

ICIAR 2010 Program Details

June 21, 2010 (Monday)

8:00-17:00 Registration

8:45 Opening

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| 9:00 | Invited Talk ICIAR 1: Decentralized sensor Fusion for Ubiquitous Robotics in Urban areas | Alberto Sanfeliu |
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10:00 Coffee Break

| Paper ID | Title | Authors | Type |
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10:30 MON-or-01: Medical Image Analysis

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| 326 | Automated Vertebra Identification from X-ray Images | Xiao Dong and Guoyan Zheng | Oral |
| 278 | Automatic Corneal Nerves Recognition for Earlier Diagnosis and Follow-up of Diabetic Neuropathy | Ana Ferreira, António Miguel Morgado and José Silvestre Silva | Oral |
| 271 | Classification of Endoscopic Images Using Delaunay Triangulation-based Edge Features | M. Häfner, A. Gangl, M. Liedlgruber, A. Uhl, A. Vécsei, and F. Wrba | Oral |
| 353 | Fusing Shape Information in Lung Segmentation in Chest Radiographs | Amer Dawoud | Oral |
| 198 | Multimodality Image Alignment using Information-Theoretic Approach | Mohammed Khader, A. Ben Hamza, Prabir Bhattacharya | Oral |
| 251 | Myocardial Segmentation Using Constrained Multi-seeded Region Growing | Mustafa A. Alattar , Nael F. Osman and Ahmed S. Fahmy | Oral |
| 275 | Towards Non Invasive Diagnosis of Scoliosis using Semi-Supervised Learning Approach | Lama Seoud, Mathias M. Adankon, Hubert Labelle, Jean Dansereau, Farida Cheriet | Oral |

12:50 Lunch Break

14:00 MON-or-02: Image Analysis in Biology

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| 190 | Elastography of Biological Tissue: Direct Inversion Methods That Allow for Local Shear Modulus Variations | C. Antonio Sanchez, Corina S. Drapaca, Sivabal Sivaloganathan and Edward R. Vrscey | Oral |
| 268 | Optical Flow based Arabidopsis Thaliana Root Meristem Cell Division Detection | Pedro Quelhas, Ana Maria Mendonça, Aurélio Campilho | Oral |
| 221 | Segmentation of cell nuclei in Arabidopsis Thaliana Roots | Jonas De Vylder, Filip Rooms, Wilfried Philips | Oral |

15:00 MON-po-01: Poster Session 1

Topic

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| 279 | A 3D Tool for Left Ventricle Segmentation Editing | Samuel Silva, Beatriz Sousa Santos, Joaquim Madeira, Augusto Silva | Poster | Biomedical Image Analysis |
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| 193 | A Framework for Cerebral CT Perfusion Imaging Methods Comparison | Miguel Moreira, Paulo Dias, Miguel Cordeiro, Gustavo Santos, José Maria Fernandes | Poster | Biomedical Image Analysis |
| 260 | A Level Set Segmentation Method of the Four Heart Cavities in Pediatric Ultrasound Images | Sofia G. Antunes, Jose Silvestre Silva, Jaime B. Santos | Poster | Biomedical Image Analysis |
| 239 | An Application for Semi-Automatic HPV Typing of PCR-RFLP Images | Christos Maramis, Evangelia Minga, Anastasios Delopoulos | Poster | Biomedical Image Analysis |
| 252 | Application of the Laplacian Pyramid Decomposition to the Enhancement of Digital Dental Radiographic Images for the Automatic Person Identification | Dariusz Frejlichowski, Robert Wanat | Poster | Biomedical Image Analysis |
| 289 | Articulated Model Registration of MRI/X-ray Spine Data | Rola Harmouche, Farida Cheriet, Hubert Labelle, Jean Dansereau | Poster | Biomedical Image Analysis |
| 208 | Automatic Information Extraction from Gel Electrophoresis Images using GEIAS | C.M.R. Caridade, A.R.S. Marçal, T. Mendonça, A.M. Pessoa, S. Pereira | Poster | Biomedical Image Analysis |
| 240 | Automatic Recognition of Five Types of White Blood Cells in Peripheral Blood | Seyed Hamid Rezaatofghi, Kosar Khaksari, Hamid Soltanian-Zadeh | Poster | Biomedical Image Analysis |
| 195 | Detection of Arterial Lumen in Sonographic Images Based on Active Contours and Diffusion Filters | Amr R. Abdel-Dayem | Poster | Biomedical Image Analysis |
| 341 | Improved Technique to Detect the Infarction in Delayed Enhancement Image Using K-mean Method | Mohamed K. Metwally, Neamat El-Gayar, and Nael F. Osman | Poster | Biomedical Image Analysis |
| 211 | Retinal Images: Optic Disk Localization and Detection | M. Usman Akram, Aftab Khan, Khalid Iqbal, Wasi Haider Butt | Poster | Biomedical Image Analysis |
| 219 | Using Retinex Image Enhancement to Improve the Artery/Vein Classification in Retinal Images | S. G. Vázquez, N. Barreira, M. G. Penedo, M. Saez, A. Pose-Reino | Poster | Biomedical Image Analysis |
| 210 | Denoising of Three Dimensional Data Cube using Bivariate Wavelet Shrinking | Guangyi Chen, Tien D. Bui and Adam Krzyzak | Poster | Image Morphology, Enhancement and Restoration |
| 233 | Morphological Thick Line Center Detection | Miguel Alemán-Flores, Luis Alvarez, Pedro Henríquez, Luis Mazorra | Poster | Image Morphology, Enhancement and Restoration |
| 294 | Adaptive Regularization Parameter for Graph Cut Minimization | Sema Candemir, Yusuf Sinan Akgül | Poster | Image Segmentation |
| 302 | Fusion of Edge Information in Markov Random Fields Region Growing Image Segmentation | Amer Dawoud and Anton Netchaev | Poster | Image Segmentation |
| 241 | Segmentation of Very High Resolution Remote Sensing Imagery of Urban Areas Using Particle Swarm Optimization Algorithm | Safaa M. Bedawi, Mohamed S. Kamel | Poster | Image Segmentation |

