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Sunday (June 19, 2011)

18:00-21:00 Registration Desk (beside Foothills)

18:00-21:00 Computer Room (behind Registration Desk)

Monday (June 20, 2011)

07:30--18:00   Registration Desk

07:30 – 18:00   Computer Room

07-30-9:00 Breakfast (Hallways)

12:00-13:30 Lunch included (Hallways, Summit)

18:00-20:00 Doctorial Consortium (Atrium)
sponsored by IBM

Tutorial: Game Theory in Computer Vision and Pattern Recognition
(Pikes Peak 3)
Monday 8:00 (half day)
Organizers: M. Pelillo and A. Torsello

Tutorial: Diffusion Geometry Methods in Shape Analysis
(Pikes Peak 4)
Monday 8:00 (half day)
Organizers: A. Brontein and M. Bronstein

Tutorial: Frontiers of Human Activity Analysis
(Pikes Peak 3)
Monday 1:30 (half day)
Organizers: J. K. Aggarwal, M. S. Ryoo, and K. Kitani

Tutorial: ITK meets OpenCV: A New Open Source Software Resource for CV
(Pikes Peak 4)
Monday 1:30 (half day)
Organizers: L. Ibanes, A. Perera, P. Reynolds, M. Leotta

Camera Networks and Wide Area Scene Analysis
(Colorado Ballroom A)

9:00 Welcome

9:10 Keynote 1: Distributed Algorithms for Camera Sensor Networks *Rene Vidal*

9:40 Learning Multi-View Correspondences from Temporal Coincidences *Christian Conrad, Alvaro Guevara, Rudolf Mester*

10:00 Late Fusion for Person Detection in Camera Networks *Martin Hofmann, Martin Kiechle, Gerhard Rigoll*

10:20 Coffee Break

10:50 Keynote 2: Virtual Vision: Computer Vision in Virtual Reality *Demetri Terzopoulos*

11:20 Multimodal Complex Event Detection Framework for Wide Area Surveillance *Himaanshu Gupta , Li Yu, Asaad Hakee, Tae Eun Choe ,Niels Haering, Michael Locasto*

11:40 A Real-Time System for 3D Recovery of Dynamic Scene with Multiple RGBD Imagers Yong Duan, Lei Chen, Yucheng Wang , Min Yang , Xiameng Qin, Shaoyang He, Yunde Jia

12:00 Lunch Break

13:40 Keynote 3 *TBD*

14:10 Person Re-identification in Multi-camera Networks *Kai Jüngling, Christoph Bodensteiner, Michael Arens*

14:30 Prioritized Data Transmission in Airborne Camera Networks for Wide Area Surveillance and Image Mosaicking *Daniel Wischounig-Strucl , Markus Quaritsch, Bernhard Rinner*

14:50 Real-Time Airport Security Checkpoint Surveillance Using a Camera Network *Ziyan Wu, Richard Radke*

15:10 Coffee Break

15:40 A Reasoning Engine for Intruders' Localization in Wide Open Areas using a Network of Cameras and RFIDs *Rita Cucchiara, Michele Fornaciari, Razia Haider, Federica Mandreoli, Riccardo Martoglia, Andrea Prati , Simona Sassatelli*

16:00 Robust Camera Calibration Tool for Video Surveillance Camera in Urban Environment *Sung Chun Lee, Ram Nevatia*

16:20 Leveraging Social Network Information to Recognize People *Mert Dikmen, Thomas Huang*

16:40 Concluding Remarks

Gesture Recognition
(Colorado Ballroom B)

Morning: Signs and gestures

9:00 Advances in Phonetics-based Sub-Unit Modeling for Transcription, Alignment and Sign Language Recognition.

*Christian Vogler, Pascal2 best paper award, Vassilis Pitsikalis, Stavros Theodorakis, and Petros Marago*s

9:45 Segmentation-robust Representations, Matching, and Modeling for Sign Language Recognition. *Sudeep Sarkar, Barbara Loeding, Ruiduo Yang, Sunita Nayak, Ayush Parashar*.

10:15 Break

10:30 Sign language and human activity recognition. *Dimitri Metaxas*

11:00 From activity to language: learning to recognize the meaning of motion. *Richard* Bowden

11:30 Deciphering the Face. *Aleix Martinez*

12:00 Poster session and lunch (included).

Afternoon: Gestures and actions

14:00 Understanding human activity. *David Forsyth*

14:45 A tutorial on deep and unsupervised feature learning for activity recognition. *Graham Taylor*

15:15 Designing Frameworks for Automatic Affect Prediction and Classification in Dimensional Space. *Maja Pantic, Mihalis A. Nicolaou, Hatice Gunes.*

15:45 Break

16:00 Learning structured models for recognizing human actions. *Greg Mori*

16:30 Body motion detection and understanding using both 2D and 3D setups. *Takeo Kanade*

17:00 Discussion

17:30 Adjourn

19:00 Dinner invitation for the invited speakers and the organizers at Fratelli Ristorante. The other participants may join at their own expenses (please contact the organizers).

Embedded Computer Vision
(Colorado Ballroom C)

8:10 Welcome Ahmed Nabil Belbachir, general chair

8:15 S1: Keynote Session 1 What's Next in Embedded Vision: Today and Future Technologies Mike Piacentino

Chair: Ahmed Nabil Belbachir

9:00 S2: Embedded Stereo Vision
Chair: Csaba Beleznai

9:00 Near real-time Fast Bilateral Stereo on the GPU Stefano Mattoccia, Marco Viti, Florian Ries

9:20 Stereo and IMU Assisted Visual Odometry on an OMAP3530 for Small Robots Steven Goldberg, Larry Matthies

9:40 An optimized Silicon Retina Stereo Matching Algorithm using Time-Space Correlation Christoph Sulzbachner, Christian Zinner, Juergen Kogler

10:00 Event-Driven Stereo Vision for Fall Detection Ahmed Nabil Belbachir, Stephan Schraml, Aneta Nowakowska

10:20 Morning Break

10:40 S3: Mobile Computer Vision
Chair: Sek Chai

10:40 Low-Power and Efficient Ambient Assistive Care System for Elders Kofi Appiah, Andrew Hunter, Chrisopher Waltham

11:00 Energy-efficient Foreground Object Detection on Embedded Smart Cameras by Hardware-level Operations Mauricio Casares, Paolo Santinelli, Senem Velipasalar, Andrea Patri, Rita Cucchiara

11:20 Rapid Reconstruction of Small Objects on Mobile Phones Andreas Hartl, Lukas Gruber, Clemens Arth, Stefan Hauswlesner, Dieter Schmalstieg

11:40 Fast Block Based Local Motion Estimation for Video Stabilization Giovanni Puglisi, Sebastiano Battiato

12:00 Ego-Motion Compensated Face Detection on a Mobile Device Bjorn Scheuermann, Arne Ehlers, Hamon Riazy, Florian Baumann, Bodo Rosenhahn

12:20 Lunch Box Distribution

12:30 S4: Tutorial Session -- Introduction to Mobile Computer Vision Development with NVIDIA Tegra Joe Stam
Chair: Ahmed Nabil Belbachir

14:00 S5: Poster Session: Applications
Chair: Sek Chai

1. **Real-Time License Plate Localisation on FPGA** Xiaojun Zhai, Faycal Bensaali, Soodamani Ramalingam

2. **A Real-Time Embedded Solution for Skew Correction in Banknote Analysis** Adnan Rashid, Andrea Prati, Rita Cucchiara

3. **Energy-Optimized Mapping of Application to Smartphone Platform – A Case Study of Mobile Face Recognition** Yi-Chu Wang, Kwang-Ting Cheng

4. **Robust Airlight Estimation for Haze Removal from a Single Image** Matteo Pedone, Janne Heikkilä

5. **Embedded neuromorphic vision for humanoid robots** Chiara Bartolozzi, Francesco Rea, Michael Hofstaetter, Daniel B. Fasnacht, Charles Clercq, Giorgio Metta, Giacomo Indiveri

6. **Photorealistic 3D Face Modeling on a Smartphone** Won Beom Lee, Man Hee Lee, In Kyu Park

14:00 S6: Poster Session: Technologies
Chair: Andrew Hunter

1**. An Optimized Vision Library Approach for Embedded Systems** *Goksel Dedeoglu, Branislav Kisacanin, Darnell Moore, Vinay Sharma, Andrew Miller*

2. **A Motion based Real-time Foveation Control Loop for Rapid and Relevant 3D Laser Scanning** *Gøril M. Breivik, Jens T. Thielemann, Asbjørn Berge, Øystein Skotheim, Trine Kirkhus*

3. **Fast Boosting Trees for Classification, Pose Detection, and Boundary Detection on a GPU** *Neil Birkbeck, Michal Sofka, S. Kevin Zhou*

4. **Acceleration of an Improved Retinex Algorithm** *Yuan-Kai Wang, Wen-Bin Huang*

5**. FPGA Implementation of Naive Bayes Classifier for Visual Object Recognition** *Hongying Meng, Kofi Appiah, Andrew Hunter, Patrick Dickinson*

6. **Efficient reconfigurable entropy coder for embedded multi-standards video adaptation** *Nicolas Marques, Hassan Rabah, Eric Dabellani, Serge Weber*

7**. Implementation and evaluation of FAST corner detection on the massively parallel embedded processor MX-G** *Yushi Moko, Yoshihiro Watanabe, Takashi Komuro, Masatoshi Ishikawa, Masami Nakajima, Kazutami Arimoto*

15:00 Afternoon Break

15:20 S7: Invited Talks: Hardware Adaptation
Chair: Andrew Hunter

15:20 NeuFlow: A Runtime Reconfigurable Dataflow Processor for Vision *Yann LeCun (talk), Clément Farabet (demo), Berin Martini, Benoit Corda, Polina, Akselrod, Eugenio Culurciello*

15:55 Adapting algorithms for hardware implementation *Donald Bailey*

16:30 Accelerating Neuromorphic Vision on FPGAs *Vijaykrishnan Narayanan: Sungho Park, Srinidhi Kestur, Kevin Irick*

17:05 S8: Invited Talks: Surveillance
Chair: Ahmed Nabil Belbachir

17:05 Embedded Face and Biometric Technologies for National and Border Security *Brian Lovell), Abbas Bigdeli, Sandra Mau*

17:40 Pedestrian Detection using GPU-accelerated Multiple Cue Computation*Csaba Beleznai, David Schreiber, Michael Rauter*

18:15 Paper Award & Closing Remarks

Large Scale Learning for Vision
(Foothills)

9:00 **Keynote: More Words and Bigger Pictures: Where could large-scale learning take us?** *David Forsyth*

9:40 **Keynote**: **Sparsity and Learning Large Scale Models** *Eric Xing*

10:20 Coffee Break

10:40 Keynote: Large Scale Image Annotation: Learning to Rank with Joint Word-Image Embeddings *Jason Weston*

11:20 Keynote: Building the Forest: Large Scale Data and Modeling in Computer Vision *Fei-Fei Li*

11:40 Discussion (All)

12:00 Lunch Buffet

13:20 Scene understanding and representation at Internet-scale. *James Hays*

13:40 Live Large-Scale Active Learning *Kristen Grauman*

14:00 Large-scale nonparametric image parsing *Svetlana Lazebnik*

14:20 Discussion (All)

14:50 Prizes

15:00 Coffee Break

Inference in Graphical Models with Structured Potentials
(Colorado Ballroom D-E)

8:50 Introduction

9:05 **Fast Inference with Min-Sum Matrix Product** *Pedro Felzenszwalb*

9:40 **Learning and Inference to Exploit High-Order Potentials** *Richard Zemel*

10:40 Focussed Inference in Markov Random Fields with Local Primal-Dual Gaps *Dhruv Batra*

11:15 Spotlights

Two-minute spotlights by *Chang-Dong Wang, Steve Duke, Stefanie Jegelka, Charless Fowlkes, Dongjin Kwon, Kyong Joon Lee, and Danny Tarlow*

11:30 Poster session

13:30 From Potentials to Polyhedra: Inference in Structured Models *Sebastian Nowozin*

14:05 Fast Training of Pairwise or Higher-order MRFs *Nikos Komodakis*

14:40 Nebojsa Jojic

Workshop on Biometrics
(Pikes Peak 1-2)

9:00 Session I Iris
1. **Statistical Attack against Iris-Biometric Fuzzy Commitment Schemes**
2. **A Cross-Sensor Evaluation of Three Commercial Iris Cameras for Iris Biometrics**
3. **Automated Segmentation of Iris Images Using VisibleWavelength Face Images**

9:50 Session II Fusion
1. **Multiple-sample Fusion of Matching Scores in Biometric Systems**
2. **Biometric Score Fusion Through Discriminative Training**
3. **Combination of User- and Enrollee-Specific Statistical Information in Verification Systems**
4. **Textured 3D Face Recognition using Biological Vision-based Facial Representation and Optimized Weighted Sum Fusion**

10:30 Coffee Break

11:00 Sessin III Face I
1. **Face Recognition System Using Extended Curvature Gabor Classifier Bunch for Low-Resolution Face Image**
2. **Face Recognition in Video with Closed-Loop Super-resolution**
3. **Patch-based Probabilistic Image Quality Assessment for Face Selection and Improved Video-based Face Recognition**

