

Final Program

ACCV2002: Asian Conference on Computer Vision
January 22-26 2002

Tuesday 22nd January 2002

ACCV opening Plenary Session and DICTA closing Plenary Session – Chair A/Prof. D. Suter, Monash

Speaker Prof. Kenichi Kanatani, Okayama University, “Model Selection for Geometric Inference”
Time 1.30 pm – 2.30 pm
Venue Hercus Theatre, Physics Building, The University of Melbourne

ACCV and DICTA Conference Tutorials

Tutorial 1 - Fast Algorithms for Stereo Matching – Dr. Changming Sun, (CSIRO)

Time 2.30 pm – 6.00 pm
Venue Physics Podium Room 2.08

Tutorial 2 - Complex Wavelets: an improved technique for multi-scale signal and image processing – Dr. Nick Kingsbury, (Cambridge)

Time 2.30 pm – 6.00 pm
Venue Physics Podium Room 2.09

Tutorial 3 - Model-Based Clustering via Gaussian Mixtures – Prof. Geoff McLachlan (UQ)

Time 2.30 p.m. – 6.00 p.m.
Venue Physics Podium Room 2.06

Wednesday 23rd January 2002

ACCV Plenary Session – Chair Prof. G. West, Curtin

Speaker Prof. Richard Hartley, Australian National University, “Multiple View Geometry” (approx. title).
Time 9.00am to 10.00am
Venue Theatre A Elizabeth Murdoch Building, The University of Melbourne

ACCV Conference Parallel Oral Sessions W1

10.05 am – 11.25 am WA1 (Elizabeth Murdoch), WA2 (Hercus) and WA3 (Laby)Theatres, Physics Building, The University of Melbourne

WA1– Chair Dr. M. Berman, CSIRO CMIS

Gait Recognition By Walking and Running: A Model-Based Approach Yam C. Y., Nixon M. S. and Carter J. N.
Estimating the Number of Independent Motions for Multibody Motion Segmentation Kanatani K. and Matsunaga C.
An Illumination Invariant Change Detection Algorithm Lou J., Yang H., Hu W. and Tan T.
Curvature-Based Algorithm for Non-Rigid Motion and Correspondence Estimation Laskov P. and Kambhamettu C.

WA2– Chair Prof. Binh Pham, QUT

Detection of Earthquake Damaged Areas from Arial Photographs by Using Color and Edge Information Ishii M., Goto T., Suiyama T. Saji H. and Abe K.
Fingerprint Segmentation Using the Phase of Multiscale Gabor Wavelets Bernard S., Boujemaa N., Vitale D. and Bricot C.
Segmentation of Wear Particle Image from Used Oil Filtergrams Duff E.
Example-Based Automatic Portraiture Chen H., Liang L., Xu Y.Q., Shum H.Y. and Zheng N.N.

WA3 – Chair Dr. Z. Zhang, Microsoft Research

A Novel Approach to Video Indexing and Retrieval Using Motion Activity Yuan L., Gao W. and Zeng W.
A Sub-Vector Weighting Scheme for Image Retrieval with Relevance Feedback Wang L., Chan K.L. and Xiong X.
Finding the Beat: An Analysis of the Rhythmic Elements of Motion Pictures Adams B., Dorai C. and Venkatesh S.
Video Genre Categorization Using Audio Wavelet Coefficients Dinh P.Q., Dorai C. and Venkatesh

11.25 am-11.45 am

Morning Tea (Grand Buffet Hall, Union Building)

ACCV Conference Parallel Oral Sessions W2

11.45 am – 1.05 pm WA4 (Elizabeth Murdoch), WA5 (Hercus) and WA6 (Laby)Theatres, Physics Building, The University of Melbourne

WA4 – Chair A/Prof. B. Lovell, Queensland

Structure Graph Matching using the EM Algorithm and Singular Value Decomposition Luo B. and Hancock E.

A Scene-Level Analysis for Video Abstraction Kang H.B.

An Image Database Semantically Structured Based on Automatic Image Annotation for Content-Based Image Retrieval Xiong X., Chan K.L. and Wang L.

