

ICCV 2003 Program

Monday 13 October

Opening : 10:20 – 10:30

Session 1. Image Segmentation : 10:30 – 12:20

1. Regression based Bandwidth Selection for Segmentation using Parzen Windows

Maneesh Singh, Narendra Ahuja. Pages 2–9.

2. Learning a Classification Model for Segmentation

Xiaofeng Ren, Jitendra Malik. Pages 10–17.

3. Image Parsing: Segmentation, Detection and Recognition

X. Chen, Z. Tu, A.L. Yuille, S.C. Zhu. Pages 18–25.

4. Computing Geodesics and Minimal Surfaces via Graph Cuts

Yuri Boykov, Vladimir Kolmogorov. Pages 26–33.

5. Epitomic Analysis of Appearance and Shape

Nebojsa Jojic, Brendan Frey, Anitha Kannan. Pages 34–41. See the CD-ROM for a [video of epitome learning](#) and the [epitome webpage](#) for further examples, comparisons and software.

Lunch Break : 12:20 – 14:30

Session 2. Posters and Demos I : 14:30 – 17:15

1. Segmenting Foreground Objects from a Dynamic, Textured Background via a Robust Kalman Filter

Jing Zhong, Stan Sclaroff. Pages 44–50.

2. Ranking Prior Likelihood Distributions for Bayesian Shape Localization Framework

Shuicheng Yan, Mingjing Li, Hongjiang Zhang, Qiansheng Cheng. Pages 51–58.

3. Efficient, Robust and Accurate Fitting of a 3D Morphable Model

Sami Romdhani, Thomas Vetter. Pages 59–66.

4. Statistical Background Subtraction for a Mobile Observer

Eric Hayman, Jan-Olof Eklundh. Pages 67–74.

5. Joint Region Tracking with Switching Hypothesized Measurements

Yang Wang, Tele Tan, Loe Kia-Fock. Pages 75–82.

6. The Local Projective Shape of Smooth Surfaces and their Outlines

Svetlana Lazebnik, Jean Ponce. Pages 83–89.

7. Active Concept Learning for Image Retrieval in Dynamic Databases

Anlei Dong, Bir Bhanu. Pages 90–95.

8. Video Input Driven Animation (VIDA)

Meng Sun, Allan Jepson, Eugene Fiume. Pages 96–103.

9. Automatic Video Summarization by Graph Modeling

Chong-Wah Ngo, Yufei Ma, Hong-Jiang Zhang. Pages 104–109.

10. A Non-Iterative Greedy Algorithm for Multi-frame Point Correspondence

Khurram Shafique, Mubarak Shah. Pages 110–115.

11. Variational Frameworks for DT-MRI Estimation, Regularization and Visualization

David Tschumperlé, Rachid Deriche. Pages 116–121.

12. Counting People in Crowds with a Real-Time Network of Simple Image Sensors

Danny B. Yang, Hector H. González-Baños, Leonidas J. Guibas. Pages 122–129.

13. Fragmentation in the Vision of Scenes

Jan-Mark Geusebroek, Arnold W. M. Smeulders. Pages 130–135.

14. Eye Gaze Estimation from a Single Image of One Eye

Jian-Gang Wang, Eric Sung, Ronda Venkateswarlu. Pages 136–143.

15. Calibrating Pan-Tilt Cameras in Wide-Area Surveillance Networks

James Davis, Xing Chen. Pages 144–149.

16. Calibration of a Hybrid Camera Network

Xilin Chen, Jie Yang, Alex Waibel. Pages 150–155.

17. Image Registration with Global and Local Luminance Alignment

Jiaya Jia, Chi-Keung Tang. Pages 156–163.

18. Highlight Removal by Illumination-Constrained Inpainting

Tan Ping, Stephen Lin, Long Quan, Heung-Yeung Shum. Pages 164–169.

19. Surface Reflectance Modeling of Real Objects with Interreflections

Takashi Machida, Naokazu Yokoya, Haruo Takemura. Pages 170–177.

20. Variable Bandwidth QMDPE and Its Application in Robust Optical Flow Estimation

Hanzi Wang, David Suter. Pages 178–183.