11:50 Session IV 3D and Occlusion
1. **Facial Curves between Keypoints for Recognition of 3D Faces with Missing Parts**
2. **A Computationally Efficient Approach to 3D Ear Recognition Employing Local and Holistic Features**

3. **Face Recognizability Evaluation for ATM Applications With Exceptional Occlusion Handling**

12:45 Lunch

13:45 Session V Identification
1. **Contactless Fingerprint Identification using Very Low-Resolution Imaging**
2. **Indexing Fingerprints Using Minutiae Quadruplets**
3. **The Photoface Database**

14:45 Session VI Performance analysis
1. **Making Impostor Pass Rates Meaningless: A Case of Snoop-Forge-Replay Attack on Continuous Cyber-behavioral Verification with Keystrokes**
2. **Predicting Performance of Face Recognition Systems: An Image Characterization Approach**
3. **Quality Assessment based Denoising to Improve Face Recognition Performance**

15:35 Coffee break

16:00 Session VII Face II
1. **Facial Marks as Biometric Signatures to Distinguish between Identical Twins**
2. **Genealogical Face Recognition based on KinFace Database**
3. **Is There a Connection Between Face Symmetry**

Activity Recognition
Competition
(Colorado Ballroom F-G)

9:00   **The VIRAT Program** *Mita Desai*

9:30   **The VIRAT Video Dataset and Competition** *Anthony Hoogs & Sangmin Oh*

10:00 *Jitendra Malik*

10:30 **Break**

11:00 *Ram Nevatia*

11:30 **Lunch**

13:00 **Object, Scene and Actions: Multi-Feature MIL for Human Action Recognition** *Stan Sclaroff*

13:30 *Fei-Fei Li*

14:00 **Web-Sourcing Video Annotations on the VIRAT Video Dataset** *Deva Ramanan*

14:30 **Break**

15:00 **Challenge Results:** *Northeastern University*

15:20 **Challenge Results:** *Universitat Autonoma de Barcelona*

15:40 **Challenge results:** *SUNY Buffalo*

16:00 **Panel: Actions to Activitie**

Tuesday (June 21, 2011)

07:30--18:00   Registration Desk

07:30 – 18:00   Computer Room

All day – Video Overflow for Oral presentations (Summit Ballroom, Rampart)

07:30-8:30 Breakfast (Hallways)

8:30-10:00 Demos (Goldcamp)

1. Structured Light 3D Scanning in the Presence of Global Illumination
2. Real Time Head Pose Estimation From Consumer Depth Cameras
3. iOS Visipedia App for Bird Species Classification
4. Sketch based Interactive Scene Composition using Internet Images

8:30-10:00 Exhibitors (Foothills)

Google
Nvidia
Point Grey
Springer
Morgan Claypool Publishers
Now Publishers
Mathworks
Texas Instruments
Aqsense SL
4D View Solutions
Tandent Vision Science, Inc.
Aldebaran Robotics

8:30-10:00 Posters 1A Statistical Methods and Learning (Foothills/Atrium/Pikes Peak)

1. A Direct Formulation for Totally-corrective Multi-class Boosting; *Chunhua Shen, Zhihui Hao*

2. A Probabilistic Representation for Efficient Large Scale Visual Recognition Tasks; *Subhabrata Bhattacharya, Rahul Sukthankar, Rong Jin, Mubarak Shah*
3. A Scalable Dual Approach to Semidefinite Metric Learning; *Chunhua Shen, Junae Kim, Lei Wang*
4. AdaBoost on Low-Rank PSD Matrices for Metric Learning with Applications in Computer Aided Diagnosis; *Jinbo Bi, Dijia Wu, Le Lu, Meizhu Liu, Yimo Tao, Matthias Wolf*
5. Bayesian Deblurring with Integrated Noise Estimation; *Uwe Schmidt, Kevin Schelten, Stefan Roth*
6. Comparing Data-Dependent and Data-Independent Embeddings for Classification and Ranking of Internet Images; *Yunchao Gong, Svetlana Lazebnik*
7. Connecting Non-Quadratic Variational Models and MRFs; *Kevin Schelten, Stefan Roth*
8. Dynamic Batch Mode Active Learning; *Shayok Chakraborty, Vineeth Balasubramanian, Sethuraman Panchanatha*
9. Natural Image Denoising: Optimality and Inherent Bounds; *Anat Levin, Boaz Nadler*
10. From Region Similarity to Category Discovery; *Carolina Galleguillos, Brian McFee, Serge Belongie, Gert Lanckriet*
11. Gated Classifiers: Boosting under High Intra-Class Variation; *Oscar Danielsson, Babak Rasolzadeh, Stefan Carlsson*
12. Generalized Gaussian Process Models; *Antoni Chan, Daxiang Dong*
13. Generalized Projection Based M-Estimator: Theory and Applications; *Sushil Mittal, Saket Anand, Peter Meer*
14. Geometric ℓ_p-norm Feature Pooling for Image Classification; *Jiashi Feng, Bingbing Ni, Qi Tian, Shuicheng Yan*
15. Graph Embedding Discriminant Analysis on Grassmannian Manifolds for Improved Image Set Matching; *Mehrtash Harandi, Sareh Shirazi , Conrad Sanderson , Brian Lovell*

16. Hybrid Generative-Discriminative Classification using Posterior Divergence; *Xiong Li, Tai Sing Lee, Yuncai Liu*

17. Learning Better Image Representations Using `Flobject Analysis'; *Inmar Givoni, Patrick Li, Brendan Frey*

18. Learning invariance through imitation; *Graham Taylor, Ian Spiro, Rob Fergus, Christoph Bregler*

19. Learning Message-Passing Inference Machines for Structured Prediction; *Stephane Ross, Daniel Munoz, J. Andrew Bagnell*

20. Learning Non-Local Range Markov Random Field for Image Restoration; *Jian Sun, Marshall Tappen*

21. Learning Transformation Invariant Representations from weakly-related Videos; *Christian Leistner, Martin Godec, Samuel Schulter, Manuel Werlberger, Amir Saffari, Horst Bischof*

22. Local Isomorphism to Solve the Pre-image Problem in Kernel Methods; *Dong Huang, Yuandong Tian, Fernando DelaTorre*

23. Max-margin Clustering: Detecting Margins from Projections of Points on Lines; *Raghuraman Gopalan, Jagan Sankaranarayanan*

24. Mining Discriminative Co-occurrence Patterns for Visual Recognition; *Junsong Yuan, Ming Yang, Ying Wu*

25. MKPM: a multiclass extension of the Kernel Projection Machine; *Sylvain Takerkart, Liva Ralaivola*

26. Modeling the joint density of two images under a variety of transformations; *Joshua Susskind, Roland Memisevic, Geoffrey Hinton, Marc Pollefeys*

27. Multi-label Learning with Incomplete Class Assignments; *Serhat Bucak, Rong Jin, Anil Jain*

28. Multi-layer Group Sparse Coding -- for Concurrent Image Classification and -- -- Annotation; *Shenghua Gao, Liang-Tien Chia, Ivor W. Tsang*

29. Multifactor Analysis Based on Factor-Dependent Geometry; *Sung Won Park*

30. Multiscale Geometric and Spectral Analysis of Plane Arrangements; *Guangliang Chen, Mauro Maggioni*

31. Non-negative Matrix Factorization as a Feature Selection Tool for Maximum Margin Classifiers; *Mithun Gupta, Jing Xiao*

32. Nonnegative Sparse Coding for Discriminative Semi-supervised Learning; *Ran He, Wei-Shi Zheng*

33. On Deep Generative Models with Applications to Recognition; *Marc'Aurelio Ranzato, Joshua Susskind, Volodymyr Mnih, Geoffrey Hinton*

34. Online Group-Structured Dictionary Learning; *Zoltan Szabo, Barnabas Poczos, Andras Lorincz*

35. Particle Filter with State Permutations for Solving Image Jigsaw Puzzles; *Xingwei Yang, Nagesh Adluru, LonginJan Latecki*

36. Recovery of Corrupted Low-Rank Matrices via Half-Quadratic based Nonconvex Minimization; *Ran He, zhenan sun, Tieniu Tan, Wei-Shi Zheng*

37. Robust and Efficient Regularized Boosting Using Total Bregman Divergence; *Meizhu Liu, Baba Vemuri*

38. Sparse Concept Coding for Visual Analysis; *Deng Cai, Xiaofei He*

39. Sparse Image Representation with Epitomes; *Louise Benoit, Julien Mairal, Francis Bach, Jean Ponce*

40. Supervised Local Subspace Learning for Continuous Head Pose Estimation; *Dong Huang, Markus Storer, Fernando DelaTorre, Horst Bischof*

41. TaylorBoost: First and Second-order Boosting Algorithms with Explicit Margin Control; *Mohammad Saberian, Hamed Masnadi-Shirazi, Nuno Vasconcelos*

42. Truncated Message Passing; *Justin Domke*

43. Visual textures as realizations of multivariate log-Gaussian Cox processes; *Huu-Giao Nguyen, Ronan Fablet, Jean-Marc Boucher*

10:00-10:20 Coffee break (Hallways)

10:20-10:30 Welcome (Colorado Ballroom 1 and Ballroom 2)

10:30-12:10 Orals 1A Image and Video Retrieval (Colorado Ballroom 1)

1. Towards Cross-Cateogory Knowledge Propagation for Learning Visual Concepts; *Guo-Jun Qi, Yong Rui, Qi Tian, Thomas Huang*
2. Image Retrieval with Geometry-Preserving Visual Phrases; *Yimeng Zhang, Zhaoyin Jia, Tsuhan Chen*
3. Image Ranking and Retrieval Based on Multi-Attribute Queries; *Behjat Siddiquie, Rogerio Feris, Larry Davis*
4. Iterative Quantization: A Procrustean Approach to Learning Binary Codes; *Yunchao Gong, Svetlana Lazebnik*
5. Compact Hashing with Joint Optimization of Search Accuracy and Time; *Junfeng He, Regunathan Radhakrishnan, Shih-Fu Chang, Claus Bauer*

10:30-12:10 Orals 1B Computational Photography (Colorado Ballroom 2)

1. Smoothly Varying Affine Stitching; *Wen Yan Lin, Siying Liu, Yasuyuki Matsushita, Tian Tsong Ng, Loong Fah Cheong*
2. Glare Encoding of High Dynamic Range Images; *Mushfiqur Rouf, Rafal Mantiuk, Wolfgang Heidrich, Matthew Trentacoste, Cheryl Lau*
3. A Bayesian Approach to Adaptive Video Super Resolution; *Ce Liu, Deqing Sun*

4. Three-Dimensional Kaleidoscopic Imaging; *Ilya Reshetouski, Alkhazur Manakov, Hans-Peter Seidel, Ivo Ihrke*
5. Wide-angle Micro Sensors for Vision on a Tight Budget; *Sanjeev Koppal, Todd Zickler, Ioannis Gkioulekas*

12:10-12:20 NVIDIA Talk
   (Colorado Ballroom 1) --Tegra for Mobile Imaging, *Kari Pulli*

12:20 – 13:30 Lunch included (Hallways, Summit Ballroom)

13:30-15:00 Demos (Goldcamp) see 8:30

13:30-15:00 Exhibitors (Foothills) see 8:30

13:30-15:00 Posters 1B Color and Texture, Document Analysis, Segmentation and Grouping (Foothills/Atrium/Pikes Peak)

1. An L_1-based variational model for Retinex theory and its application to medical images; *Wenye Ma, Jean-Michel Morel, Stanley Osher, Aichi Chien*
2. Inertial sensor-aligned visual feature descriptors; *Daniel Kurz, Selim Ben Himane*
3. Learning Object Color Models from Multi-view Constraints; *Trevor Owens, Kate Saenko, Trevor Darrell, Ayan Chakrabarti, Todd Zickler*
4. Multi-spectral SIFT for Scene Category Recognition; *Matthew Brown, Sabine Susstrunk*
5. Statistics of Real-World Hyperspectral Images; *Ayan Chakrabarti, Todd Zickler*
6. Unsupervised Local Color Correction for Coarsely Registered Images; *Miguel Riem de Oliveira, Angel Sappa, Vitor Santos*
7. Efficient approximations to the marginal likelihood in blind deconvolution; *Anat Levin, Yair Weiss, Bill Freeman, Fredo Durand*

8. An effective document image deblurring algorithm; *Xiao-gang Chen, Xiangjian He, Jie Yang, Qiang Wu*

9. Registration of Camera Captured Documents Under Non-rigid Deformation; *Venkata Edupuganti, Suryaprakash Kompalli, Vinayak Agarwal*

10. Style Transfer Matrix Learning for Unsupervised Writer Adaptation; *Xu-Yao Zhang, Cheng-Lin Liu*

11. unused

12. unused

13. A Global Optimization Approach to Robust Multi-Model Fitting; *Jin Yu, Tat-Jun Chin, David Suter*

14. A Global Sampling Method for Alpha Matting; *Kaiming He, Christoph Rhemann, Carsten Rother, Xiaoou Tang, Jian Sun*

15. Biased Normalized Cuts; *Subhransu Maji, Nisheeth Vishnoi, Jitendra Malik*

16. Contour cut: identifying salient contours in images by solving a Hermitian eigenvalue problem; *Ryan Kennedy, Jean Gallier, Jianbo Shi*