SVD-Based Hierarchical Algorithm for Similarity Indexing in Quadratic Form Distance Space Luo M., Bai X. and Xu G.

WA5 – Chair Dr. Changming Sun, CSIRO

Simultaneous 2D Images and 3D Geometric Model Registration for Texture Mapping Utilizing Reflectance Attribute Kurazume R., Nishino K., Zhang Z. and Ikeuchi K.

Rank Deficiency Condition of the Multiple View Matrix for Mixed Point and Line Features Ma Y., Kosecka J. and Huang K.

Vector Transform for Shape-From-Shading Ribeiro E. and Hancock E.

Fast Free-Form Surface Registration by A New Genetic Algorithm Chow C.K., Tsui H.T. and Lee T.

WA6 – Chair K. Koh, Kyoto

Looming Stereo with Adaptive Windowing Feng T., Kang S.B., and Shum H.-Y.

A Practical Approach for 3D Building Modeling from Uncalibrated Video Sequences Liu. Y., Tsui H.T., and Wu C.

Reconstruction of 3-D Space Structure with Rotational Imaging System Hild M., Nishijima K.

Reconstruction from Two Views using Approximate Calibration Hartley R. and Silpa-Anan C.

1.05 pm-2.15 pm

Lunch (Grand Buffet Hall, Union Building)

ACCV Conference Parallel Oral Sessions W3

2.15 pm – 3.35 pm WP1 (Elizabeth Murdoch), WP2 (Hercus) and WP3 (Laby)Theatres, Physics Building, The University of Melbourne

WP1 – Chair A/Prof. D. Suter, Monash

Object Representation and Rendering Using Inverse Concentric Mosaics Wang L., Shum H.Y. and Kang S.B.

Feature-Based Radial Distortion Correction for Image Mosaicing Chiba N., Minoh M. and Kana H.

A Low-Cost Projector Mosaic with Fast Registration Raskar R., Baar J. and Chai J.X.

Learning Dynamic Audio/Visual Mapping with Input-Output Hidden Markov Models Li Y. Shum H.Y.

WP2 – Chair Prof. Yi Ma, Illinois (Urbana-Champaign)

Real-Time Lip Synchronization Based on Hidden Markov Models Huang Y., Lin S., Ding X., Guo. B. and Shum H.Y.

Word Recognition Based on Hidden Markov Models with Three-Dimensional Lip Shape Information Masuda S., Tagawa N. Minagawa A. and Moriya T.

A Face Recognition Method Based on Local Feature Analysis Jiao F., Gao W., Chen X., Cui G and Shan S.

Automatic Eyeglasses Removal from Face Images Wu C., Liu C., Shum H.Y., Xu Y.Q. and Zhang Z.

WP3 – Chair Prot. T. Tan Institute of Automation

Automatic Feature Matching Using Coplanar Projective invariants For Object Recognition Li W.J., Lee T., and Tsui H.T.

A Robust Object Recognition Method Using Surface Images of 3D Objects Kawamura K. and Ikeuchi K

Camera Calibration by a Single Image of Balls: From Conics to the Absolute Conic Teramoto H. and Xu G.

3D Visual Servoing from Uncalibrated Cameras for Uncalibrated Robots Adachi J. and Sato J.

ACCV Conference Poster Session (and afternoon tea)

3.35 pm – 5.00 pm Grand Buffet Hall, Union Building, The University of Melbourne

An Automatic Bullet Cartridge Identification System Mazumdar D., Mitra S. and Kar A.

Telepresence System with an Omnidirectional HD Camera Yamazawa K., Takemura H. and Yokoya N.

Trail-Dependent Intelligent Scissors Based on Multiscale Image Segmentation Hung Y.P. and Tsai Y.P.

Acquisition and Accumulation of Object Appearances Using Successive Eigenspace Construction Mae Y., Umetani T., Arai T. and Inoue K.

Recovering Human Motions by Mobile Cameras and Factorization, Tabusa T., Tan J.K. and Ishikawa S.

Multi-Model Feature Integration for Texture Classification Huang Y. and Chan K.L.

