Natural Images

Stavros Tsogkas ; Iasonas Kokkinos

S8-P21A - Similarity Constrained Latent Support Vector Machine: An Application to Weakly Supervised Action Classification

Nataliya Shapovalova ; Arash Vahdat; Kevin Cannons; Tian Lan; Greg Mori

S8-P22A - Team Activity Recognition in Sports

Cem Direkoglu ; Noel O'Connor

POSTER SESSION 8 B

S8-P1B- Space-Variant Descriptor Sampling for Action Recognition Based on Saliency and Eye Movements

Eleonora Vig ; Michael Dorr; David Cox

S8-P2B - Dynamic Probabilistic CCA for Analysis of Affective Behaviour

Mihalis Nicolaou ; Vladimir Pavlovic; Maja Pantic

S8-P3B - Loss-Specific Training of Non-Parametric Image Restoration Models: A New State of the Art

Jeremy Jancsary ; Sebastian Nowozin; Carsten Rother

S8-P4B - A Probabilistic Approach to Robust Matrix Factorization

Naiyan Wang ; Tiansheng Yao; Jingdong Wang; Dit-Yan Yeung

S8-P5B - Fast Parameter Sensitivity Analysis of PDE-based Image Processing Methods

Torben Pätz ; Tobias Preusser

S8-P6B - The Lazy Flipper: Efficient Depth-limited Exhaustive Search in Discrete Graphical Models

Bjoern Andres ; Jörg Kappes; Thorsten Beier; Ullrich Koethe; Fred Hamprecht

S8-P7B - Face Association across Unconstrained Video Frames Using Conditional Random Fields

Ming Du ; Rama Chellappa

S8-P8B - Contraction Moves for Geometric Model Fitting

Oliver Woodford ; Minh-Tri Pham; Atsuto Maki; Riccardo Gherardi; Frank Perbet; Bjorn Stenger

S8-P9B - General and Nested Wiberg Minimization: L_2 and Maximum Likelihood

Dennis Strelocw

S8-P10B - Nonmetric Priors for Continuous Multilabel Optimization

Evgeny Strekalovskiy ; Claudia Nieuwenhuis; Daniel Cremers

S8-P11B - Real-Time Camera Tracking: When is High Frame-Rate Best?

Ankur Handa; Richard Newcombe; Adrien Angeli; Andrew Davison

S8-P12B - A Bayesian Approach to Alignment-based Image Hallucination

Marshall Tappen ; Ce Liu

S8-P13B - Continuous Regression for Non-Rigid Image Alignment

Enrique Sanchez Lozano ; Fernando De la Torre; Daniel Gonzalez Jimenez

S8-P14B - Non-Rigid Shape Registration: A Single Linear Least Squares Framework

Mohammad Rouhani ; Angel Sappa

S8-P15B - Robust and Accurate Shape Model Fitting using Random Forest Regression Voting

Tim Cootes ; Mircea Ionita; Claudia Lindner; Patrick Sauer

S8-P16B - Shape From Fluorescence

Tali Treibitz ; Zack Murez; B. Greg Mitchell; David Kriegman

S8-P17B - Separability Oriented Preprocessing for Illumination-insensitive Face Recognition

Hu Han ; Shiguang Shan; Xilin Chen; Shihong Lao; Wen Gao

S8-P18B - Saliency Modeling from Image Histograms

Shijian Lu ; Joo-Hwee Lim

S8-P19B - A theoretical analysis of camera response functions in image deblurring

Xiaogang Chen ; Feng Li; Jie Yang; Jingyi Yu

S8-P20B - Robust and Efficient Subspace Segmentation via Least Squares Regression

Can-Yi Lu ; Hai Min; Zhong-Qiu Zhao; Lin Zhu; De-Shuang Huang; Shuicheng Yan

S8-P21B - Local Label Descriptor for Example based Semantic Image Labeling

Yiqing Yang ; Zhouyuan Li; Li Zhang; Christopher Murphy; Jim Hoeve; Hongrui Jiang

S8-P22B - Road Scene Segmentation from a Single Image

Jose Alvarez ; Theo Gevers; Yann LeCun; Antonio Lopez

S8-P23B - Efficient Recursive Algorithms for Computing the Mean Diffusion Tensor and Applications to DTI Segmentation

Guang Cheng; Hesamoddin Salehian; Baba Vemuri

S8-P24B - Semi-Nonnegative Matrix Factorization for Motion Segmentation with Missing Data

Quanyi Mo ; Bruce Draper

ORAL SESSION 8

Semantic segmentation

Session Chairs

Tinne Tuytelaars and Serge Belongie

S8-O1 - *A Three-Layered Approach to Facade Parsing*

Andelo Martinovic ; Markus Mathias; Julien Weissenberg; Luc Van Gool

S8-O2 - *Semantic Segmentation with Second-Order Pooling*

Joao Carreira ; Rui Caseiro; Jorge Batista; Cristian Sminchisescu

S8-O3 - *Shape Sharing for Object Segmentation*

Jaechul Kim ; Kristen Grauman

S8-O4 - *Segmentation Propagation in ImageNet*

Daniel Kettell ; Matthieu Guillaumin; Vittorio Ferrari

S8-O5 - *“Clustering by Composition” for Unsupervised Discovery of Image Categories*