17. 17.Detection Free Tracking: Exploiting Motion and Topology for Segmenting and Tracking under Entanglement.; *Katerina Fragkiadaki, Jianbo Shi*

18. Efficient MCMC Sampling with Implicit Shape Representations; *Jason Chang, John Fisher III*

19. Enforcing topological constraints in random field image segmentation; *Chao Chen, Daniel Freedman, Christoph Lampert*

20. Entropy Rate Superpixel Segmentation; *Ming-Yu Liu, Oncel Tuzel, Srikumar Ramalingam, Rama Chellappa*

21. Foreground Segmentation of Live Videos using Locally Competing 1SVMs; *Minglun Gong, Li Cheng*

22. Foreground-Background Segmentation using Iterated Distribution Matching; *Viet Pham, Keita Takahashi, Takeshi Naemura*

23. From Active Contours to Active Surfaces; *Akshaya Mishra, Paul Fieguth, David Clausi*

24. From Co-saliency to Co-segmentation: An Efficient and Fully Unsupervised Energy Minimization Model; *Kai-Yueh Chang, Tyng-Luh Liu, Shang-Hong Lai*

25. Graph Connectivity In Sparse Subspace Clustering; *Behrooz Nasihatkon, Richard Hartley*

26. Heat-Mapping: A Robust Approach Toward Perceptually Consistent Mesh Segmentation; *Yi Fang, Mengtian Sun, Karthik Ramani*

27. Learning to Find Occlusion Regions; *Ahmad Humayun, Oisin Mac Aodha, Gabriel Brostow*

28. Majorization-Minimization mixture model determination in image segmentation; *Giorgos Sfikas, Christophoros Nikou, Nikos Galatsanos, Christian Heinrich*

29. Modelling composite shapes by Gibbs Random Fields; *Dmitrij Schlesinger, Boris Flach*

30. Nonlocal Matting; *Philip Lee, Ying Wu*

31. Nonparametric Density Estimation on A Graph: Learning Framework, Fast Approximation and Application in Image Segmentation; *Zhiding Yu, Oscar Au, Ketan Tang*

32. O Implicit Subspace Embedding for Unsupervised Multi-scale Image Segmentation; *Hongbo Zhou, Qiang Cheng*

33. Object Cosegmentation; *Sara Vicente, Carsten Rother, Vladimir Kolmogorov*

34. Object Segmentation by Alignment of Poselet Activations to Image Contours; *Thomas Brox, Lubomir Bourdev, Subhransu Maji, Jitendra Malik*

35. Partial similarity based nonparametric scene parsing in certain environment; *Honghui Zhang, Long Quan*

36. Segment an Image by Looking into an Image Corpus; *Xiaobai Liu, Jiashi Feng, Shuicheng Yan, Hai Jin*

37. Semi-Supervised Video Segmentation; *Ignas Budvytis, Vijay Badrinarayanan, Roberto Cipolla*

38. Shape Based Pedestrian Parsing; *Yihang Bo, Charless Fowlkes*

39. Shape Grammar Parsing via Reinforcement Learning; *Olivier Teboul, Iasonas Kokkinos, Panagiotis Koutsourakis, Loic Simon, Nikos Paragios*

40. Supervised Hierarchical Pitman-Yor Process for Natural Scene Segmentation; *Alex Shyr, Trevor Darrell, Michael Jordan, Raquel Urtasun*

41. Supervised Hypergraph Labeling; *Toufiq Parag, Ahmed Elgammal*

42. Time and Space Efficient Spectral Clustering via Column Sampling; *Mu Li, Xiao-Chen Lian, James Kwok, Bao-Liang Lu*

43. Unsing Ripley's K-function to Improve Graph-Based Clustering Techniques; *Kevin Streib, Jim Davis*

44. Using Global Bag of Features Models in Random Fields for Joint Categorization and Segmentation of Objects; *Dheeraj Singaraju, René, Vidal*

15:00-15:30 Coffee break (Hallways)

15:30-17:10 Orals 1C Scene Understanding and 3D Structures (Colorado Ballroom 1)

1. From 3D Scene Geometry to Human Workspace; *Abhinav Gupta, Scott Satkin, Alyosha Efros, Martial Hebert*
2. A generative model for 3D urban scene understanding from movable platforms; *Andreas Geiger, Martin Lauer, Raquel Urtasun*
3. Single-Image Shadow Detection and Removal using Paired Regions; *Ruiqi Guo, Qieyun Dai, Derek Hoiem*
4. Discrete-Continuous Optimization for Large-scale Structure from Motion; *David Crandall, Andrew Owens, Noah Snavely, Daniel Huttenlocher*

5. Active Learning for Piecewise Planar 3D Reconstruction; *Adarsh Kowdle, Yao-Jen Chang, Andrew Gallagher, Tsuhan Chen*

15:30-17:10 Orals 1D Video Analysis (Colorado Ballroom 2)

1. Stacked Convolutional Independent Subspace Analysis for Action Recognition; *Quoc Le, Will Zou, Serena Yeung, Andrew Ng*
2. Space-Time Super-Resolution from a Single Video; *Oded Shahar, Alon Faktor, Michal Irani*
3. Earth Mover's Prototypes: a Convex Learning Approach for Discovering Activity Patterns in Dynamic Scenes; *Elisa Ricci, Gloria Zen*
4. Recognizing Human Actions by Attributes; *Jingen Liu, Benjamin Kuipers, Silvio Savarese*
5. Cross-View Action Recognition via View Knowledge Transfer; *Jingen Liu, Mubarak Shah, Benjamin Kuipers, Silvio Savarese*

17:10-18:30 Demos (Goldcamp) see 8:30

17:10 – 18:30 Exhibitors (Foothills) see 8:30

17:10 - 18:30 Posters 1C Object Recognition, Image based Modeling, Human ID
(Foothills/Atrium/Pikes Peak)

1. A Generalized Probabilistic Framework for Compact Codebook Creation; *Lingqiao Liu, Lei Wang, Chunhua Shen*
2. Are Sparse Representations Really Relevant for Image Classification?; *Roberto Rigamonti, Matthew Brown, Vincent Lepetit*
3. Classification with Invariant Scattering; *Joan Bruna, Sté,phane Mallat*
4. Clues from the Beaten Path: Location Estimation with Bursty Sequences of Tourist Photos; *Chao-Yeh Chen, Kristen Grauman*
5. Combining Randomization and Discrimination for Fine-Grained Image Categorization; *Bangpeng Yao, Aditya Khosla, Li Fei-Fei*
6. Contextualizing Object Detection and Classification; *Zheng Song, Qiang Chen, Zhongyang Huang, Yang Hua, Shuicheng Yan*
7. Deformation and Illumination Invariant Feature Point Descriptor; *Francesc Moreno*
8. Discriminative Affine Sparse Codes for Image Classification; *Naveen Kulkarni, Baoxin Li*
9. Discriminative Spatial Pyramid; *Tatsuya Harada, Yoshitaka Ushiku, Yuya Yamashita, Yasuo Kuniyoshi*
10. Efficient Euclidean Distance Transform Using Perpendicular Bisector Segmentation; *Jun Wang, Ying Tan*
11. Hyper-graph Matching via Reweighted Random Walks; *Jungmin Lee, Minsu Cho, Kyoung Mu Lee*
12. Exploring Knowledge Transfer and Zero-Shot Learning in a Large-Scale Setting; *Marcus Rohrbach, Bernt Schiele, Michael Stark*
13. Exploring Relations of Visual Codes for Image Classification; *yongzhen Huang, Kaiqi Huang, Tieniu Tan*
14. High Level Describable Attributes for Predicting Aesthetics and Interestingness; *Sagnik Dhar, Vicente Ordonez, Tamara Berg*
15. High-Dimensional Signature Compression for Large-Scale Image Classification; *Jorge Sanchez, Florent Perronnin*
16. Image Classification by Non-Negative Sparse Coding, Low-Rank and Sparse Decomposition; *Chunjie Zhang, Jing Liu, Qi Tian, changsheng Xu, Hanqing Lu, Songde Ma*
17. Interactively Building a Discriminative Vocabulary of Nameable Attributes; *Devi Parikh, Kristen Grauman*
18. Large-scale image classification: fast feature extraction and SVM training; *Yuanqing Lin, Fengjun Lv, Shenghuo Zhu, Ming Yang, Timothee Cour, Kai Yu, Liangliang Cao, Thomas Huang*
19. Learning A Discriminative Dictionary for Sparse Coding via Label Consistent K-SVD; *Zhuolin Jiang, Zhe Lin, Larry Davis*
20. Learning Hierarchical Poselets for Human Parsing; *Yang Wang, Duan Tran, Zicheng Liao*
21. Learning Image Representations from Pixel Level via Hierarchical Sparse Coding; *Kai Yu, Yuanqing Lin, John Lafferty*
22. Learning the Easy Things First: Self-Paced Visual Category Discovery; *Yong Jae Lee, Kristen Grauman*
23. Object Recognition with Hierarchical Kernel Descriptors; *Liefeng Bo, Kevin Lai, Xiaofeng Ren, Dieter Fox*
24. Rank-SIFT: Learning to Rank Local Interest Points; *Bing Li, Rong Xiao, Zhiwei Li, Rui Cai, Bao-Liang Lu, Lei Zhang*
25. Salient Coding for Image Classification; *yongzhen Huang, Kaiqi Huang, Tieniu Tan*
26. Sharing Features Between Objects and Their Attributes; *Sung Ju Hwang, Fei Sha, Kristen Grauman*
27. Spatial-DiscLDA for Visual Recognition; *Zhenxing Niu, Gang Hua, Xinbo Gao, Qi Tian*

28. Visual and Semantic Similarity in ImageNet; *Thomas Deselaers, Vittorio Ferrari*
29. Where's Waldo: Matching People in Images of Crowds; *Rahul Garg, Deva Ramanan, Steve Seitz, Noah Snavely*
30. A Complete Statistical Inverse Ray Tracing Approach to Multi-view Stereo; *Shubao Liu, David Cooper*
31. A general method for the Point of Regard estimation in 3D space; *Fiora Pirri, Matia Pizzoli, Alessandro Rudi*
32. Adapted Gaussian Models for Image Classification; *Mandar Dixit, Nikhil Rasiwasia, Nuno Vasconcelos*
33. Capturing Time-of-Flight Data with Confidence; *Malcolm Reynolds, Jozef Doboš,, Leto Peel, Tim Weyrich, Gabriel Brostow*
34. Extracting Vanishing Points across Multiple Views; *Michael Hornacek, Stefan Maierhofer*
35. Feature Context for Image Classification and Object Detection; *Xinggang Wang, Xiang Bai, Wenyu Liu, LonginJan Latecki*
36. High-quality shape from multi-view stereo and shading under general illumination; *Chenglei Wu, Bennett Wilburn, Yasuyuki Matsushita, Christian Theobalt*
37. Linearity of Each Channel Pixel Values from a Surface in and out of Shadows and Its Applications; *Dong Tian, dong tang*
38. Reconstruction of relief objects from line drawings; *Michael Kolomenkin, George Leifman, Ilan Shimshoni, Ayellet Tal*
39. Topology-adaptive Multi-view Photometric Stereo; *Yusuke Yoshiyasu*
40. Translation Symmetry Detection in a Fronto-parallel View; *Peng ZHAO, Long Quan*
41. Person Re-identification by Probabilistic Relative Distance Comparison; *Wei-Shi Zheng, Shaogang Gong, Tao Xiang*
42. Simultaneous Dimensionality Reduction and Human Age Estimation via Kernel Partial Least Squares Regression; *Guodong Guo, Guowang Mu*

18:30-19:30 Dinner Buffet
(Colorado Ballroom 2, Hallways, Summit Balllroom) *bar sponsored by Point Grey*

19:30- 21:30 PAMI TC meeting
(Colorado Ballroom 1)

Wednesday (June 22, 2011)

07:30--18:00   Registration Desk

07:30 – 18:00   Computer Room

All day – Video Overflow for Oral presentations (Summit Ballroom, Rampart)

07:30-9:00 Breakfast (Hallways)

8:30-10:00 Demos (Goldcamp)
1. MindFinder: A Sketch-based Image Search Engine based on Edgel Index
2. Real-time stereo vision system for on-road obstacle detection
3. Wide-angle Micro Sensors for Vision on a Tight Budget
4. Coded Aperture Videography
5. Photometric Stereo via Smartphone/Computer Screen Lighting for 3D Reconstruction
6. Relevance Feedback as an Intreractive Navigation Tool for Artistic Image Collection

8:30-10:00 Exhibitors (Foothills)
See Tuesday 8:30 for list

8:30-10:00 Posters 2A Video Analysis and Event Recognition, Computational Photography, Vision for Graphics, Sensors (Foothills/Atrium/ PikesPeak)