16:00 MON-or-03: Image Processing and Image Segmentation

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| 296 | A Neighborhood Dependent Nonlinear Technique for Color Image Enhancement | Rupal Patel, Vijayan K. Asari | Oral |
| 200 | Entropy of Gabor Filtering for Image Quality Assessment | Esteban Vazquez-Fernandez, Angel Dacal-Nieto, Fernando Martin and Soledad Torres Guijarro | Oral |
| 309 | Image Segmentation for Robots: Fast Self-Adapting Gaussian Mixture Model | Nicola Greggio, Alexandre Bernardino, Jose Santos-Victor | Oral |
| 232 | PageRank Image Denoising | Panganai Gomo | Oral |

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| | 277 | Queue and Priority Queue based Algorithms for Computing the Quasi-Distance Transform | Raffi Enficiaud | Oral |
| | 331 | Segmentation based Noise Variance Estimation from Background MRI Data | Jeny Rajan, Dirk Poot, Jaber Juntu, Jan Sijbers | Oral |
| | 287 | Structural Similarity-based Approximation of Signals and Images using Orthogonal Bases | Dominique Brunet, Edward R. Vrscay, and Zhou Wang | Oral |
| 19:00 | Reception | | | |

June 22, 2010 (Tuesday)

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| 8:00-17:00 Registration | | | | |
| 9:00 | Invited Talk ICIAR 2: A random walk through spectral graph theory | | Edwin Hancock | |
| 10:00 | Coffee Break | | | |
| | Paper ID | Title | Authors | Type |
| 10:30 | TUE-or-04: Image Analysis and Computer Vision | | | |
| | 163 | 3D Human Action Recognition using Model Segmentation | Sang Min Yoon, Arjan Kuijper | Oral |
| | 182 | A Novel Human Motion Recognition Method based on Eigenspace | Abdunnaser Diaf, Riadh Ksantini, Boubakeur Boufama, and Rachid Benlamri | Oral |
| | 354 | High Accuracy Optical Flow Method Based on a Theory for Warping: 3D Extension | Weixin Chen and John L. Barron | Oral |
| | 188 | II-LK - A Real-Time Implementation for Sparse Optical Flow | Tobias Senst, Volker Eiselein, and Thomas Sikora | Oral |
| | 273 | Image-based Grasping Point Detection using Boosted Histograms of Oriented Gradients | Leonidas Lefakis, Horst Wildenauer, Manuel Pascual García-Tubío, Lech Szumilas | Oral |
| | 264 | Improving Accuracy of Optical Flow of Heeger's Original Method on Biomedical Images | Vladimír Ulman | Oral |
| | 266 | Shape Reconstruction from Unorganized Set of Points | Yvan Maillot, Bruno Adam, Mahmoud Melkemi | Oral |
| 12:50 | Lunch Break | | | |
| 14:00 | Invited Talk AIS 1: Multi-locomotion Robotic System | | Toshio Fukuda | |
| 15:00 | TUE-po-02: Poster Session 2 | | | Topic |