21. Surface Reconstruction from Feature Based Stereo

Camillo J. Taylor. Pages 184–190.

22. Gaze Manipulation for One-to-one Teleconferencing

Antonio Criminisi, Jamie Shotton, Andrew Blake, Philip Torr. Pages 191–198.

23. Preemptive RANSAC for Live Structure and Motion Estimation

David Nistér. Pages 199–206. See the CD-ROM for a [description of the demo](#).

24. Multiple-View Structure and Motion From Line Correspondences

Adrien Bartoli, Peter Sturm. Pages 207–212.

25. Modeling Textured Motion: Particle, Wave and Sketch

Yizhou Wang, Song-Chun Zhu. Pages 213–220.

26. Circular Motion Geometry by Minimal 2 Points in 4 Images

Guang Jiang, Long Quan, Hung-Tat Tsui. Pages 221–227.

27. A Cylindrical Surface Model to Rectify the Bound Document Image

Huaigu Cao, Xiaoqing Ding, Changsong Liu. Pages 228–233.

28. Edit Distance From Graph Spectra

Antonio Robles-Kelly, Edwin Hancock. Pages 234–241.

29. Minimum Risk Distance Measure for Object Recognition

Shyjan Mahamud, Martial Hebert. Pages 242–248.

30. A Multi-scale Generative Model for Animate Shapes and Parts

Alexandra Dubinskiy, Song-Chun Zhu. Pages 249–256.

31. Recognition with Local Features: the Kernel Recipe

Christian Wallraven, Barbara Caputo, Arnulf Graf. Pages 257–264.

32. Images as Bags of Pixels

Tony Jebara. Pages 265–272.

33. Context-based Vision System for Place and Object Recognition

Antonio Torralba, Kevin P. Murphy, William T. Freeman, Mark A. Rubin. Pages 273–280.

34. Object Recognition with Informative Features and Linear Classification

Michel Vidal-Naquet, Shimon Ullman. Pages 281–288.

35. Meshfree Particle Method

Huafeng Liu, Pengcheng Shi. Pages 289–296.

36. Minimally-supervised Classification using Multiple Observation Sets

Chris Stauffer. Pages 297–304.

37. Learning How to Inpaint from Global Image Statistics

Anat Levin, Assaf Zomet, Yair Weiss. Pages 305–312.

38. Multiclass Spectral Clustering

Stella X. Yu, Jianbo Shi. Pages 313–319.

39. Graph Partition by Swendsen-Wang Cuts

Adrian Barbu, Song-Chun Zhu. Pages 320–327.

40. Image Spaces and Video Trajectories: Using Isomap to Explore Video Sequences

Robert Pless. Pages 1433–1440.

Session 3. Tracking : 17:15 – 18:45

1. Obstacle Detection Using Projective Invariant and Vanishing Lines

Ryuzo Okada, Yasuhiro Taniguchi, Kenji Furukawa, Kazunori Onoguchi. Pages 330–337. See the CD-ROM for a [description](#) and [video](#) of our onboard surveillance system.

2. Using Temporal Coherence to Build Models of Animals

Deva Ramanan, D.A. Forsyth. Pages 338–346.

3. On-Line Selection of Discriminative Tracking Features

Robert T. Collins, Yanxi Liu. Pages 346–352.

4. A Sparse Probabilistic Learning Algorithm for Real-Time Tracking

Oliver Williams, Andrew Blake, Roberto Cipolla. Pages 353–360.

Reception. Espace Rhodes : 19:00 – 21:00

Tuesday 14 October

Session 4. Clustering, Feature Selection : 9:00 – 10:30

1. Dominant Sets and Hierarchical Clustering

Massimiliano Pavan, Marcello Pelillo. Pages 362–369.

2. Applying the Information Bottleneck Principle to Unsupervised Clustering of Discrete and Continuous Image Representations

Shiri Gordon, Hayit Greenspan, Jacob Goldberger. Pages 370–377.

3. Feature Selection for Unsupervised and Supervised Inference: the Emergence of Sparsity in a Weighted-based Approach

Lior Wolf, Amnon Shashua. Pages 378–384.