1. A Large-scale Benchmark Dataset for Event Recognition in Surveillance Video; *Sangmin Oh, Anthony Hoogs, A.G.Amitha Perera, Chia-Chih Chen, Jong Taek Lee, Jake Aggarwal, Hyungtae Lee, Larry Davis, Xiaoyang Wang, Eran Swears, Qiang Ji, Kishore Reddy, Mubarak Shah, Carl Vondrick, Hamed Pirsiavash, Deva Ramanan, Jenny Yuen, Antonio Torralba, Bi Song, Anesco Fong, Amit Roy-Chowdhury, Mita Desai*

2. Abnormal Detection Using Interaction Energy Potentials; *Xinyi Cui, Qingshan Liu, Mingchen Gao, Dimitris Metaxas*
3. Action recognition by dense trajectories; *Heng Wang, Alexander Klä,ser, Cordelia Schmid, Cheng-Lin Liu*
4. Action Recognition from a Distributed Representation of Pose and Appearance; *Subhransu Maji, Lubomir Bourdev, Jitendra Malik*
5. Action Recognition with Multiscale Spatio-Temporal Contexts; *Jiang Wang, Zhuoyuan Chen, Ying Wu*
6. Activity Recognition using Dynamic Subspace Angles; *Octavia Camps, Mario Sznaier, Binlong Li, Teresa Mao, Mustafa Ayazoglu*
7. Actom Sequence Models for Efficient Action Detection; *Adrien Gaidon, Harchaoui Zaid, Cordelia Schmid*
8. Discriminative Tag Learning on YouTube Videos with Latent Sub-tags; *Weilong Yang, George Toderici*
9. Extracting and Locating Temporal Motifs in Video Scenes Using a Hierarchical Non Parametric Bayesian Model; *Ré,mi Emonet, Jagannadan Varadarajan, Jean-Marc Odobez*
10. Fast Unsupervised Ego-Action Learning for First-person Sports Videos; *Kris Kitani, Yoichi Sato, Takahiro Okabe, Akihiro Sugimoto*
11. Identifying Players in Broadcast Sports Videos using Conditional Random Fields; *Wei-Lwun Lu, Jo-Anne Ting, Kevin Murphy, Jim Little*
12. Instantly Telling What Happens in a Video Sequence Using Light Features; *Liang Wang, Yizhou Wang, Tingting Jiang, Wen Gao*
13. Joint Segmentation and Classification of Human Actions in Video; *MinhHoai Nguyen, Zhen-zhong Lan, Fernando DelaTorre*
14. Learning Context for Collective Activity Recognition; *Wongun Choi, Silvio Savarese, Khuram Shahid*

15. Learning to Recognize Objects in Egocentric Activities; *Alireza Fathi, Xiaofeng Ren, James Rehg*

16. Multi-agent event recognition in structured scenarios; *Vlad Morariu, Larry Davis*

17. Novelty detection from an Ego-centric perspective; *Omid Aghazadeh, Josephine Sullivan, Stefan Carlsson*

18. On Dynamic Scene Geometry for View-invariant Action Matching; *Anwaar Haq, Iqbal Gondal, Mubarak Shah*

19. Online Detection of Unusual Events in Videos via Dynamic Sparse Coding; *Bin Zhao, Li Fei-Fei, Eric Xing*

20. Optimal Spatio-Temporal Path Discovery for Video Event Detection and Localization; *Du Tran, Junsong Yuan*

21. Probabilistic Event Logic for Interval-Based and Holistic Event Recognition; *William Brendel, Alan Fern, Sinisa Todorovic*

22. Scenario-Based Video Event Recognition by Constraint Flow; *Suha Kwak, Bohyung Han, Joon Han*

23. Track to the future: Spatio-temporal video segmentation with long-range motion cues; *José, Lezama, Karteek Alahari, Josef Sivic, Ivan Laptev*

24. TVParser: An Automatic TV Video Parsing Method; *Chao Liang, changsheng Xu, Jian Cheng, Hanqing Lu*

25. A Theory of Multi-perspective Defocusing; *Yuanyuan Ding, Jingyi Yu*

26. Auto Directed Video Stabilization with Robust L1 Optimal Camera Paths; *Matthias Grundmann, Vivek Kwatra, Irfan Essa*

27. Blind Deconvolution Using A Normalized Sparsity Measure; *Dilip Krishnan, Rob Fergus*

28. Blur kernel estimation using the Radon Transform; *Taeg Sang Cho, Sylvain Paris, Bill Freeman, Berthold Horn*

29. Collaborative Personalization of Image Enhancement; *Juan Caicedo, Ashish Kapoor, Sing Bing Kang*

30. Enhancing by Saliency-guided Decolorization; *Codruta Ancuti, Cosmin Ancuti, Philippe Bekaert*

31. Estimating Motion and Size of Moving Non-Line-of-Sight Objects in Cluttered Environments; *Rohit Pandharkar, Andreas Velten, Andrew Bardagjy, Ramesh Raskar, Moungi Bawendi, Ahmed Kirmani, Everett Lawson*

32. Exploring Aligned Complementary Image Pair for Blind Motion Deblurring; *Wen Li, Jun Zhang, Qionghai Dai*

33. Face Illumination Transfer through Edge-preserving Filters; *Xiaowu Chen, Mengmeng Chen, Xin Jin, Qinping Zhao*

34. High Resolution Multispectral Video Capture with a Hybrid Camera System; *Xun Cao, Xin Tong, Qionghai Dai, Stephen Lin*

35. Learning a Blind Measure of Perceptual Image Quality; *Huixuan Tang, Neel Joshi, Ashish Kapoor*

36. Motion Denoising with Application to Time-lapse Photography; *Michael Rubinstein, Ce Liu, Bill Freeman*

37. Noise Suppression in Low-Light Images through Joint Denoising and Demosaicing; *Priyam Chatterjee, Neel Joshi, Sing Bing Kang, Yasuyuki Matsushita*

38. P2C2: Programmable Pixel Compressive Camera for High Speed Imaging.; *Dikpal Reddy, Ashok Veeraraghavan*

39. Reconstructing an image from its local descriptors; *Philippe Weinzaepfel, Herve Jegou, Patrick Perez*

40. Global temporal registration of multiple non-rigid surface sequences; *Peng Huang, Adrian Hilton, Chris Budd*

41. High Quality Intrinsic Images Using Optimization; *Jianbing Shen, Xiaoshan Yang*

42. Camera Calibration with Lens Distortion from Low-rank Textures; *Zhengdong Zhang, Yasuyuki Matsushita, Yi Ma*

43. High-resolution Hyperspectral Imaging via Matrix Factorization; *Rei Kawakami, John Wright, Yu-Wing Tai, Yasuyuki Matsushita, Moshe Ben-Ezra, Katsushi Ikeuchi*
44. Radiometric Calibration by Transform Invariant Low-rank Structure; *Joon-Young Lee, Boxin Shi, Yasuyuki Matsushita, InSo Kweon, Katsushi Ikeuchi*

10:00-10:30 Coffee Break (Hallways)

10:30-12:10 Orals 2A Object Detection (Colorado Ballroom 1)

1. A Coarse-to-fine approach for fast deformable object detection; *Marco Pedersoli, Andrea Vedaldi, Jordi Gonzalez*
2. FlowBoost - Appearance Learning from Sparsely Annotated Video; *Karim Ali, Francois Fleuret, David Hasler*
3. Articulated Pose Estimation with Flexible Mixtures-of-Parts; *Yi Yang, Deva Ramanan*
4. Large-Scale Live Active Learning: Training Object Detectors with Crawled Data and Crowds; *Sudheendra Vijayanarasimhan, Kristen Grauman*
5. From Partial Shape Matching through Local Deformation to Robust Global Shape Similarity for Object Detection; *Tianyang Ma, LonginJan Latecki*

10:30-12:10 Orals 2B - Optimization Methods   (Colorado Ballroom 2)

1. A Non-convex Relaxation Approach to Sparse Dictionary Learning; *Jianping Shi, Xiang Ren, Jingdong Wang, Guang Dai, Zhihua Zhang*
2. A Study of Nesterov',s Scheme for Lagrangian Decomposition and MAP Labeling; *Bogdan Savchynskyy, Jö,rg Kappes, Stefan Schmidt, Christoph Schnö,rr*

3. Scale Invariant cosegmentation for image groups; *Lopamudra Mukherjee, Vikas Singh, Jiming Peng*
4. Submodularity beyond submodular energies: coupling edges in graph cuts; *Stefanie Jegelka, Jeff Bilmes*
5. Scale and Rotation Invariant Matching Using Linearly Augmented Trees; *Hao Jiang, Tai-Peng Tian, Stan Sclaroff*

12:10 -1:30 Lunch (Hallways, Summit)

13:30-15:00 Demos (Goldcamp) see 8:30

13:30 -15:00 Exhibitors (Foothills) see 8:30

13:30-15:00 Posters 2B Stereo and Structure form Motion, Performance Evaluation, Object Detection (Foothills/Atrium/ PikesPeak)

1. A Branch and Contract Algorithm For Globally Optimal Fundamental Matrix Estimation; *Yinqiang Zheng, Shigeki Sugimoto, Masatoshi Okutomi*
2. A Brute-Force Algorithm for Reconstructing a Scene from Two Projections; *Olof Enqvist, Fangyuan Jiang, Fredrik Kahl*
3. A Novel Parametrization of the Perspective-Three-Point Problem for a Direct Computation of Absolute Camera Position and Orientation; *Laurent Kneip, Davide Scaramuzza, Roland Siegwart*
4. A Robust Method for Vector Field Learning with Application to Mismatch Removing; *Ji Zhao, Ma Jiayi*
5. An Analysis of Using High-Frequency Sinusoidal Illumination to Measure the 3D Shape of Translucent Objects; *Michael Holroyd, Jason Lawrence*
6. Energy Based Multiple Model Fitting for Non-Rigid Structure from Motion; *Chris Russell, Joao Fayad, Lourdes Agapito*

7. Fast Cost-Volume Filtering for Visual Correspondence and Beyond; *Christoph Rhemann, Asmaa Hosni, Michael Bleyer, Carsten Rother, margrit Gelautz*

8. Fusion of GPS and Structure-from-Motion using Constrained Bundle Adjustments; *Maxime Lhuillier*

9. Global Stereo Matching Leveraged by Sparse Ground Control Points; *Liang Wang, Ruigang Yang*

10. L1-rotation averaging using the Weiszfeld algorithm; *Richard Hartley*

11. Line-Based Relative Pose Estimation; *Ali Elqursh, Ahmed Elgammal*

12. Multicore Bundle Adjustment; *Changchang Wu, Sameer Agarwal, Brian Curless, Steve Seitz*

13. Non-Rigid Structure from Motion with Complementary Rank-3 Spaces; *Paulo Gotardo, Aleix Martinez*

14. NonLinear Refinement of Structure from Motion Reconstruction by Taking Advantage of a Partial

15. Knowledge of the Environment; *Mohamed Tamaazousti, Vincent Gay-Bellile, Sylvie Naudet Colette, Steve Bourgeois, Michel Dhome*

16. Object Stereo - Joint Stereo Matching and Object Segmentation; *Michael Bleyer, Carsten Rother, Pushmeet Kohli, Daniel Scharstein, Sudipta Sinha*

17. Projective Alignment of Range and Parallax Data; *Miles Hansard, Radu Horaud, Michel Amat, Seungkyu Lee*

18. Reduced Epipolar Cost for Accelerated Incremental SfM; *Antonio Rodrí,guez, Pedro Enrique Ló,pez-De-Teruel, Alberto Ruiz*

19. Relative pose problem for non-overlapping surveillance cameras with known gravity vector; *Branislav Micusik*

20. Robust, Accurate and Weakly-Supported-Surfaces preserving Multi-View Reconstruction; *Michal Jancosek, Tomas Pajdla*

21. Scene Flow Estimation by Growing Correspondence Seeds; *Jan Cech, Jordi Sanchez-Riera, Radu Horaud*

22. Structure from motion for scenes with large duplicate structures; *Richard Roberts, Sudipta Sinha, Richard Szeliski, Drew Steedly*

23. The Light-Path Less Traveled; *Srikumar Ramalingam, Sofien Bouaziz, Peter Sturm, Philip Torr*

24. Unused

25. Evaluating Combinational Color Constancy Methods on Real-World Images; *Bing Li*

26. Evaluation of Background Subtraction Techniques for Video Surveillance; *Sebastian Brutzer, Benjamin Hoeferlin, Gunther Heidemann*

27. What Makes a Chair a Chair?; *Helmut Grabner, Juergen Gall, Luc VanGool*

28. A Segmentation-aware Object Detection Model with Occlusion Handling; *Tianshi Gao, Benjamin Packer, Daphne Koller*

29. Adapting an Object Detector by Considering the Worst Case: a Conservative Approach; *Guang Chen, TonyX. Han*

30. Adaptive Random Forest - How many ``experts'' to ask before making a decision?; *Alexander Schwing, Christopher Zach, Yefeng Zheng, Marc Pollefeys*

31. Boosted Local Structured HOG-LBP for Object Localization; *Junge Zhang, Kaiqi Huang, Tieniu Tan*

32. Efficient Region Search for Object Detection; *Sudheendra Vijayanarasimhan, Kristen Grauman*

33. Efficient Subwindow Search with Submodular Score Functions; *Senjian An, Patrick Peursum, Wanquan Liu, Svetha Venkatesh*