Combining Local and Global Features for Face Recognition Huang J., Yuen P.C., Lai J.H. and Li C.H.

Generation of Spherical Image Mosaic Using 3D Information Obtained from Stereo Omni-Directional System (SOS) Tanahashi H., Wang C., Niwa Y. Yamamoto K.

Algorithm Evaluation by Probabilistic Fitness/Cost Analysis, and Application to Image Segmentation Everingham M., Muller H. and Thoms B.

Toward Spatial Information Awareness Map (SIAM) for the Visually Impaired Pongpech W., Bennamoun M. and Williams J.

Extracting Human Limb Region Using Optical Flow and Nonlinear Optimization Tamaki T., Yamamura T. and Ohnishi N.

Object-Based Image Description and Query Refinement in a 3D Iconic Environment Turcat J.P., Chibelushi C.C. and Low A.A.
 Discriminative Regions for Human Face Detection Matas J., Bilek P., Hamouz M. and Kittler J.
 The Spectral-Face Analysis for Face Recognition Zhu Y. and Sung E.
 Triangular Mesh Segmentation Based on Surface Normal Kim D.H., Yun I.D., and Lee S.U.
 Acquiring Bidirectional Texture Function for Image Synthesis of Deformed Objects Furukawa R., Kawasaki H. and Ikeuchi K.
 A New Self-Calibration Technique via Epipoles Li H., Wang G., Wu F. and Hu Z.

Thursday 24th January 2002

ACCV Plenary Session – Chair Pr. S. Venkatesh, Curtin

Speaker Prof. Baba C. Vemuri, University of Florida, “Level-set Methods in Computer Vision and Medical Imaging”
 Time 9.00am to 10.00am
 Venue Theatre A Elizabeth Murdoch Building, The University of Melbourne

ACCV Conference Parallel Oral Sessions T1

10.05 am – 11.25 am TA1 (Elizabeth Murdoch), TA2 (Hercus) and TA3 (Laby)Theatres, Physics Building, The University of Melbourne

TA1 – Chair Prof. A. Maeder, QUT

Motion Detection from Time-varied Background Ren Y., Chua C.S., Ho Y.K. and Chen Y.
 Single and Multi-View Reconstruction of Structured Scenes Grossmann E., Ortin D. and Santos-Victor J.
 The Detective of the Obstacle by Using the New System Called Horizon View Camera Iwata A., Kato K. and Yamamoto K.
 Low-Cost Real-Time Gesture Recognition Lovell B.C. and Heckenberg D.

TA2 – Chair Prof. N. Ohta, Gunma

Textural Features in Multi-Channel Color Images Lakmann R.
 Texture Analysis and Description in Linguistic Terms Lin H.C., Chiu C.Y. and Yang S.N.
 Estimating Image Blur in the Wavelet Domain Rooms F., Pizurica A. and Philips W.
 Affine Invariant Texture Analysis Based on Structural Properties Zhang J. and Tan T.

TA3 – Chair Prof. M. Sato, Tokyo IT

Lip Tracking using Pattern Matching Snakes Barnard M., Holden E.J., and Owens R.
 Iris Recognition Based on Multichannel Gabor Filtering Ma L., Wang Y., and Tan T.
 Automatic Feature Detection and Pose Recovery for Faces Yilmaz A. and Shah M.A.
 Motion Estimation of Driver's Head from Nostrils Detection Katahara S. and Aoki M.

11.25 am-11.45 am

Morning Tea (Grand Buffet Hall, Union Building)

ACCV Conference Parallel Oral Sessions T2

11.45 am – 1.05 pm TA4 (Elizabeth Murdoch), TA5 (Hercus) and TA6 (Laby)Theatres, Physics Building, The University of Melbourne

TA4 – Chair A/Prof. D. Suter, Monash

Visual Vehicle Tracking Using An Improved EKF Lou J., Yang H., Hu W., and Tan T.
 Coordination of Multiple Cameras to Track Multiple People Nguyen N.T., Venkatesh S., West G., and Bui H.H.
 Side Statistics and Maximum Discriminant Analysis for Real-Time Tracking Zhang Z., Wu Y., and Liu Z.
 Performance Measures for Assessing Contour Trackers Tissainayagam P. and Suter D.