4. Learning a Locality Preserving Subspace for Visual Recognition

Xiaofei He, Shuicheng Yan, Yuxiao Hu, Hong-Jiang Zhang. Pages 385–392.

Coffee Break : 10:30 – 11:00

Session 5. Tracking, Medical Applications : 11:00 – 12:30

1. A Model-Based Approach for Automated Feature Extraction in Fundus Images

Huiqi Li, Opas Chutatape. Pages 394–399.

2. Information Theoretic Focal Length Selection for Real-Time Active 3-D Object Tracking

Joachim Denzler, Matthias Zobel, Heinrich Niemann. Pages 400–407.

3. Shape Gradients for Histogram Segmentation using Active Contours

Stephanie Jehan-Besson, Michel Barlaud, Gilles Aubert, Olivier Faugeras. Pages 408–415.

4. Fast Intensity-based 2D-3D Fluoroscopy-to-CT Registration of Clinical Data Using Light Fields

Daniel B. Russakoff, Torsten Rohlfing, Calvin R. Maurer Jr.. Pages 416–422.

Lunch Break : 12:30 – 14:30

Session 6. Posters and Demos II : 14:30 – 17:15

1. Integrated Edge and Junction Detection with the Boundary Tensor

Ulrich Koethe. Pages 424–431.

2. Space-Time Interest Points

Ivan Laptev, Tony Lindeberg. Pages 432–439.

3. Good Continuations in Digital Image Level Lines

Frederic Cao. Pages 440–447.

4. On the Use of Marginal Statistics of Subband Images

Joshua Gluckman. Pages 448–455.

5. Mean Shift Based Clustering in High Dimensions: A Texture Classification Example

Bogdan Georgescu, Ilan Shimshoni, Peter Meer. Pages 456–463.

6. Improved Fast Gauss Transform and Efficient Kernel Density Estimation

Changjiang Yang, Ramani Duraiswami, Nail A. Gumerov, Larry Davis. Pages 464–471.

7. Unsupervised Image Translation

Romer Rosales, Kannan Achan, Brendan Frey. Pages 472–478.

8. On Exploiting Occlusions in Multiple-view Geometry

Paolo Favaro, Alessandro Duci, Yi Ma, Stefano Soatto. Pages 479–486.

9. An Efficient Image Similarity Measure Based on Approximations of KL-Divergence Between Two Gaussian Mixtures

Jacob Goldberger, Shiri Gordon, Hayit Greenspan. Pages 487–493.

10. Machine Learning and Multiscale Methods in the Classification of Bivalve Larvae

Sanjay Tiwari, Scott Gallager. Pages 494–501.

11. Automatic Segmentation of Contrast-Enhanced Image Sequences

Junhwan Kim, Ramin Zabih. Pages 502–509.

12. Reinforcement Learning for Combining Relevance Feedback Techniques in Image Retrieval

Peng-Yeng Yin, Bir Bhanu, Kuang-Cheng Chang, Anlei Dong. Pages 510–515.

13. Automatically Labeling Data Using Multi-class Active Learning

Rong Yan, Jie Yang, Alex G. Hauptmann. Pages 516–523.

14. Fast Vehicle Detection with Probabilistic Feature Grouping and Its Application to Vehicle Tracking

ZuWhan Kim, Jitendra Malik. Pages 524–531.

15. An Automatic Drowning Detection Surveillance System for Challenging Outdoor Pool Environments

How-Lung Eng, Kar-Ann Toh, Alvin H. Kam, Junxian Wang, Wei-Yun Yau. Pages 532–539.

16. The Catchment Feature Model for Multimodal Language Analysis

Francis Quek. Pages 540–547.

17. Cumulative Residual Entropy, A New Measure of Information and its Application to Image Alignment

F. E. Wang, B. C. Vemuri, M. Rao, Y. Chen. Pages 548–553.

18. Nonmetric Lens Distortion Calibration: Closed-form Solutions, Robust Estimation and Model Selection

Moumen El-Melegy, Aly Farag. Pages 554–559.

19. Determining Reflectance and Light Position from a Single Image Without Distant Illumination Assumption

Kenji Hara, Ko Nishino, Katsushi Ikeuchi. Pages 560–567.