34. Fast and High-Performance Template Matching Method; *Alexander Sibiryakov*

35. Finding the Weakest Link in Person Detectors; *Devi Parikh, Larry Zitnick*

36. Learning and Matching Multiscale Template Descriptors for Real-Time Detection,

Localization and Tracking; *Taehee Lee, Stefano Soatto*

37. Learning Effective Human Pose Estimation from Inaccurate Annotation; *Sam Johnson, Mark Everingham*

38. Learning People Detection Models from Few Training Samples; *Leonid Pishchulin, Christian Wojek, Arjun Jain, Thorsten Thormaehlen, Bernt Schiele*

39. Learning to Share Visual Appearance for Multiclass Object Detection; *Ruslan Salakhutdinov, Antonio Torralba, Josh Tenenbaum*

40. PClines - Line Detection Using Parallel Coordinates; *Marké,ta Dubská,, Adam Herout, Jiří, Havel*

41. Proposal Generation for Object Detection using Cascaded Ranking SVMs; *Ziming Zhang, Jonathan Warrell, Philip Torr*

42. Scalable Multi-class Object Detection; *Nima Razavi, Juergen Gall, Luc VanGool*

43. Shared Parts for Deformable Part-based Models; *Patrick Ott, Mark Everingham*

44. Unbiased Look at Dataset Bias; *Antonio Torralba, Alyosha Efros*

15:00-15:30 Coffee Break (Hallways)

15:30-17:10 Orals 2C - Motion and Tracking (Colorado Ballroom 1)

1. Multiobject Tracking as Maximum Weight Independent Set; *William Brendel, Mohamed Amer, Sinisa Todorovic*

2. Parsing Human Motion with Structured Ensembles of Stretchable Models; *Ben Sapp, David Weiss, Ben Taskar*

3. Intrinsic Dense 3D Surface Tracking; *Yun Zeng, Chaohui Wang, Yang Wang, David Gu, Dimitris Samaras, Nikos Paragios*

4. Robust Tracking Using Local Sparse Appearance Model and K-Selection; *Baiyang*

Liu, junzhou Huang, Casimir Kulikowski, Lin Yang

5. Markerless Motion Capture of Interacting Characters Using Multi-view Image Segmentation; *Yebin Liu, Carsten Stoll, Juergen Gall, Hans-Peter Seidel, Christian Theobalt*

15:30 -17:10 Orals 2D - Segmentation and Grouping (Colorado Ballroom 2)

1. Occlusion Boundary Detection and Figure/Ground Assignment from Optical Flow; *Patrik Sundberg, Jitendra Malik, Michael Maire, Pablo Arbelaez, Thomas Brox*

2. Nonlinear Shape Manifolds as Shape Priors in Level Set Segmentation and Tracking; *Victor Prisacariu, Ian Reid*

3. Kernelized Structural SVM Learning for Supervised Object Segmentation; *Luca Bertelli, Tianli Yu, Diem Vu, Salih Gokturk*

4. Contour Based Joint Clustering of Multiple Segmentations; *Daniel Glasner, Shiv Vitaladevuni, Ronen Basri*

5. Real-time Human Pose Recognition in Parts from Single Depth Images; *Jamie Shotton, Andrew Fitzgibbon, Mat Cook, Andrew Blake*

17:10- 18:30 Demos (Goldcamp) see 8:30

17:10-18:30 Exhibitors (Foothills) see 8:30

**17:10-18:30 Posters 2C Optimization, Vision for Robotics, Scene Understanding, Image and Video Retrieval
(Foothills/Atrium/ PikesPeak)**

1. A Closed Form Solution to Robust Subspace Estimation and Clustering; *Paolo Favaro, René, Vidal, Avinash Ravichandran*

2. Deterministically Maximizing Feasible Subsystem for Robust Model Fitting with Unit Norm Constraint; *Yinqiang Zheng, Shigeki Sugimoto, Masatoshi Okutomi*

3. Distributed Message Passing for Large Scale Graphical Models; *Alexander Schwing, Hazan Tamir, Marc Pollefeys, Raquel Urtasun*

4. Efficient Training for Pairwise or Higher Order MRFs via Dual Decomposition; *Nikos Komodakis*

5. Exhaustive Family of Energies Minimizable Exactly by a Graph Cut and Approximations of the Other Ones; *Guillaume Charpiat*

6. Inference for Order Reduction in MRFs; *Andrew Gallagher, Dhruv Batra, Devi Parikh*

7. Making the Right Moves: Guiding Alpha-Expansion using Local Primal-Dual Gaps; *Dhruv Batra, Pushmeet Kohli*

8. Robust Classification via Structured Sparse Representation; *Ehsan Elhamifar, René, Vidal*

9. Submodular Decomposition Framework for Inference in MRF with Global Constraints; *Dmitry Vetrov, Anton Osokin, Vladimir Kolmogorov*

10. Total Variation for Cyclic Structures; *Evgeny Strekalovskiy, Daniel Cremers*

11. Variable Grouping for Energy Minimization; *Taesup Kim, Sebastian Nowozin, Pushmeet Kohli, Chang D. Yoo*

12. Wavelet Belief Propagation for Large Scale Inference Problems; *Ruxandra Lasowski, Art Tevs, Michael Wand, Hans-Peter Seidel*

13. Online Environment Mapping; *Jongwoo Lim, Jan-Michael Frahm, Marc Pollefeys*

14. Structure-from-Motion Based Hand-Eye Calibration Using L_{∞} Minimization; *Jan Heller, Michal Havlena, Tomas Pajdla, Akihiro Sugimoto*

15. Repetition-based Dense Single-View Reconstruction; *Changchang Wu, Jan-Michael Frahm, Marc Pollefeys*

16. A Hierarchical Conditional Random Field Model for Labeling and Segmenting Images of Street Scenes; *Qixing Huang, Mei Han, Bo Wu, Sergey Ioffe*

17. Functional Categorization of Objects using Real-time Markerless Motion Capture; *Juergen Gall, Andrea Fossati, Luc VanGool*

18. Heterogeneous Image Features Integration via Multi-View Spectral Clustering; *Xiao Cai, Feiping Nie, Heng Huang, Farhad Kamangar*

19. Image analysis by counting on a grid; *Alessandro Perina, Nebojsa Jojic*

20. Monocular 3D Scene Understanding with Explicit Occlusion Reasoning; *Christian Wojek, Stefan Walk, Stefan Roth, Bernt Schiele*

21. Piecing Together the Segmentation Jigsaw using Context; *Xi Chen, Arpit Jain, Abhinav Gupta, Larry Davis*

22. Sampling Bedrooms; *Luca Del Pero, Jinyan Guan, Ernesto Brau, Joseph Schlecht, Kobus Barnard*

23. Scene Shape from Textures of Objects; *Nadia Payet, Sinisa Todorovic*

24. Semantic structure from motion; *Sid Ying-Ze Bao, Silvio Savarese*

25. Asymmetric Distances for Binary Embeddings; *Albert Gordo, Florent Perronnin*

26. City-Scale Landmark Identification on Mobile Devices; *David Chen, Georges Baatz, Kevin Koeser, Sam Tsai, Ramakrishna Vedantham, Timo Pylvanainen, kimmo Roimela, Xin Chen, Jeff Bach, Marc Pollefeys, Bernd Girod, Radek Grzeszczuk*

27. Combining attributes and Fisher vectors for efficient image retrieval; *Matthijs Douze, Arnau Ramisa, Cordelia Schmid*

28. Edgel Inverted Index for Large-Scale Sketch-based Image Search; *Yang Cao, Wang Changhu, Zhang Liqing, Lei Zhang*

29. Face Image Retrieval by Shape Manipulation; *Brandon Smith, Shengqi Zhu, Li Zhang*

30. Hello neighbor: accurate object retrieval with k-reciprocal nearest neighbors; *Qin Danfeng, Stephan Gammeter, Lukas Bossard, Till Quack, Luc VanGool*

31. Hierarchical Semantic Indexing for Large Scale Image Retrieval; *Jia Deng, Alexander Berg, Li Fei-Fei*

32. Image Annotation via Preferential Random Walk on Bi-relational Graph of Images and Semantic Labels; *Hua Wang, Heng Huang, Chris Ding*

33. Learning Image Vicept Description via Mixed-Norm Regularization for Large Scale Semantic Image Search; *Liang LI, Shuqiang Jiang, Qingming Huang*

34. Learning structured prediction models for interactive image labeling; *Thomas Mensink, Jakob Verbeek, Gabriela Csurka*

35. Locality-Sensitive Support Vector Machine by Exploring Local Feature Correlation for Web Image Annotation; *Guo-Jun Qi, Qi Tian, Thomas Huang*

36. Noise Resistant Graph Ranking for Improved Web Image Search; *Wei Liu, Yu-Gang Jiang, Jiebo Luo, Shih- Fu Chang*

37. Query-Specific Visual Semantic Spaces for Web Image Re-ranking; *Ke Liu, Xiaogang Wang*

38. Random Forest Voting for Fast Action Search; *Gang YU, Junsong Yuan, Zicheng Liu*

39. Random Maximum Margin Hashing; *Alexis Joly, Olivier Buisson*

40. Tag Localization with Spatial Correlations and Joint Group Sparsity; *Yang Yang, Yi Yang, Zi Huang, Heng Tao Shen, Feiping Nie*

41. Total Recall II: Query Expansion Revisited; *Ondrej Chum, Andrej Mikulik, Michal Perdoch, Jiri Matas*

42. Unsupervised Auxiliary Visual Words Discovery for Large-Scale Image Object Retrieval; *Yin-Hsi Kuo, Hsuan-Tien Lin, Wen-Huang Cheng, Yi-Hsuan Yang, Winston Hsu*

18:30 -19:00 Awards Ceremony
   (Colorado Ballroom 1)

19:00-21:00 Dinner
   (Colorado Ballroom 2, Hallways, Summit Ballroom) *bar sponsored by NVIDIA*

Thursday (June 23, 2011)

07:30--18:00   Registration Desk

07:30 – 18:00   Computer Room

All day – Video Overflow for Oral presentations
   (Summit Ballroom, Rampart)

07:30-9:00   Breakfast   (Hallways)

08:30-10:00 Demos (Goldcamp)
1. Family Relationship Classification in Photos
2. Fusing RFIDs and cameras for detecting intruders
3. Biologically-inspired Stereo Vision for Fall Detection
4. Capturing Time of Flight Data with Confidence
5. Querying and mining people trajectories and visual appearances for forensic application

08:30-10:00 Exhibitors (Foothills) see 8:30

8:30-10:00 Posters 3A Motion and Tracking, Shape Representation and Matching, Illumination (Foothills/Atrium/Pikes Peak)

1. A Generative Statistical Model for Tracking Multiple Smooth Trajectories; *Ernesto Brau, Kobus Barnard, Ravi Palanivelu, Damayanthi Dunatunga, Tatsuya Tsukamoto, Philip Lee*
2. A Polar Representation of Motion and Implications for Optical Flow; *Yair Adato, Todd Zickler, Ohad Ben-Shahar*
3. A Two-Stage Reconstruction Approach for Seeing Through Water; *Omar Oreifej, Guang Shu, Teresa Pace, Mubarak Shah*
4. Adaptive Metric Differential Tracking; *Nan Jiang, Wenyu Liu, Ying Wu*
5. Branch and Track; *Steve Gu, Carlo Tomasi*

6. Context Tracker: Exploring Supporters and Distracters in Unconstrained Environments; *Thang Dinh, Gerard Medioni*
7. Efficient Track Linking Methods for Track Graphs Using Network-flow and Set-cover Techniques; *Zheng Wu, Margrit Betke, Thomas Kunz*
8. Feature- and Depth-Supported Modified Total Variation Optical Flow for 3D Motion Field Estimation in Real Scenes; *Thomas Mü,ller, Jens Rannacher, Clemens Rabe, Uwe Franke*
9. Globally-Optimal Greedy Algorithms for Tracking a Variable Number of Objects; *Hamed Pirsiavash, Deva Ramanan, Charless Fowlkes*
10. GraphTrack: Faster than Realtime Tracking in Videos; *Brian Amberg, Thomas Vetter*
11. How does Person Identity Recognition Help Multi-Person Tracking?; *Cheng-Hao Kuo, Ram Nevatia*
12. Learning Affinities and Dependencies for Multi-Target Tracking using a CRF Model; *Bo Yang, Chang Huang, Ram Nevatia*
13. Learning Temporally Consistent Rigidities; *Jean-Sebastien Franco, Edmond Boyer*
14. Minimum Error Bounded Efficient L1 Tracker with Occlusion Detection; *Xue Mei, Haibin Ling, Yi Wu*
15. Multi-target Tracking by Continuous Energy Minimization; *Anton Andriyenko, Konrad Schindler*
16. Probabilistic Simultaneous Pose and Non-Rigid Shape Recovery; *Francesc Moren , Josep Porta*
17. Real-time visual tracking with compressed sensing; *Hanxi Li, Chunhua Shen, Qinfeng Shi*
18. Tracking 3D Human Pose with Large Root Node Uncertainty; *Ben Daubney, Xianghua Xie*
19. Tracking Low Resolution Objects by Metric Preservation; *Nan Jiang, Wenyu Liu, Ying Wu, Heng Su*
20. Using 3D Scene Structure to Improve Tracking; *Jan Prokaj, Gerard Medioni*