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| 223 | The West Pomeranian University of Technology Ear Database - a Tool for Testing Biometric Algorithms | Dariusz Frejlichowski, Natalia Tyszkiewicz | Poster | Biometrics |
| 170 | 3D Texton Spaces for Color-Texture Retrieval | Susana Alvarez, Anna Salvatella, Maria Vanrell, Xavier Otazu | Poster | Coding, Indexing and Retrieval |
| 356 | A Fast PDE Algorithm Using Adaptive Matching Scan Order for Real-time Video Coding | Jong-Nam Kim and Tae-Kyung Ryu | Poster | Coding, Indexing and Retrieval |
| 246 | A Geometric Data Structure Suitable for Fast Image Mining or Retrieval | T. Iwaszko, M. Melkemi, L. Idoumghar | Poster | Coding, Indexing and Retrieval |
| 274 | New Non Predictive Wavelet based Video Coder: Performances Analysis | Tarek Ouni, Walid Ayedi and Mohamed Abid | Poster | Coding, Indexing and Retrieval |
| 202 | Robust Approaches to 3D Object Secret Sharing | Esam Elsheh and A. Ben Hamza | Poster | Coding, Indexing and Retrieval |
| 228 | SIA: Semantic Image Annotation using Ontologies and Image Content Analysis | Pyrros Koletsis, Euripides G.M. Petrakis | Poster | Coding, Indexing and Retrieval |
| 315 | Efficient Methods for Point Matching with Known Camera Orientation | Joao F. C. Mota, Pedro M. Q. Aguiar | Poster | Computer Vision |
| 336 | Human Body Pose Estimation from Still Images and Video Frames | Amar A. El-Sallam and Ajmal S. Mian | Poster | Computer Vision |
| 216 | On-Board Monocular Vision System Pose Estimation through a Dense Optical Flow | Naveen Onkarappa and Angel D. Sappa | Poster | Computer Vision |
| 348 | Real-Time Scale Invariant 3D Range Point Cloud Registration | Anuj Sehgal, Daniel Cernea, Milena Makaveeva | Poster | Computer Vision |
| 164 | A New SVM + NDA Model for Improved Classification and Recognition | Naimul Mefraz Khan, Riadh Ksantini, Imran Shafiq Ahmad and Boubaker Boufama | Poster | Feature Extraction and Pattern Recognition |
| 224 | An Experimental Comparison of Seven Shape Descriptors in the General Shape Analysis Problem | Dariusz Frejlichowski | Poster | Shape, Texture and Motion Analysis |
| 215 | Generic Initialization for Motion Capture from 3D Shape | Benjamin Raynal, Michel Couprie and Vincent Nozick | Poster | Shape, Texture and Motion Analysis |
| 184 | Significantly Improving Scan-Based Shape Representations Using Rotational Key Feature Points | Yasser Ebrahim, Maher Ahmed, Siu-Cheung Chau, Wegdan Abdelsalam | Poster | Shape, Texture and Motion Analysis |
| 261 | Topology Preserving 3D Thinning Algorithms Using Four and Eight Subfields | Gábor Németh, Péter Kardos, and Kálmán Palágyi | Poster | Shape, Texture and Motion Analysis |
| 16:00 | TUE-or-06: Feature Extraction and Pattern Recognition | | | |
| | 346 | Incremental Hybrid Approach for Unsupervised Classification: Applications to Visual Landmarks Recognition | Antonio Bandera and Rebeca Marfil | Oral |
| | 286 | Nonlinear Scale Space Theory in Texture Classification Using Multiple Classifier Systems | Mehrdad J. Gangeh, Amir H. Shabani, Mohamed S. Kamel | Oral |
| | 213 | The Proof of Completeness of the Graph Method for Generation of Affine Moment Invariants | Tomáš Suk | Oral |
| 20:00 | Banquet | | | |

June 23, 2010 (Wednesday)

8:00-17:00 Registration

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| 9:00 | Invited Talk AIS 2: Design and Navigation of Wheeled, Walking and Flying Robots | Roland Siegwart |
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10:00 Coffee Break

| Paper ID | Title | Authors | Type |
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10:30 WED-or-07: Face Analysis and Biometrics