20. Phenomenological Eigenfunctions for Image Irradiance

Peter Nillius, Jan-Olof Eklundh. Pages 568–575.

21. Dealing with Textureless Regions and Specular Highlights — A Progressive Space Carving Scheme Using a Novel Photo-consistency Measure

Ruigang Yang, Marc Pollefeys, Greg Welch. Pages 576–584.

22. Outlier Correction in Image Sequences for the Affine Camera

D. Q. Huynh, R. Hartley, A. Heyden. Pages 585–590.

23. Voxel Carving for Specular Surfaces

Thomas Bonfort, Peter Sturm. Pages 591–596.

24. Variational Stereovision and 3D Scene Flow Estimation with Statistical Similarity Measures

Jean-Philippe Pons, Renaud Keriven, Olivier Faugeras, Gerardo Hermosillo. Pages 597–602.

25. Two-Frame Wide Baseline Matching

Jiangjian Xiao, Mubarak Shah. Pages 603–609.

26. Fast Stereo Matching Using Reliability-Based Dynamic Programming and Consistency Constraints

Minglun Gong, Herbert Yang. Pages 610–617.

27. Shape and Motion under Varying Illumination: Unifying Multiview Stereo, Photometric Stereo, and Structure from Motion

Li Zhang, Brian Curless, Aaron Hertzmann, Steven M. Seitz. Pages 618–625.

28. Unsupervised Improvement of Visual Detectors using Co-Training

Anat Levin, Paul Viola, Yoav Freund. Pages 626–633.

29. Selection of Scale-Invariant Parts for Object Class Recognition

György Dorkó, Cordelia Schmid. Pages 634–640.

30. Inferring 3D Structure with a Statistical Image-based Shape Model

Kristen Grauman, Greg Shakhnarovich, Trevor Darrell. Pages 641–648.

31. Affine-Invariant Local Descriptors and Neighborhood Statistics for Texture Recognition

Svetlana Lazebnik, Cordelia Schmid, Jean Ponce. Pages 649–655.

32. Shape Representation via Harmonic Embedding

Alessandro Duci, Anthony Yezzi, Sanjoy Mitter, Stefano Soatto. Pages 656–662.

33. Learning Pedestrian Models for Silhouette Refinement

Lily Lee, Gerald Dalley, Kinh Tieu. Pages 663–670.

34. A Bayesian Network for Relational Shape Matching

A. Rangarajan, J.M. Coughlan, A.L. Yuille. Pages 671–678.

35. Unified Subspace Analysis for Face Recognition

Xiaogang Wang, Xiaoou Tang. Pages 679–686.

36. Face Sketch Synthesis and Recognition

Xiaoou Tang, Xiaogang Wang. Pages 687–694.

37. Dynamic Stroke Information Analysis for Video-Based Handwritten Chinese Character Recognition

Feng Lin, Xiaoou Tang. Pages 695–700.

38. Surface Classification using Conformal Structures

Xianfeng Gu, Shing-Tung Yau. Pages 701–708.

39. Boosting Chain Learning for Object Detection

Rong Xiao, Long Zhu, Hongjiang Zhang. Pages 709–715.

40. Texture Segmentation by Multiscale Aggregation of Filter Responses and Shape Elements

Meirav Galun, Eitan Sharon, Ronen Basri, Achi Brandt. Pages 716–723. See the CD-ROM for a [color version](#).

Session 7. Human Tracking, Action Recognition : 17:15 – 18:45

1. Recognizing Action at a Distance

Alexei A. Efros, Alexander C. Berg, Greg Mori, Jitendra Malik. Pages 726–733.

2. Detecting Pedestrians using Patterns of Motion and Appearance

Paul Viola, Michael J. Jones, Daniel Snow. Pages 734–741.

3. Recognition of Group Activities using a Dynamic Probabilistic Network

Shaogang Gong, Tao Xiang. Pages 742–749.

4. Fast Pose Estimation with Parameter-Sensitive Hashing

Gregory Shakhnarovich, Paul Viola, Trevor Darrell. Pages 750–757.

PAMI Meeting. Athena Amphitheatre : 19:00 – 20:30

Wednesday 15 October

Session 8. Calibration, Reconstruction : 9:00 – 10:30

1. Towards Gauge Invariant Bundle Adjustment: A Solution Based on Gauge Dependent Damping

Adrien Bartoli. Pages 760–765.