21. Who are you with and where are you Going?; *Kota Yamaguchi, Alexander Berg, Luis Ortiz, Tamara Berg*

22. 2D Nonrigid Partial Shape Matching Using MCMC and Contour Subdivision; *Yu Cao, Zhiqi Zhang, Irina Czogiel, Ian Dryden, Song Wang*

23. A Deformation and Lighting Insensitive Metric for Face Recognition Based on Dense Correspondences; *Anne Jorstad, David Jacobs, Alain Trouvé,*

24. Affine-invariant diffusion geometry for the analysis of deformable 3D shapes; *Dan Raviv, Alexander Bronstein, Michael Bronstein, Ron Kimmel, Nir Sochen*

25. Affinity Learning on a Tensor Product Graph with Applications to Shape and Image Retrieval; *Xingwei Yang, LonginJan Latecki*

26. Aggregating Gradient Distributions into Intensity Orders: A Novel Local Image Descriptor; *Bin Fan, Fuchao Wu, Zhanyi Hu*

27. Discriminative Image Warping with Attribute Flow; *Weiyu Zhang, Praveen Srinivasan, Jianbo Shi*

28. Efficient Groupwise Non-rigid Registration of Textured Surfaces; *Kirill Sidorov, Stephen Richmond, David Marshall*

29. Global Optimization for Optimal Generalized Procrustes Analysis; *Daniel Pizarro, Adrien Bartoli*

30. Graph Matching through Entropic Manifold Alignment; *Francisco Escolano, Edwin Hancock, Miguel Lozano*

31. Matching 2D Image Lines to 3D Models: Two Improvements and a New Algorithm; *Behzad Kamgar-Parsi*

32. Multi-Level Inference by Relaxed Dual Decomposition for Human Pose Segmentation; *Huayan Wang, Daphne Koller*

33. Multiview Registration via Graph Diffusion of Dual Quaternions; *Andrea Torsello, Emanuele Rodola, Andrea Albarelli*

34. Optimal Similarity Registration of Volumetric Images; *Effrosyni Kokiopoulou, Michail Zervos, Daniel Kressner, Nikos Paragios*

35. Registration for 3D Surfaces with Large Deformations Using Quasi-Conformal Curvature Flow; *Wei Zeng, David Gu*

36. Robust Point Set Registration Using EM-ICP with Information-Theoretically Optimal Outlier Handling; *Jeroen Hermans, Dirk Smeets, Paul Suetens, Dirk Vandermeulen*

37. Topologically-Robust 3D Shape Matching Based on Diffusion; *Avinash Sharma, Radu Horaud, Jan Cech, Edmond Boyer*

38. Illumination Estimation and Cast Shadow Detection through a Higher-order Graphical Model; *Alexandros Panagopoulos, Chaohui Wang, Dimitris Samaras, Nikos Paragios*

39. Illumination Invariant Feature Extraction Based on Natural Images Statistics and Optimal Filtering; *Lu-Hung Chen, Yao-Hsiang Yang, Chu-Song Chen, Ming-Yen Cheng*

40. Interreflections removal for photometric stereo by using spectrum-dependent albedo; *Miao Liao, Xinyu Huang, Ruigang Yang*

41. Reflection Detection in Image Sequences; *Mohamed Ahmed, Francois Pitie, Anil Kokaram*

42. Structured Light 3D Scanning Under Global Illumination; *Mohit Gupta, Amit Agrawal, Ashok Veeraraghavan, Srinivasa Narasimhan*

43. Using Specular Highlights as Pose Invariant Features for 2D-3D Pose Estimation; *Aaron Netz, Margarita Osadchy*

10:00-10:30 Coffee Break (Hallways)

10:30 - 12:10 Orals 3A Object Recognition (Colorado Ballroom 1)

1. Describing Images: Understanding and Generating Image Descriptions; *Girish Kulkarni, Visruth Premraj, Sagnik Dhar, Siming Li, Alexander Berg, Yejin Choi, Tamara Berg*
2. Recognition Using Visual Phrases; *Ali Farhadi, Mohammad Amin Sadeghi*
3. Uncovering Vein Patterns from Color Skin Images for Forensic Analysis; *Chaoying Tang, Adams Wai Kin Kong, Noah Craft*
4. What You Saw is Not What You Get: Domain Adaptation Using Asymmetric Kernel Transforms; *Brian Kulis, Kate Saenko, Trevor Darrell*
5. Automatic Photo-to-Terrain Alignment for the Annotation of Mountain Pictures; *Lionel Baboud, Martin Cadik, Elmar Eisemann, Hans-Peter Seidel*

10:30 - 12:10 Orals 3B Image Modeling (Colorado Ballroom 2)

1. Rectification and 3D reconstruction of Curved Document Images; *Yuandong Tian, Srinivasa Narasimhan*
2. Internal Statistics of a Single Natural Image; *Maria Zontak, Michal Irani*
3. Boundary Preserving Dense Local Regions; *Jaechul Kim, Kristen Grauman*
4. A Theory of Differential Photometric Stereo for General Isotropic BRDFs; *Jiamin Bai, Manmohan Chandraker, Ravi Ramamoorthi*
5. Analytical Projection Model for Non-Central Catadioptric Cameras with Quadric Mirrors; *Amit Agrawal, Yuichi Taguchi, Srikumar Ramalingam*

12:10-13:30 –Lunch (Hallways, Summit)

13:30-15:00 Posters 3B Shape from X, Video Surveillance, Face and Gesture (Foothills/Atrium/Pikes Peak)

1. 2.5D Building Modeling with Topology Control; *Qian-Yi Zhou, Ulrich Neumann*
2. A pattern framework driven by the Hamming distance for structured light-based reconstruction with a single image; *Xavier Maurice*
3. Adequate Reconstruction of Transparent Objects on a Shoestring Budget; *Sai-Kit Yeung, Tai-Pang Wu, Chi-keung Tang, Tony F. Chan, Stanley Osher*
4. High-Frequency Shape and Albedo from Shading using Natural Image Statistics; *Jonathan Barron, Jitendra Malik*
5. Least Squares Surface Reconstruction from Gradients: Direct Algebraic Methods with Spectral, Tikhonov, and Constrained Regularization; *Matthew Harker, Paul O'Leary*
6. Multiview Specular Stereo Reconstruction of Large Mirror Surfaces; *Jonathan Balzer, Sebastian Hoefer, Juergen Beyerer*
7. Recovering Shape from a Single Image of a Mirrored Surface from Curvature Constraints; *Marshall Tappen*
8. Shape Estimation in Natural Illumination; *Micah Johnson, Edward Adelson*
9. Shape from Specular Flow: Is One Flow Enough?; *Yuriy Vasilyev, Todd Zickler, Steven Gortler, Ohad Ben-Shahar*
10. Structure from motion blur in low light; *Yali Zheng, Shohei NOBUHARA, Yaser Sheikh*
11. Symmetric Piecewise Planar Object Reconstruction from a Single Image; *Tianfan XUE, Jianzhuang LIU*
12. Unused
13. A 3-D Marked Point Process Model for Multi-View People Detection; *Á,kos Utasi, Csaba Benedek*

14. A Novel Supervised Level Set Method for Non-Rigid Object Tracking; *Xin Sun, Hongxun Yao, Shengping Zhang*

15. Automatic Adaptation of a Generic Pedestrian Detector to a Specific Traffic Scene; *Meng Wang, Xiaogang Wang*

16. Continuously Tracking and See-through Occlusion Based on A New Hybrid Synthetic Aperture Imaging Model; *Tao Yang, Yanning Zhang, Xiaomin Tong, Xiaoqiang Zhang, Rui Yu*

17. Dirichlet Process Mixture Models on Symmetric Positive Definite Matrices for Appearance Clustering in Video Surveillance Applications; *Anoop Cherian, Vassilios Morellas, Nikolaos Papanikolopoulos*

18. Modeling Human Activities as Speech; *Chia-Chih Chen, Jake Aggarwal*

19. Object Association Across PTZ Cameras using Logistic MIL; *Karthik Sankaranarayanan, Jim Davis*

20. Random Field Topic Model for Semantic Region Analysis in Crowded Scenes from Tracklets; *Bolei Zhou, Xiaogang Wang*

21. Sparse Reconstruction Cost for Abnormal Event Detection; *Yang Cong, Junsong Yuan, Ji Liu*

22. Vehicle Tracking Across Nonoverlapping Cameras Using Joint Kinematic and Appearance Features; *Bogdan Matei, Harpreet Sawhney, Supun Samarasekera*

23. unused

24. unused

25. Action Recognition using Context and Appearance Distribution Features; *Xinxiao Wu, Dong Xu, Lixin Duan, Jiebo Luo*

26. An Associate-Predict Model for Face Recognition; *Qi Yin, Jian Sun, Xiaoou Tang*

27. Correspondence Driven Adaptation for Human Profile Recognition; *Ming Yang, Shenghuo Zhu, Fengjun Lv, Kai Yu*

28. Exploiting Phonological Constraints for Handshape Inference in ASL Video; *Ashwin Thangali, Stan Sclaroff, Carol Neidle, Joan Nash*

29. Face Recognition in Unconstrained Videos with Matched Background Similarity; *Lior Wolf, Tal Hassner, Itay Maoz*

30. Face Recognition with Large Pose Variation; *Carlos Castillo, David Jacobs*

31. Finding Fiducial Points with Local Detectors and a Consensus of Global Models; *Peter Belhumeur, David Jacobs, David Kriegman*

32. Is face recognition really a Compressive Sensing problem?; *Qinfeng Shi, Anders Eriksson, Anton vandenHengel, Chunhua Shen*

33. Joint Face Alignment with A Generic Deformable Face Model; *Cong Zhao, Wai-Kuen Cham, Xiaogang Wang*

34. Non-negative Local Coordinate Factorization for Image Representation; *Yan Chen, Xiaofei He*

35. Ordinal Hyperplanes Ranker with Cost Sensitivities for Age Estimation; *Kuang-Yu Chang, Chu-Song Chen, Yi-Ping Hung*

36. PLS Based Multi-Modal Face Recognition; *Abhishek Sharma, David Jacobs*

37. Pose-Robust Recognition of Low-Resolution Face Images; *Soma Biswas, Gaurav Aggarwal, Patrick Flynn*

38. Probabilistic Gaze Estimation Without Active Personal Calibration; *Jixu Chen, Qiang Ji*

39. Real Time Head Pose Estimation with Random Regression Forests; *Gabriele Fanelli, Juergen Gall, Luc VanGool*

40. Robust Sparse Coding for Face Recognition; *Meng Yang, Lei Zhang*

41. A RankOrder-based clustering algorithm in face annotation; *Chunhui Zhu, Fang Wen, Jian Sun*

42. Support Tucker Machines; *Irene Kotsia, Ioannis Patras*

43. Which parts of the face give out your identity?; *Jesus Ocegueda-Gonzalez, Shishir Shah, Ioannis Kakadiaris*

15:00-15:30 Coffee Break (Hallways)

15:30-17:10 Orals 3C Applications (Colorado Ballroom 1)

1. Separating Reflective and Fluorescent Components of An Image; *Cherry Zhang, Imari Sato*
2. Sparse Approximated Nearest Points for Image Set Classification; *Yiqun Hu, Ajmal Mian, Robyn Owens*
3. Intrinsic Images Decomposition Using a Local and Global Sparse Representation of Reflectance; *Li Shen, Chuohao Yeo*
4. Sparsity-based Image Denoising via Dictionary Learning and Structural Clustering; *Weisheng Dong, Xin Li*
5. Stable Multi-Target Tracking in Real-Time Surveillance Video; *Ben Benfold, Ian Reid*

15:30-17:10 Orals 3D Statistical Methods and Learning (Colorado Ballroom 2)

1. Principal Regression Analysis; *Jason Saragih*
2. Accelerated Low-Rank Visual Recovery by Random Projection; *Yadong Mu, Jian Dong, Xiaotong Yuan, Shuicheng Yan*
3. Online Domain-Adaptation of a Pre-Trained Cascade of Classifiers; *Vidit Jain, Eric Learned-Miller*
4. Coupled Information-Theoretic Encoding for Face Photo-Sketch Recognition; *Wei Zhang, Xiaogang Wang, Xiaoou Tang*

17:10-18:30 Demos (Goldcamp) see 8:30

17:10-18:30 Exhibitors (Foothills)

17:10-18:30 Posters 3C Early & Biological Vision, Medical, Applications (Foothills/Atrium/Pikes Peak)