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| 295 | Advances in EEG-based Biometry | António Ferreira, Carlos Almeida, Pétia Georgieva, Ana Tomé, Filipe Silva | Oral |
| 161 | Associating Minutiae Between Distorted Fingerprints Using Minimal Spanning Tree | En Zhu, Edwin Hancock, Peng Ren, Jianping Yin and Jianming Zhang | Oral |
| 205 | Facial Expression Recognition using Spatiotemporal Boosted Discriminatory Classifiers | Stephen Moore, Eng Jon Ong and Richard Bowden | Oral |
| 235 | System and Analysis used for a Dynamic Facial Speech Deformation Model | Jürgen Rurainsky | Oral |
| 322 | The Analysis of Facial Beauty: An Emerging Area of Research in Pattern Analysis | Andrea Bottino and Aldo Laurentini | Oral |
| 214 | Transforming Rectangular and Polar Iris Images to Enable Cancelable Biometrics | Peter Färberböck, Jutta Hämmerle-Uhl, Dominik Kaaser, Elias Pschernig, Andreas Uhl | Oral |
| 212 | Using the Fisher-Rao Metric to Compute Facial Similarity | Simone Ceolin and Edwin R. Hancock | Oral |

12:50 Lunch Break

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| 14:00 | Invited Talk ICIAR 3: Reverse Engineering the Brain with Humanoid Robots | J. Santos-Victor |
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15:00 WED-po-03: Poster Session 3

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|-----|---|---|--------|--------------|
| 255 | Color Texture Analysis for Tear Film Classification: A Preliminary Study | D. Calvo, A. Mosquera, M. Penas, C. García-Resúa, B. Remeseiro | Poster | Applications |
| 256 | Geometrical Characterization of Various Shaped 3D-Aggregates of Primary Spherical Particules by Radial Distribution Functions | Marthe Lagarrigue, Johan Debayle, Sandra Jacquier, Frédéric Gruy, and Jean-Charles Pinoli | Poster | Applications |
| 272 | HistDoc - A Toolbox for Processing Images of Historical Documents | Gabriel Pereira e Silva, Rafael Dueire Lins and João Marcelo Silva | Poster | Applications |
| 339 | Non-static scenes HDRI aquisition | Anna Tomaszewska, Mateusz Markowski | Poster | Applications |
| 299 | Urban Road Extraction from High-resolution Optical Satellite Images | Mohamed Naouai , Atef Hamouda and Christiane Weber | Poster | Applications |

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| 178 | Secure Iris Recognition based on Local Intensity Variations | Christian Rathgeb and Andreas Uhl | Poster | Biometrics |
| 313 | Two-Factor Authentication or How to Potentially Counterfeit Experimental Results in Biometric Systems | Christian Rathgeb Andreas Uhl | Poster | Biometrics |
| 153 | Unideal Iris Segmentation using Region-Based Active Contour Model | Kaushik Roy, Prabir Bhattacharya and Ching Y. Suen | Poster | Biometrics |
| 192 | Adaptation of SIFT Features for Robust Face Recognition | Janez Križaj, Vitomir Štruc, Nikola Pavešić' | Poster | Face Detection and Recognition |
| 225 | Face Detection in Low-resolution Color Images | Jun Zheng, Geovany A. Ramirez, and Olac Fuentes | Poster | Face Detection and Recognition |
| 191 | Face Recognition from Color Images Using Sparse Projection Analysis | Vitomir Štruc, Nikola Pavešić' | Poster | Face Detection and Recognition |
| 284 | Recognition of Facial Expressions by Cortical Multi-scale Line and Edge Coding | R.J.R. de Sousa, J.M.F. Rodrigues and J.M.H. du Buf | Poster | Face Detection and Recognition |
| 16:00 | WED-or-09: Applications | | | |
| 303 | A New Method for Text-line Segmentation for Warped Documents | Daniel M. Oliveira, Rafael D. Lins, Gabriel Torreão, Jian Fan, Marcelo Thielo | Oral | |
| 324 | Automated Detection of Sand Dunes on Mars | Lourenço Bandeira, Jorge S. Marques, José Saraiva, Pedro Pina | Oral | |
| 290 | Correcting Book Binding Distortion in Scanned Documents | Rafael Dueire Lins, Daniel M. Oliveira, Gabriel Torreão, Jian Fan, Marcelo Thielo | Oral | |
| 155 | Digital Instrumentation Calibration Using Computer Vision | Fernando Martín-Rodríguez, Esteban Vázquez-Fernández, Ángel Dacal-Nieto, Arno Formella, Víctor Álvarez-Valado, Higinio González-Jorge | Oral | |
| 218 | Directional Gaze Analysis in Webcam Video Sequences | V. Vivero, N. Barreira, M. G. Penedo, D. Cabrero, B. Remeseiro | Oral | |
| 158 | Image-Based Drift and Height Estimation for Helicopter Landings in Brownout | Hans-Ullrich Doehler, Niklas Peinecke | Oral | |
| 187 | Novelty Detection on Metallic Surfaces by GMM Learning in Gabor Space | Yigitcan Savran and Bilge Günsel | Oral | |