2. Mirrors in Motion: Epipolar Geometry and Motion Estimation

Christopher Geyer, Kostas Daniilidis. Pages 766–773.

3. Autocalibration of Projector-Screen-Camera System: Theory and Algorithm for Screen-to-Camera Homography Estimation

Takayuki Okatani, Koichiro Deguchi. Pages 774–781.

4. Camera Calibration using Spheres: A Semi-definite Programming Approach

Motilal Agrawal, Larry Davis. Pages 782–789.

Coffee Break : 10:30 – 11:00

Session 9. Illumination : 11:00 – 12:30

1. Gamut Constrained Illuminant Estimation

Graham D. Finlayson, Steven D. Hordley, Ingeborg Tastl. Pages 792–799.

2. Appearance Sampling for Obtaining a Set of Basis Images for Variable Illumination

Imari Sato, Takahiro Okabe, Yoichi Sato, Katsushi Ikeuchi. Pages 800–807.

3. A Theory of Multiplexed Illumination

Yoav Y. Schechner, Shree K. Nayar, Peter Belhumeur. Pages 808–815.

4. Incorporating the Torrance and Sparrow Model of Reflectance in Uncalibrated Photometric Stereo

Athinodoros S. Georgiades. Pages 816–823.

Lunch Break : 12:30 – 14:30

Session 10. Posters and Demos III : 14:30 – 17:15

1. “Perspective Shape from Shading” and Viscosity Solutions

Emmanuel Prados, Olivier Faugeras. Pages 826–831.

2. The Beltrami Flow over Implicit Manifolds

Nir Sochen, Rachid Deriche, Lucero Lopez-Perez. Pages 832–839.

3. Image Statistics and Anisotropic Diffusion

Hanno Scharr, Michael J. Black, Horst W. Haussecker. Pages 840–847.

4. Combining Gradient and Albedo Data for Rotation Invariant Classification of 3D Surface Texture

Jiahua Wu, Mike Chantler. Pages 848–855.

5. Reflectance-based Classification of Color Edges

Theo Gevers. Pages 856–861.

6. A New Perspective [on] Shape-from-Shading

Ariel Tankus, Nir Sochen, Yehezkel Yeshurun. Pages 862–869. See the [poster](#) on the CD-ROM for newer examples than the proceedings.

7. Separating Reflection Components of Textured Surface using a Single Image

Robby T. Tan, Katsushi Ikeuchi. Pages 870–877.

8. Robust Regression with Projection Based M-estimators

Haifeng Chen, Peter Meer. Pages 878–885.

9. Variational Space-Time Motion Segmentation

Daniel Cremers, Stefano Soatto. Pages 886–893.

10. How to Deal with Point Correspondences and Tangential Velocities in the Level Set Framework

Jean-Philippe Pons, Gerardo Hermosillo, Renaud Keriven, Olivier Faugeras. Pages 894–899.

11. Comparison of Graph Cuts with Belief Propagation for Stereo, using Identical MRF Parameters

Marshall F. Tappen, William T. Freeman. Pages 900–907.

12. Controlling Model Complexity in Flow Estimation

Zoran Duric, Fayin Li, Harry Wechsler, Vladimir Cherkassky. Pages 908–914.

13. Model-Based Multiple View Reconstruction of People

J. Starck, A. Hilton. Pages 915–922.

14. Landmark-based Shape Deformation with Topology-Preserving Constraints

Song Wang, Jim Xiuquan Ji, Zhi-Pei Liang. Pages 923–930.

15. Reliable Recovery of Piled Box-like Objects via Parabolically Deformable Superquadrics.

Dimitrios Katsoulas. Pages 931–938.

16. View-invariant Alignment and Matching of Video Sequences

Cen Rao, Alexei Gritai, Mubarak Shah, Tanveer Syeda-Mahmood. Pages 939–945.

17. High Resolution Terrain Mapping using Low Altitude Aerial Stereo Imagery

Il-Kyun Jung, Simon Lacroix. Pages 946–951.