1. A Probabilistic Model for Recursive Factorized Image Features; *Sergey Karayev, Mario Fritz, Sanja Fidler, Trevor Darrell*
2. Global Contrast based Salient Region Detection; *Ming-Ming Cheng, Guo-Xin Zhang, Niloy Mitra, Xiaolei Huang, Shi-Min Hu*
3. Image Saliency: From Local to Global Context; *Meng Wang, Janusz Konrad, Prakash Ishwar, Yushi Jing, Henry Rowley*
4. On analyzing video with very small motions; *Robert Pless, Nathan Jacobs, Michael Dixon, Austin Abrams*
5. Saliency Estimation Using a Non-Parametric Low-Level Vision Model; *Naila Murray, Maria Vanrell, Xavier Otazu, C. Alejandro Parraga*
6. Simulating Human Saccadic Scanpaths on Natural Images; *Wei Wang, Cheng Chen, Yizhou Wang, Tingting Jiang, Fang Fang, Yuan Yao*
7. Single Image Super-Resolution using Gaussian Process Regression; *He He, Wan-Chi Siu*
8. The importance of intermediate representations for the modeling of 2D shape detection: Endstopping and curvature tuned computations; *Antonio Rodriguez-Sanchez, John Tsotsos*
9. Visual Saliency Detection by Spatially Weighted Dissimilarity; *Lijuan duan, chunpeng Wu, Jun Miao, Laiyun Qing, Yu Fu*
10. A Sobolev-type Metric for Polar Active Contours; *Maximilian Baust, Anthony J. Yezzi, Gozde Unal, Nassir Navab*
11. Sparse Shape Composition: A New Framework for Shape Prior Modeling; *Shaoting Zhang , Yiqiang Zhan , Maneesh Dewan , Junzhou Huang , Dimitris Metaxas , Xiang Zhou*
12. Automated Mitosis Detection of Stem Cell Populations with high confluency in Phase-Contrast Microscopy Images; *Seungil Huh, Mei Chen*
13. CrossTrack: Robust 3D Tracking from Two Cross-Sectional Views; *Mohamed Hussein, Fatih Porikli*

14. Effective 3D Object Detection and Regression Using Probabilistic Segmentation Features in CT Images; *Le Lu, Jinbo Bi, Matthias Wolf, Marcos Salganicoff*

15. Feature Guided Motion Artifact Reduction with Structure-Awareness in 4D CT Images; *Dongfeng Han, John Bayouth, Qi Song, sudershan Bhatia, Milan Sonka, Xiaodong Wu*

16. Generalized Group Sparse Classifiers with Application in fMRI Brain Decoding; *Bernard Ng, Rafeef Abugharbieh*

17. Hierarchical Anatomical Brain Networks for MCI Prediction by Partial Least Square Analysis; *Luping Zhou, Yaping Wang, Yang Li, Pew-Thian Yap, Dinggang Shen*

18. Human Brain Labeling Using Image Similarities; *Franç,ois Rousseau, Piotr Habas, Colin Studholme*

19. Landmark/Image-based Deformable Registration of Gene Expression Data; *Uday Kurkure, Yen Le, Nikos Paragios, James Carson, Tao Ju, Ioannis Kakadiaris*

20. Learning-based Hypothesis Fusion for Robust Catheter Tracking in 2D X-ray Fluoroscopy; *Wen Wu, Terrence Chen, Adrian Barbu, Peng Wang, Norbert Strobel, Shaohua Zhou, Comaniciu Dorin*

21. Novel 4-D Open-Curve Active Contour and Curve Completion Approach for Automated Tree Structure Extraction; *Yu Wang, Arunachalam Narayanaswamy, Badri Roysam*

22. Regression-Based Label Fusion for Multi-Atlas Segmentation; *Hongzhi Wang, Jung Wook Suh, John Pluta, Murat Altinay, Paul Yushkevich*

23. Robust Discriminative Wire Structure Modeling with Application to Stent Enhancement in Fluoroscopy; *Xiaoguang Lu, Terrence Chen, Comaniciu Dorin*

24. sLLE: Spherical Locally Linear Embedding with Applications to Tomography; *Yi Fang, S.V.N. Vishwanathan, Mengtian Sun, Karthik Ramani*

25. 3D Motion Reconstruction for Real-World Camera Motion; *Yingying Zhu, Mark Cox, Simon Lucey*

26. A fully automated greedy square jigsaw puzzle solver; *Dolev Pomeranz, Michal Shemesh, Ohad Ben- Shahar*

27. A Multichannel Edge-Weighted Centroidal Voronoi Tessellation Algorithm for 3D Superalloy Image Segmentation; *Yu Cao, Lili Ju, Qin Zou, Chengzhang Qu, Song Wang*

28. A Unified Framework for Locating and Recognizing Human Actions; *Yuelei Xie, Hong Chang, Zhe Li, Luhong Liang, Xilin Chen, Debin Zhao*

29. Aesthetic Quality Classification of Photographs Based on Color Harmony; *Masashi Nishiyama, Takahiro Okabe, Imari Sato, Yoichi Sato*

30. Constructing Image Panoramas using Dual-Homography Warping; *Junhong GAO, Michael Brown, Seon Joo Kim*

31. Distributed Computer Vision Algorithms Through Distributed Averaging; *Roberto Tron, René, Vidal*

32. Efficient Multi-Camera Detection, Tracking, and Identification using a Shared Set of Haar-Features; *Reyes Rios-Cabrera, Tinne Tuytelaars, Luc VanGool*

33. Enforcing Similarity Constraints with Integer Programming for Better Scene Text Recognition; *David Smith, Jacqueline Feild, Eric Learned-Miller*

34. High Precision localization System with Visual Landmarks Fused With Range Data; *Zhiwei Zhu*

35. Importance Filtering for Image Retargeting; *Yuanyuan Ding, Jing Xiao*

36. Learning photographic global tonal adjustments with a database of input/output image pairs; *Vladimir Bychkovsky, Sylvain Paris, Eric Chan, Fredo Durand*

37. Predicting Image Matching using Affine Distortion Models; *Daniel Fleck, Zoran Duric*

38. RUNE-Tag: a High Accuracy Fiducial Marker with Strong Occlusion Resilience; *Filippo*

Bergamasco, Andrea Albarelli, Andrea Torsello, Emanuele Rodola

39. The Magic Sigma; *Dirk Padfield*
40. Towards a practical lipreading system; *Ziheng Zhou, Matti Pietik, Guoying Zhao*
41. What makes an image memorable?; *Phillip Isola, Jianxiong Xiao, Aude Oliva, Antonio Torralba*

Friday (June 24, 2011)

07:30--18:00   Registration Desk

07:30 – 18:00   Computer Room

07-30-9:00 Breakfast (Hallways)

12:00-13:30 Lunch included (Hallways,Summit)

Tutorial: Tools and Methods for Image Registration
(Colorado Ballroom C)
Friday 8:00 (all day)
Organizers: M. Brown, G. Carneiro, A. A. Farag, E. Hancock, A. A. Goshtasby, J. Matas, J.M. Morel, N. S. Netanyahu, F. Sur, and G. Yu

Tutorial: Light Fields in Computational Photography
(Pikes Peak 3-4)
Friday 8:00 (half day)
Organizers: R. Raskar and R. Horstmeyer

Tutorial: Image and Video Description with Local Binary Pattern Variants
(Pikes Peak 3-4)
Friday: 1:30 (half day)
Organizers: M. Pietikäinen and J. Heikkila

Workshop of Aerial Video Processing (WAVP)
(Colorado Ballroom F-G)

9:00 Keynote Speech 1: 2D and 3D exploitation for aerial surveillance *Supun Samarasekera*

10:00 Coffee break

10:30 Mesh-based Global Motion Compensation for Robust Mosaicking and Detection of Moving Objects in Aerial Surveillance *Marco Munderloh, Holger Meuel , Jörn Ostermann*

10:50 Robust control point detection for aerial synthetic aperture radar via a logarithmic quasi-random scale space framework *Alexander Wong*

11:10 Low Bit Rate ROI Based Video Coding for HDTV Aerial Surveillance Video Sequences *Holger Meuel, Marco Munderloh, Jörn Ostermann*

11:30 Efficient Structure from Motion with Weak Position and Orientation Priors *Arnold Irschara, Christof Hoppe, Horst Bischof, Stefan Kluckner*

14:00 Keynote Speech 2: Massive Multimodal Video/Image Stream Processing and Mining for Object& Event Detection and Tracking *Ashit Talukder*

15:00 Automatic Alignment of 3D Reconstructions using a Digital Surface Model *Andreas Wendel, Arnold Irschara, Horst Bischof*

15:20 Inferring Tracklets for Multi-Object Tracking *Jan Prokaj, Mark Duchaineau, Gerard Medioni*

15:40 Learning Scene Categories from High Resolution Satellite Image for Aerial Video Analysis *Anil Cheriyadat*

16:00 Recognizing Human-Vehicle Interactions From Aerial Video without training *Jong Taek Lee, Chia-Chih Chen, J. K. Aggarwal*

<u>Projector–Camera Systems (PROCAMS)</u>
(Colorado Ballroom A)

8:30 Welcome / Opening statements

8:45 Keynote 1: FCam – An architecture and API for computational cameras *Kari Pulli*

9:45 Poster Fast Forward

10:00 Break

10:30 Papers Session 1: Kinect Applications

1. **View-Dependent 3D Projection Using Depth-Image-based Head Tracking** *Jens Garstka and Gabriele Peters*

2. **µNect: On Using a Gaming RGBD Camera in Micro-Metrology Applications** *Matthias Rüther, Martin Lenz and Horst Bischof*

11:15 Papers Session 2: Structured Light

1. **Simultaneous Self-Calibration of a Projector and a Camera Using Structured Light** *Shuntaro Yamazaki, Masaaki Mochimaru and Takeo Kanade*

2. **Surface Depth Computation and Representation from Multiple Coded Projector Light** *Fumihiko Sakaue and Jun Sato*

12:00 Break

13:30 Keynote 2: Computational Illumination *Hendrik Lensch*

14:30 Poster Session

1. **Dense Depth Estimation Using Adaptive Structured Light and Cooperative Algorithm** *Qiang Li, Moyuresh Biswas, Mark R. Pickering and Michael R. Frater*

2. **Fully Automatic Multi-Projector Calibration with an Uncalibrated Camera** *Ignacio Garcia-Dorado and Jeremy Cooperstock*

3. **Computer Vision Methods for Visual MIMO Optical System** *Wenjia Yuan, Kristin Dana, Michael Varga, Ashwin Ashok, Marco Gruteser and Narayan Mandayam*

4. **Camera-Based Video Synchronization for a Federation of Mobile Projectors** *Kiarash Amiri, Shih Hsien Yang, Christopher Larsen, Fadi Kurdahi, Magda El Zarki and Aditi Majumder*

15:15 Break

15:45 Papers Session 3: Projection and Lightfields

1. **Microscopic Shape from Focus with Optimal Illumination** *Martin Lenz, Matthias Rüther and Horst Bischof*

2. **Projection Defocus Correction Using Adaptive Kernel Sampling and Geometric Correction in Dual-Planar Environments** *Shamsuddin Ladha, Kate Smith-Miles and Sharat Chandran*

3. **Prototyping a Light Field Display Involving Direct Observation of a Video Projector Array** *Joel Jurik, Andrew Jones, Mark Bolas and Paul Debevec*

16:45 -Closing statements / best paper award

Human Activity Understanding from 3D Data (HAU3D)
(Foothills)

9:00 Keynote Speech: Learning 3D Bodies *Michael Black*

10:00 Tea / Coffee

10:30 Real-time Hybrid ToF Multi-Camera Rig Fusion System for Depth Map Enhancement *Frederic Garcia, Djamila Aouada, Thomas Solignac, Bruno Mirbach and Bjorn Ottersten*

10:50 Connected Operators on 3D Data for Human Body Analysis *Marcel Alcoverro, Adolfo López-Méndez, Montse Pardàs, Josep Casas*

11:10 Human Detection Using Depth Information by Kinect *Lu Xia, Chia-Chih Chen, J. K. Aggarwal*

11:30 Real-time Tracking of Unconstrained Full-Body Motion using Niching Swarm Filtering Combined with Local Optimization *Zheng Zhang, Hock Soon Seah*

11:50 3D Pose Tracking of Walker Users' Lower Limb with a Structured-Light Camera on a Moving Platform *Richard Zhi-Ling Hu, Adam Hartfiel, James Tung, Adel Fakih, Jesse Hoe, Pascal Poupart*

12:10 Lunch

13:30 Keynote Speech: Understanding activities using relational descriptions *David Hogg*

14:30 Multi-Object Detection and Behavior Recognition from Motion 3D Data *Kyungnam Kim, Michael Cao, Shankar Rao, Jiejun Xu, Swarup Medasani, Yuri Owechko*

14:45 Pedestrian Sensing Using Time-of-Flight Ranging Camera *Xue Wei , Son Lam Phung, Abdesselam Bouzerdoum*

15:00 Tea / Coffee

15:30 3D Human Pose and Shape Estimation from Multi-view Imagery *Atul Kanaujia, Niels Haering, Graham Taylor, Chris Bregler*

15:45 Viewpoint invariants for activity recognition from 3-D data: the role of reflection *Ramakrishna Kakarala, Prabhu Kaliamoorthi, Wanqing Li*

16:00 Keynote Speech: Natural user interaction with commodity depth cameras *Zhengyou Zhang*

Symmetry Detection from Real World Images - A Competition
(Colorado Ballroom B)