Michal Irani; Alon Faktor

**Monday, Tuesday October 8-9
All day**

DEMO SESSION 1

DS1-D1 - Real-time Image Registration of RGB Webcams and Colorless 3D Time-of-flight Cameras

Juan Gomez ; Guido Bologna; Thierry Pun

DS1-D2 - Technical Demonstration on Model Based Training, Detection and Pose Estimation of Texture-Less 3D Objects in Heavily Cluttered Scenes

Stefan Hinterstoisser ; Vincent Lepetit; Slobodan Ilic; Stefan Holzer; Kurt Konolige; Gary Bradski; Nassir Navab;

DS1-D3 - FaceHugger: The ALIEN Tracker Applied to Faces

Federico Pernici

DS1-D4 - INTAIRACT: Joint Hand Gesture and Fingertip Classification for Touchless Interaction

Xavier Suau ; Marcel Alcoverro; Adolfo Lopez-Mendez; Javier Ruiz-Hidalgo; Josep Casas

DS1-D5 - Fast and Precise Template Matching Based on Oriented Gradients

Yoshinori Konishi ; Yasuyo Kotake; Yoshihisa Ijiri; Masato Kawade

DS1-D6 - A Demo for Object Categorization Based on a Supervised Mean Shift Algorithm

Ruo Du ; UTS; Xiangjian He; Qiang Wu; Jie Yang

DS1-D7 - 3D gesture touchless control based on real-time stereo matching

Chaokang Liao ; Chi-Hao Wu; Ching-Chun Hsiao; po-Kuan Huang; Tung-Yang Lin; Hsu-Ting Lin

DS1-D8 - A Real-time Scene Text to Speech System

Lukas Neumann ; Jiri Matas

DS1-D9 - *Face-based illuminant estimation*

Simone Bianco ; Raimondo Schettini

DS1-D10 - *Object-Layout-Aware Image Retrieval for Personal Album Management*

Mengyou Li; Zheng Song ; Qiang Chen; Zhongyang Huang; Liang Lin; Shuicheng Yan

DS1-D11 - *The Leiden Augmented Reality System (LARS)*

Michael Lew ; Qi Zhang

Wednesday, Thursday October 10-11
All day

DEMO SESSION 2

DS2-D1 - A human vs machine challenge in fashion color classification

Daniele Borghesani ; Costantino Grana

DS2-D2 - Understanding Road Scenes using Visual Cues and GPS Information

Jose Alvarez ; Felipe Lumbrieras; Antonio Lopez; Theo Gevers

DS2-D3 - Prosemantic image retrieval

Gianluigi Ciocca; Claudio Cusano ; Simone Santini; Raimondo Schettini

DS2-D4 - LZM in Action: Realtime Face Recognition System

Evangelos Sariyanidi; Birkan Tunc ; Muhittin Gokmen

DS2-D5 - Using 3D Models for Real-Time Facial Feature Tracking, Pose Estimation, and Expression Monitoring

Angela Caunce ; Tim Cootes

DS2-D6 - Instant Scene Recognition on Mobile Platform

Sebastiano Battiatto; Giovanni Maria Farinella ; Mirko Guarnera; Daniele Ravì; Valeria Tomaselli

DS2-D7 - Adasens Advanced Driver Assistance Systems Live Demo

Noel Trujillo; Chrystoph Toll; Daniele Sciretti; Silvia Sanchez; Andrej Ritter; Christian KAES; Vrushali Jedhe; Gabriela Jager; Daniel Danch; Alessandro Colombo; Sebastian Carreño; Josep Aulinas

DS2-D8 - Real-Time 3D Motion Capture by Monocular Vision and Virtual Rendering

David Gmez Jaregui ; Patrick Horain

DS2-D9 - A Tai Chi Training System Based on Fast Skeleton Matching Algorithm

Yu Jin ; Stanley Hu; GangShan Wu

DS2-D10 - Emotion Mirror: A novel intervention for autism based on real-time expression recognition

David Deriso; Joshua Susskind; Lauren Krieger; Marian Bartlett

DS2-D11 - Unsupervised Activity Analysis and Monitoring algorithms for Effective Surveillance Systems

J.-M. Odobez; C. Carincotte; R. Emonet ; E. Jouneau; S. Zaidenberg; B. Raverra; F. Bremond; A. Grifoni

EXHIBITS

The following firms will present their latest vision-related products and technology:

Mathworks

Point Grey

Ascending Technologies GmbH

Morgan & Claypool Publishers

Toyota Motor Europe

3Dflow

4D View Solutions

Texas Instruments

Springer

Wiley-Blackwell

Now Publishers

NREC National Robotics Engineering Center

Tobii

Cambridge University Press

Notes