TA5 – Chair Prof. M. Shah, Central Florida

A Two-step Approach Based on PaHMM for the Recognition of ASL Deng J. and Tsui H.T.
 Complex Gesture Recognition Using Coupled Switching Linear Model Jeong M.H., Kuno Y., Shimada N. and Shirai Y.
 Classifying Complex Human Motion Using Point Distribution Models Tassone E., West G. and Venkatesh S.
 Learning A Highly Structured Motion Model for 3D Human Tracking Zhao T., Wang T. and Shum H.Y.

TA6 – Chair Prof. J. Sato, Nagoya IT

Non-Metric Augmented Reality under Orthographic Projection Seo Y. and Hong K.S.
 Personal Authentication by Free Space Signing with Video Capture Katagiri M. and Sugimura T.
 Minimal Euclidean Structure and Motion from Three Calibrated Affine Images. Ameller M.A., Bartoli A. and Quan L.
 Algebraic Characteristic and Geometric Interpretation of Planar Motion and Its Application to Camera Self-calibration Lu L. and Tsui H.T.

1.05 pm-2.15 pm

Lunch (Grand Buffet Hall, Union Building)

ACCV Conference Parallel Oral Sessions T3

2.15 pm – 3.15 pm TP1 (Elizabeth Murdoch), TP2 (Hercus) and TP3 (Laby)Theatres, Physics Building, The University of Melbourne

TP1 – Chair Prof. Y. Ohta, Tsukuba

Robust Cooperative Strategy for Contour Matching Using Epipolar Geometry Yuan M., Xie M., and Yin X.

Control Points Based Semi-Dense Matching Zhong Y. and Zhang H.
Detecting 3D Object with Color Texture by Genetic Algorithm Aoki K. and Kaneko T.

TP2 – Prof. Y. Shirai, Osaka

Arbitrary View Synthesis of Real-World Environment Kawasaki H., Ikeuchi K., and Sakauchi M.
An Optical Analysis of Light Field Rendering Feng T. and Shum H.-Y.
High-level Human Figure Action Control for Vision-based Real-time Interaction Yonemoto S. and Taniguchi R.

TP3 – Chair Prof. B. Pham, QUT

Separation of Gray and White Matter from MR Images Using the Polya Urn Model and the EM algorithm Yang F. and Jiang T.
Fast Region Merging Algorithms for Image Segmentation Crisp D.J. and Tao T.C.
Shape Decomposition Scheme by Combining Mathematical Morphology and Convex Partitioning Kim D.H., Yun I.D., and Lee S.U.

ACCV Conference Poster Session (and afternoon tea)

3.15 pm – 4.30 pm Grand Buffet Hall, Union Building, The University of Melbourne

Video Editing Support System Based on Video Content Analysis Kumano M., Arika Y., Shunto K. and Tsukada K.
A Moving Object Segmentation Technique Using Dynamic Programming Wu Z. and Chen C.
Hierarchical Image Classification using Support Vector Machines Wang Y. and Hu B.G.
A Comparative Study of Fourier Descriptors for Shape Representation and Retrieval Zhang D. and Lu G.
An Integrated Approach to Shape Based Image Retrieval Zhang D. and Lu G.
On Accuracy of 3D Localization Obtained by Aligning 3D Model with Observed 2D Occluding Edges Kita Y. and Kita N.
On the Automatic Estimation of Fundamental Matrix Lei C., Tsui H.T. and Hu Z.Y.
Automatic Correspondence of Range Images Planitz B.M., Williams J.A. and Bennamoun M.
A New Linear Camera Self-Calibration Technique Li H., Zhang H., Wu F. and Hu Z.
3-D Recognition of Remote Objects Utilizing Stereo Vision on a Roving Platform Wingate M. and Davison A.
Dense Estimation of Surface Reflectance Properties for Merging Virtualized Objects into Real Images Machida T., Takemura H. and Yokoya N.
Correction of a 3D Object Reconstructed from a Single Image Chen Q.R., Liu J.Z., Cham W.K. and Tsui H.T.
A Multifeature Correspondence Algorithm Using Dynamic Programming Jawahar C.V. and Narayanan
Wheelchair Detection in a Calibrated Environment Myles A., Lobo N.V. and Shah M.
Maximum Likelihood Shape Matching Sebe N. and Lew M.S.
Object Recognition Supported by User Interaction for Service Robots Makihara Y., Takizawa M., Shirai Y., Miura J. and Shimada N.
A Probabilistic Approach to Surface Extraction from Range Data Hirayu H., Wang C., Tanahashi H., Niwa Y. and Yamamoto K.