18. Tracking Across Multiple Cameras With Disjoint Views

Omar Javed, Zeeshan Rasheed, Khurram Shafique, Mubarak Shah. Pages 952–957.

19. Facial Expression Decomposition

Hongcheng Wang, Narendra Ahuja. Pages 958–965.

20. Plane-based Calibration Algorithm for Multi-camera Systems via Factorization of Homography Matrices

Toshio Ueshiba, Fumiaki Tomita. Pages 966–973.

21. Tales of Shape and Radiance in Multiview Stereo

Stefano Soatto, Anthony J. Yezzi, Hailin Jin. Pages 974–981.

22. Polarization-based Inverse Rendering from a Single View

Daisuke Miyazaki, Robby T. Tan, Kenji Hara, Katsushi Ikeuchi. Pages 982–987.

23. On the Epipolar Geometry of the Crossed-Slits Projection

Doron Feldman, Daphna Weinshall, Tomas Pajdla. Pages 988–995.

24. Spectral Partitioning for Structure from Motion

Drew Steedly, Irfan Essa, Frank Dellaert. Pages 996–1003.

25. Scene Modeling Based on Constraint System Decomposition Techniques

Marta Wilczkowiak, Gilles Trombettoni, Christophe Jermann, Peter Sturm, Edmond Boyer. Pages 1004–1010.

26. Combinatorial Constraints on Multiple Projections of a Set of Points

Tomas Werner. Pages 1011–1016.

27. Multiview Reconstruction of Space Curves

Fredrik Kahl, Jonas August. Pages 1017–1024.

28. What Does Motion Reveal About Transparency?

Moshe Ben-Ezra, Shree K. Nayar. Pages 1025–1032.

29. Visual Correspondence Using Energy Minimization and Mutual Information

Junhwan Kim, Vladimir Kolmogorov, Ramin Zabih. Pages 1033–1040.

30. Entropy-of-likelihood Feature Selection for Image Correspondence

Matthew Toews, Tal Arbel. Pages 1041–1047.

31. A Caratheodory-Fejer Approach to Robust Multiframe Tracking

Octavia I. Camps, Hwasup Lim, Maria Cecilia Mazzaro, Mario Sznaiar. Pages 1048–1055.

32. Tracking Objects using Density Matching and Shape Priors

Tao Zhang, Daniel Freedman. Pages 1056–1062.

33. Filtering Using a Tree-Based Estimator

Bjorn Stenger, Arasanathan Thayananthan, Philip Torr, Roberto Cipolla. Pages 1063–1070.

34. Constraining Human Body Tracking

David Demirdjian, Teresa Ko, Trevor Darrell. Pages 1071–1078.

35. A Background Layer Model for Object Tracking through Occlusion

Yue Zhou, Hai Tao. Pages 1079–1085.

36. Bayesian Clustering of Optical Flow Fields

Jesse Hoey, James J. Little. Pages 1086–1093.

37. Tracking Articulated Body by Dynamic Markov Network

Ying Wu, Gang Hua, Ting Yu. Pages 1094–1101.

38. Tracking Articulated Hand Motion with Eigen-Dynamics Analysis

Hanning Zhou, Thomas S. Huang. Pages 1102–1109.

39. Maintaining Multi-Modality through Mixture Tracking

Jaco Vermaak, Arnaud Doucet, Patrick Pérez. Pages 1110–1116.

40. Using Prior Shape and Intensity Profile in Medical Image Segmentation

Yunmei Chen, Feng Huang, Hemant D. Tagare, Murali Rao, David Wilson, Edward A. Geiser. Pages 1117–1124.

Session 11. Recognition, Shape : 17:15 – 18:45

1. A New Paradigm for Recognizing 3-D Object Shapes from Range Data

Salvador Ruiz Correa, Linda G. Shapiro, Marina Melia. Pages 1126–1133.

2. A Bayesian Approach to Unsupervised One-shot Learning of Object Categories

Li Fei-Fei, Rob Fergus, Pietro Perona. Pages 1134–1141.

3. An Affine Invariant Deformable Shape Representation for General Curves

Anders Ericsson, Kalle Åström. Pages 1142–1149.