Schedule: TBD

Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA'11)
(Colorado Ballrooms D-E)

9:00 Keynote talk "4D Performance Modelling and Animation" *Christoph Bregler*

10:00 Coffee break

10:30 Dense Shape Correspondences using Spectral High-Order Graph Matching *Dirk Smeets, Jeroen Hermans, Dirk Vandermeulen, Paul Suetens*

11:00 Temperature Distribution Descriptor for Robust 3D Shape Retrieval *Yi Fang, Mengtian Sun, Karthik Ramani*

11:30 Efficient Nonlinear DTI Registration Using DCT Basis Functions *Lin Gan, Gady Agam*

12:00 Lunch

13:30 Keynote talk *Adrian Hilton*

14:30 Consistent Pose Normalization of Non-Rigid Shapes using One-Class Support Vector Machines *Panagiotis Papadakis, Fiora Pirri*

15:00 Resolving Occlusion in Multiframe Reconstruction of Deformable Surfaces *Appu Shaji, Aydin Varol, Pascal Fua, Yashoteja Ankush, Jain Sharat, Chandran*

15:30 Coffee break

16:00 Keynote talk *Dimitris Samaras*

17:00 Separating Rigid Motion from Local Linear Deformation Models *Markus Moll, Luc Van Gool*

17:30 Deformable Image Alignment as a Source of Stereo Correspondences on Portraits *David C. Schneider, Markus Kettern, Anna Hilsmann, Peter Eisert*

Saturday (June 25, 2011)

07:30--18:00   Registration Desk

07:30 – 18:00   Computer Room

07-30-9:00   Breakfast (Hallways)

12:00-13:30 Lunch included (Hallways,Summit)

Tutorial: Structured Prediction and Learning in Computer Vision
(Pikes Peak 3-4)
Saturday 8:00 (half day)
Organizers: S. Nowozin and C. Lampert

Biologically-Consistent Vision
(Colorado Ballroom A)

8:00 Introduction and Welcome *Brian Parks*

8:10 Invited Talk: What does it mean to be biologically-consistent *David Cox*

9:10 Invited Talk *Tom Dean*

10:10 Coffee Break

10:40 Session 1: Attention and Detection

1. **Fast, Recurrent, Attentional Modulation Improves Saliency Representation and Scene Recognition** *Xun Shi, Neil Bruce, John Tsotsos*

2. **3D Saliency Maps** *Fiora Pirri, Matia Pizzoli, Daniele Rigato*

3. **Automatic Initialization and Tracking Using Attentional Mechanisms** *Vijay Mahadevan, Nuno Vasconcelos*

4. **A Unified CSF-based Framework for Edge Detection and Edge *Visibility*** *Karine Joulan, Nicolas Hautière , Roland Brémond*

12:00 Lunch

13:00 Session 2: Applications

1. **Biologically Plausible Detection of Amorphous Objects in the Wild** *Sunhyoung Han, Nuno Vasconcelos*

2. **Biologically Inspired Template Matching Using Scene Context** *Changxin Gao, Nong Sang*

3. **Spatio-Chromatic Decorrelation by Shift-Invariant Filtering** *Matthew Brown, Sabine Susstrunk , Pascal Fua*

4. **Scaling Up Biologically-Inspired Computer Vision: a Case Study in Unconstrained Face Recognition on Facebook** *Nicolas Pinto, Zak Stone, Todd Zickler, David Cox*

14:20 Invited Talk: Embodied Object Recognition and Metacognition *Randall O'Reilly*

15:20 Coffee Break

Computer Vision for Computer Games (CVCG)
(Colorado Ballrooms D-E)

09:00 Making Kinect Robust *Jamie Shotton*

09:45 Action Recognition for Biometric Authentication, *Dimitrios Tzovaras*

10:30 Coffee break

11:00 Analysis of Patterns of Motor Behavior in Gamers with Down Syndrome, *Jeremy Svendsen, Alexandra Branzan Albu, and Naznin Virji-Babul*

11:20 Remote Calibration Using the Sensor Bar, *Alparslan Yildiz, Abdullah Akay, Yusuf Sinan Akgul*

11:40 Using Eye Gaze, Head Pose, and Facial Expression for Personalized Non-Player Character Interaction, *Michael Reale, Peng Liu, Lijun Yin*

12:00 Posters

1. **Approximate Partitioning of Observations in Hierarchical Particle Filter Body Tracking**, *Adolfo Lopez-Mendez, Marcel Alcoverro, Montse Pardas, Josep R. Casas*
2. **Activity related biometric authentication using Spherical Harmonics,** *A. Drosou; K. Moustakas; D. Ioannidis; D. Tzovaras*
3. **An extended fuzzy SOM for anomalous behaviour detection,** *Hussein Al-Khateeb and Maria Petrou*
4. **Subspace Analysis Of Arbitrarily Many Linear Filter Responses With An Application to Face Tracking,** *Stefanos Zafeiriou; Georgios Tzimiropoulos; Maja Pantic*
5. **Action spotting exploiting the frequency domain**, *Irene Kotsia, Vasileios Argyriou*

Fine-Grained Visual Categorization
(Colorado Ballroom B)

9:00 Welcome *Ryan Farrell , Steve Branson, Peter Welinder*

9:05 Invited Talk *Peter Belhumeur*

9:40 Invited Talk *Irving Biederman*

10:15 Break

10:35 Panel *Tom Dietterich, Derek Hoiem, Jitendra Malik, Devi Parikh*

11:35 Invited Talk *Hartmut Neven*

12:10 Poster Spotlights

12:30 Poster Session with Buffet LUNCH

14:30 Invited Talk *Fei-Fei Li*

15:05 Break

15:25 Invited Talk *Christoph Lampert*

16:00 Panel *Irving Biederman, David Forsyth, David Jacobs, Ian Reid)*

17:00 Awards/Concluding Remarks *Ryan Farrell, Steve Branson, Peter Welinder*

CVPR for Human Communicative Behavior Analysis (CVPR4HB)
(Colorado Ballroom C)

09:00 Opening

09:15 Key Note Talk: David Matsumoto (San Francisco State University)

'Culture, Emotion and Expression: New Empirical Findings & Theoretical Advances'

Session Chair: Jeff Cohn

10:00 Coffee break

10:15 Oral Session 1

Session Chair: Maja Pantic

1. **A Common Framework for Real-Time Emotion Recognition and Facial Action Unit Detection** *T. Gehrig, and H.K. Ekenel*
2. **Recognizing Expressions from Face and Body Gesture by Temporal Normalized Motion and Appearance Features** *S. Chen, Y. Tian, Q. Liu, and D. Metaxas*
3. **Facial Behaviometrics: the Case of Facial Deformation in Spontaneous Smile/Laughter** *S. Zafeiriou, and M. Pantic*
4. **Towards an Optimal Affect-Sensitive Instructional System of Cognitive Skills** *J. Whitehill, Z. Serpell, A. Foster, Y.-C. Li, B. Pearson, M. Bartlett, and J. Movellan*

12:00 Key Note Talk by the Winner of the Award for the Outstanding Young Researcher in Human Behaviour Analysis

Session Chair: Jeff Cohn

12:45 Lunch break

14:15 Key Note Talk: Coupling Deformable Models and Learning methods for Nonverbal Behavior Analysis *Dimitris Metaxas*

Session Chair: Maja Pantic

15:00 Coffee break

15:15 Oral Session 2

Session Chairs: Stefanos Zafeiriou

1. **Sparse Representations of Image Gradient Orientations for Visual Recognition and Tracking** *G. Tzimiropoulos, S. Zafeiriou, and M. Pantic*
2. **Localizing Actions through Sequential 2D Video Projections** *H. Boyraz, M. Tappen and R. Sukthankar*
3. **Automatic Visual Mimicry Expression Analysis in Interpersonal Interaction** *X. Sun, K. Truong, A. Nijholt, and M. Pantic*
4. **Learning Human Behaviour Patterns in Work Environments** *C.-W. Chen, A. Aztiria, and H. Aghajan*

17:00 Panel discussion

Session Chair: Maja Pantic

Panellists: Jeff Cohn, Thomas Huang, Dimitris Metaxas, Stefanos Zafeiriou (Award Winner)

18:30 Closing

Machine Learning for Vision-based Motion Analysis (MLvMA-2011)
(Foothills)

09:00 Opening Address

09:10 Invited Talk 1 Learning feature hierarchies for image and video analysis, *Prof. Yann LeCun*

10:00 Coffee Break

10:30 Session 1: Pose and Motion Estimation

Kernel PLS regression for robust monocular pose estimation *Radu Dondera, Larry Davis*

Joint gait-pose manifold for video-based human motion estimation *Xin Zhang, Guoliang Fan*

11:10 Session 2: Object Tracking

1. **Tracking through scattered occlusion** *Haggai Abramson and Shai Avidan*
2. **Non-rigid tracking of musk shrews in video for detection of emetic episodes** *Dong Huang, Kelly Meyers, Sverine Henry, Fernando De la Torre, and Charles Horn*
3. **Occlusion robust multi-camera face tracking** *Josh Harguess, Changbo Hu, and J. K. Aggarwal*

12:10 Lunch Break
14:00 Invited Talk 2 : TBD *Prof. Dimitris Metaxas*
15:00 Coffee Break
15:30 Session 3: Action Recognition

1. **Human action recognition in crowded surveillance video sequences by using features taken from key-point trajectories**

Masaki Takahashi, Mahito Fujii, Masahide Naemura, and Shinichi Satoh
2. **HMM-MIO an enhanced hidden Markov model for action recognition** *Massimo Piccardi, Richard Yi Da Xu, Oscar Perez Concha, and Zia Moghaddam*

16:10 Session 4: Motion Pattern Analysis

1. **Improved anomaly detection in crowded scene via cell-based analysis of foreground speed, size and textures** *Vikas Reddy, Conrad Sanderson, Brain Lovell*
2. **Dynamic modeling of streaklines for motion pattern analysis in video** *Nandita Nayak and Amit Roy-Chowdhury*

16:50 Closing Remark

Object Tracking and Classification Beyond the Visible Spectrum (OTCBVS)
(Colorado Ballrooms F-G)

8:00 Complimentary breakfast

8:30 Introductory talk: Beyond the Visible Spectrum *Firooz Sadjadi, Behzad Kamgar-Parsi, Riad I. Hammoud, Guoliang Fan*

8:40 Keynote talk: Coastal Zone Characterization from Hyperspectral Imagery *Charles M. Bachmann*

Session 1. Automated object detection and classification

9:30 Passive infrared technique for buried object detection and classification *Nguyen Trung Thanh, Dinh Nho Hao, Hichem Sahli*

9:50 Coupled Label and Intensity MRF Models for IR Target Detection *Toufiq Parag*

10:10 Coffee break

10:30 Laplace-Beltrami Eigenfunction Metrics and Geodesic Shape Distance Features for Shape Matching in Synthetic Aperture Sonar *Jason Isaacs*

10:50 A Nonparametric Bayesian Approach for Enhanced Pedestrian Detection and Foreground Segmentation *Tarek Elguebaly, Nizar Bouguila*

11:10 Diffusion Features for Target Specific Recognition with Synthetic Aperture Sonar Raw Signals and Acoustic Color *Jason Isaacs, James Tucker*

Session 2. Automated object tracking and recognition (1)

11:30 Joint Target Tracking and Recognition using View and Identity Manifolds *Vijay Venkataraman, Guoliang Fan, Liangjiang Yu, Xin Zhang, Weiguang Liu, Joseph Havlicek*

11:50 Automated Detection in Complex Objects using a Tracking Algorithm in Multiple X-ray Views *Domingo Mery*

12:10 Lunch

14:00 Invited Talk *Richard Baraniuk*

Session 2:Automated object tracking and recognition (2)

14:20 Simultaneous Identification and Tracking of Moving Targets *Ahmed Shalaby, Asem Ali, Aly Farag*

14:40 Where is the rat? Tracking in low contrast thermographic images *Guillaume-Alexandre Bilodeau, Ramla Ghali, Sebastien Desgent, Pierre Langlois, Rana Farah, Pier-Luc St-Onge, Sandra Duss, Lionel Carmant*

15:00 Coffee break

15:30 Invited Talk: Interceptors & simulated cool target tracking *Aly Farag*

Session 3: Registration and segmentation

15:50 Local self-similarity as a dense stereo correspondence measure for thermal-visible video registration *Atousa Torabi, Guillaume-Alexandre Bilodeau*

16:10 Silhouette-based features for visible-infrared registration *Guillaume-Alexandre Bilodeau, Pier-Luc St-Onge, Romain Garnier*

16:30 Strip Histogram Grid for Efficient LIDAR Segmentation from Urban Environments *Thommen Korah, Swarup Medasani, Yuri Owechko*

Session 4: Feature extraction and localization

16:50 Extracting Spatially and Spectrally Coherent Regions from Multispectral Images *Farhana Bandukwala*

**17:10 Learning a Gaussian Basis for Spectra
Representation Aimed at Reflectance
Classification** *Antonio Robles-Kelly*

**17:30 A Method for Object Localization in a
Multi-view Multimodal Camera System**
Zoltan Szlavik, Havasi Laszlo

17:50 Conclusions