ACCV Conference Dinner – Rydges Carlton Hotel

Time 6.30pm Pre-Dinner Drinks

7.00pm Seated for Dinner (11.30 finish)

Guest Speaker Prof. Mandyam V. Srinivasan, ANU, "From Flying Insects to Autonomous Robots"

Friday 25th January 2002

ACCV Plenary Session – Chair A/Prof. D. Suter, Monash

Speaker Dr. Zhengyou Zhang, Microsoft Research, "Vision-Based Modelling and Interaction"
Time 9.00am to 10.00am
Venue Theatre A Elizabeth Murdoch Building, The University of Melbourne

ACCV Conference Parallel Oral Sessions F1

10.10 am – 11.10 am FA1 (Elizabeth Murdoch), and FA2 (Hercus) Theatres, Physics Building, The University of Melbourne

FA1 – Chair Prof. T. Lee, Chinese University HK

Automatic Camera Calibration Method for Distributed Multiple Camera Based Human Tracking System Yamazoe H., Utsumi A., Tetsutani N. and Yachida M.

Direct Recovery of the Camera Internal Parameters Using Known Angles Kolesnik M.

A Scheme for Combining Auto-calibration and Scene Constraints Huynh D.Q., Heyden A., and Khan S.

FA2 – Chair Prof. B. Pham, QUT

Real-time Detection of Between-the-Eyes with a Circle Frequency Filter Kawato S. and Tetsutani N.

Face Tracking Using Motion-Guided Dynamic Template Matching Wang L., Tan T., and Hu W.

FA3 – Chair Prof. A. Maeder, QUT

Robust Simultaneous Registration of Multiple Range Images Nishino K. and Ikeuchi K.

Polyhedral Description of Panoramic Range Data by Stable Plane Extraction Wang C., Tanahashi H., Hirayu H., Niwa Y., and Yamamoto K.

Multiresolution Topology Estimation of 3-D Range Park I.K., Lee K.M., Jang J.Y., and Lee S.U.

ACCV Conference Poster Session (and morning tea)

11.10 am – 1.00 pm Grand Buffet Hall, Union Building, The University of Melbourne

Automatic Facial Point Detection Holden E.J. and Owens R.
Combination Face Direction Estimation and Face Recognition Using Four-Directional Features Hongo H., Yasumoto M., Niwa Y., and Yamamoto K.
Combining Color, Contour and Region for Face Detection Fang Y., Wang Y., and Tan T.
Recognition of Logo Images using Invariants Defined from Higher-Order Spectra Lowther S., Chandran V., and Sridharan S.
Surveillance Image Coding for Interpretability using Importance Maps Nguyen A., Chandran V., Sridharan S., and Prandolini R.
Locating Anchor Shots in Compression Domain Based on Neural Networks Wang W.Q., Qing L.Y., Fu Y. and Gao W.
Graph Representation of Images in Scale-Space with Application to Face Detection Maruta H., Kozakaya T., Koike Y., and Sato M.
A Computer Vision System for Monitoring Production of Fast Food Russo R., Shah M., and Lobo N.
Real Time Head and Facial Features Tracking from Uncalibrated Monocular Views Bottino A.
The Impossibility of Affine Reconstruction from Perspective Image Pairs Obtained by a Translating Camera with Varying Parameters Hu Z. Y. and Wu F. C.
Image Stabilization using Practical Information from Aerial View Moriya T., and Takeda H.
Singular Point Detection in Fingerprint Image Zhang W. and Wang Y.
Adult Image Detection Method Base-on Skin Color Model and Support Vector Machine Duan L., Cui G., Gao W., and Zhang H.
Morlet Wavelet Based Human Head and Face Boundary Extraction Zhang L. and Lenders P.
Face Recognition Based on Support Vector Method Cui G., Gao W., Jiao F., and Shan S.
Recognition of Printed Sinhala Characters using Linear Symmetry Premaratne H.L. and Bigun J.
Face Recognition using Multi-Class SVM Du P., Zhang Y, and Liu C.