4. Discriminative Random Fields: A Discriminative Framework for Contextual Interaction in Classification

Sanjiv Kumar, Martial Hebert. Pages 1150–1157.

Banquet. Marineland Antibes : Depart 19:15, return 23:30

Thursday 16 October

Session 12. Sensing devices, IBR : 9:00 – 10:30

1. Eye Design in the Plenoptic Space of Light Rays

Jan Neumann, Cornelia Fermüller, Yiannis Aloimonos. Pages 1160–1167.

2. Adaptive Dynamic Range Imaging: Optical Control of Pixel Exposures Over Space and Time

Shree K. Nayar, Vlad Branzoi. Pages 1168–1175.

3. Image-based Rendering using Image-based Priors

Andrew Fitzgibbon, Yonatan Wexler, Andrew Zisserman. Pages 1176–1183.

4. Photo-Consistent 3D Fire by Flame-Sheet Decomposition

Samuel W. Hasinoff, Kiriakos N. Kutulakos. Pages 1184–1191. See the CD-ROM for [example videos](#) or visit [the authors' web site](#).

Coffee Break : 10:30 – 11:00

Session 13. Multiview Stereo, Matching : 11:00 – 12:30

1. Dense Matching of Multiple Wide-Baseline Views

Christoph Strecha, Tinne Tuytelaars, Luc Van Gool. Pages 1194–1201.

2. Dense Shape Reconstruction of a Moving Object under Arbitrary, Unknown Lighting

Denis Simakov, Darya Frolova, Ronen Basri. Pages 1202–1209.

3. Linear Multi-View Reconstruction of Points, Lines, Planes and Cameras using a Reference Plane

Carsten Rother. Pages 1210–1217.

4. Recognising Panoramas

Matthew Brown, David Lowe. Pages 1218–1225.

Lunch Break : 12:30 – 14:30

Session 14. Posters and Demos IV : 14:30 – 17:15

1. A Mathematical Theory of Primal Sketch and Sketchability

Cheng-En Guo, Song-Chun Zhu, Yingnian Wu. Pages 1228–1235.

2. Dynamic Texture Segmentation

Gianfranco Doretto, Daniel Cremers, Paolo Favaro, Stefano Soatto. Pages 1236–1242.

3. Learning and Inferring Image Segmentations using the GBP Typical Cut Algorithm

Noam Shental, Assaf Zomet, Tomer Hertz, Yair Weiss. Pages 1243–1250.

4. Geometric Segmentation of Perspective Images Based on Symmetry Groups

Allen Yang, Shankar Rao, Wei Hong, Yi Ma. Pages 1251–1258.

5. Natural Image Statistics for Natural Image Segmentation

Matthias Heiler, Christoph Schnörr. Pages 1259–1266.

6. Unsupervised Non-parametric Region Segmentation Using Level Sets

Timor Kadir, Michael Brady. Pages 1267–1274.