1.00 pm-2.10 pm

Lunch (Grand Buffet Hall, Union Building)

AFCV meeting (For representatives in the Private Dining Room adjacent to Grand Buffet Hall)

ACCV Conference Parallel Oral Sessions F2

2.10 pm – 3.30 pm FP1 (Elizabeth Murdoch) and FP2 (Hercus) Theatres, Physics Building, The University of Melbourne

FP1 –Chair A/Prof. Lovell, Queensland

Interactive Calibration of a Pan-Tilt-Zoom (PTZ) Camera for Surveillance Trajkovic M.
A Camera Calibration Method using Concentric Circles for Vision Applications Kim J.S., Kim H.W., and Kweon I.S.
Correcting Distortion of Image by Image Registration Tamaki T., Yamamura T., and Ohnishi N.
Detecting Approaching Cars via Artificial Insect Vision Ohta N.

FP2 – Chair A/Prof.D. Suter, Monash

Pixon-based Image Segmentation with Markov Random Fields Yang F. and Jiang T.
Eigenspaces for Graphs Luo B., Wilson R., and Hancock E.

ACCV Conference Poster Session (and afternoon tea)

3.30 pm – 5.00 pm Grand Buffet Hall, Union Building, The University of Melbourne

Edges Are Not Just Steps Kovési P.
Unsupervised Texture Classification of Images using Cortex Filters Bashar M.K., Mohan B.K., Shevgaonkar R.K., and Ohnishi N.
Presence Analysis of Players in Broadcasted American Football Video Nishiue F., Babaguchi N., and Kitahashi T.
Evaluating Colour-Based Object Recognition Algorithms on the SOIL-47 Database Koubaroulis D., Matas G., and Kittler J.
A New Method for Chinese Characters Classification Using Pseudo Skeleton Features Fan K.C., Wen M.G., Han C.C.
Circular Shortest Path on Regular Grids Sun C. and Pallottino S.
Unified Framework For Classifying Facial Images Based On Facial Attribute-Specific Subspaces And Minimum Reconstruction Error Shan S., Gao W., Lu Y., Cao B., Chen X., Zhao D., and Zeng W.
Extraction of 3D Graph Structure of Worm-holes in a Wooden Statue of Buddha by X-ray CT Image Analysis. Iwamoto J., Kenmochi Y., Kotani K., and Nagasawa I.
Construction of Image Mosaics with Video Texture Du W. and Li H.
An Iris Detection Method Using the Hough Transform And Its Evaluation for Facial and Eye Movement Kashima H., Hongo H., Kato K., and Yamamoto K.
Head Tracking Based on Histogram and Shape Model Liu Q., Ma S., and Lu H.
3D Eigenfaces for Face Modeling Iwasa T., Shima T., Sai M., and Xu G.
High Speed Image Processing System and It's Application Ohba K., Ortega J.C.P., Tanie K., Tsuji M., and Yamada S.
Personal Authentication Using Palmprint Features Han C.C., Cheng H. L. and Fan K. C.
Intruder Tracking with a Pan-Tilt-Zoom Camera Trajkovic M.
Structural Analysis of On-Line Curves Based on Topological Turning Patterns Lee J. and Paik I.

Saturday 26th January 2002

ACCV Satellite Workshop

Time 8.30 am – 6.00 pm

Venue Rathdowne & Bouverie Rooms (4th Floor), Rydges Carlton Hotel