- 7. Computing MAP Trajectories by Representing, Propagating and Combining PDFs over Groups**
Paul Smith, Tom Drummond, Kimon Roussopoulos. Pages 1275–1282.
- 8. Markov-Based Failure Prediction for Human Motion Analysis**
Shiloh L. Dockstader, Nikita S. Imennov, A. Murat Tekalp. Pages 1283–1288.
- 9. SVM-based Nonparametric Discriminant Analysis, an Application to Face Detection**
Rik Fransens, Jan De Prins, Luc Van Gool. Pages 1289–1296.
- 10. Facial Expression Understanding in Image Sequences Using Dynamic and Active Visual Information Fusion**
Yongmian Zhang, Qiang Ji. Pages 1297–1304.
- 11. Background Modeling and Subtraction of Dynamic Scenes**
Antoine Monnet, Anurag Mittal, Nikos Paragios, Visvanathan Ramesh. Pages 1305–1312.
- 12. Surface Reconstruction by Integrating 3D and 2D Data of Multiple View**
Maxime Lhuillier, Long Quan. Pages 1313–1320.
- 13. Recovery of Epipolar Geometry as a Manifold Fitting Problem**
Liran Goshen, Ilan Shimshoni, Padmanabhan Anandan, Daniel Keren. Pages 1321–1328.
- 14. Assessing Accuracy Factors in Deformable 2D/3D Medical Image Registration Using a Statistical Pelvis Model**
Jianhua Yao, Russell Taylor. Pages 1329–1334.
- 15. Stochastic Refinement of the Visual Hull to Satisfy Photometric and Silhouette Consistency Constraints**
John Isidoro, Stan Sclaroff. Pages 1335–1342.
- 16. Capturing Subtle Facial Motions in 3D Face Tracking**
Zhen Wen, Thomas S. Huang. Pages 1343–1350.
- 17. Catadioptric Camera Calibration Using Geometric Invariants**
Xianghua Ying, Zhanyi Hu. Pages 1351–1358.
- 18. Paracatadioptric Camera Calibration using Lines**
Joao P. Barreto, Helder Araujo. Pages 1359–1365.
- 19. Multiple-cue Illumination Estimation in Textured Scenes**
Yuanzhen Li, Stephen Lin, Hanqing Lu, Heung-Yeung Shum. Pages 1366–1373.
- 20. A Novel Approach For Texture Shape Recovery**
Jing Wang, Kristin J. Dana. Pages 1374–1380.
- 21. Polarization-based Transparent Surface Modelling from Two Views**
Daisuke Miyazaki, Masataka Kagesawa, Katsushi Ikeuchi. Pages 1381–1386.
- 22. A Class of Photometric Invariants: Separating Material from Shape and Illumination**
Srinivasa G. Narasimhan, Visvanathan Ramesh, Shree K. Nayar. Pages 1387–1394.
- 23. Towards Direct Recovery of Shape and Motion Parameters from Image Sequences**
Stephen Benoit, Frank P. Ferrie. Pages 1395–1402.
- 24. Real-Time Simultaneous Localisation and Mapping with a Single Camera**
Andrew J. Davison. Pages 1403–1410.
- 25. Binocular Helmholtz Stereopsis**
Todd Zickler, Jeffrey Ho, David Kriegman, Jean Ponce, Peter Belhumeur. Pages 1411–1417.
- 26. Camera Calibration with Known Rotation**
Jan-Michael Frahm, Reinhard Koch. Pages 1418–1425.
- 27. Globally Convergent Autocalibration**
Arrigo Benedetti, Alessandro Busti, Michela Farenzena, Andrea Fusiello. Pages 1426–1432.

28. 3D Tracking = Classification + Interpolation

Carlo Tomasi, Slav Petrov, Arvind Sastry. Pages 1441–1448. See the CD-ROM for some [demo video clips](#).

29. Fusion of Static and Dynamic Body Biometrics for Gait Recognition

Liang Wang, Huazhong Ning, Tieniu Tan, Weiming Hu. Pages 1449–1454.

30. Large-Scale Event Detection Using Semi-Hidden Markov Models

Somboon Hongeng, Ramakant Nevatia. Pages 1455–1462.

31. Recognizing Human Action Efforts: An Adaptive Three-Mode PCA Framework

James W. Davis, Hui Gao. Pages 1463–1469.

32. Video Google: A Text Retrieval Approach to Object Matching in Videos

Josef Sivic, Andrew Zisserman. Pages 1470–1477.

33. Probabilistic Bilinear Models for Appearance-Based Vision

David B. Grimes, Aaron P. Shon, Rajesh P.N. Rao. Pages 1478–1485.

34. Real Time Pattern Matching Using Projection Kernels

Yacov Hel-Or, Hagit Hel-Or. Pages 1486–1493.

35. Weighted and Robust Incremental Method for Subspace Learning

Danijel Skocaj, Ales Leonardis. Pages 1494–1501.

36. Conditional Feature Sensitivity: A Unifying View on Active Recognition and Feature Selection

Xiang Sean Zhou, Dorin Comaniciu, Arun Krishnan. Pages 1502–1509.

Session 15. Specularities, Color : 17:15 – 18:00

1. Using Specularities for Recognition

Margarita Osadchy, David Jacobs, Ravi Ramamoorthi. Pages 1512–1519.

2. Color Edge Detection by Photometric Quasi-Invariants

J. van de Weijer, Th. Gevers, J-M. Geusebroek. Pages 1520–1525.