# U. PORTO

**FEUP FACULDADE DE ENGENHARIA UNIVERSIDADE DO PORTO**

Francisco Oliveira

**VIPIMAGE** — THEMATIC CONFERENCE ON COMPUTATIONAL VISION AND MEDICAL IMAGE PROCESSING
17-19TH OCTOBER 2007 — FACULDADE DE ENGENHARIA UNIVERSIDADE DO PORTO

Porto, 27th April 2007

## Papers Accepted

| 1st Author | Title | Country |
|---|---|---|
| Daniela Iacoviello | Video sequences analysis for eye tracking | Italy |
| Kala Kaliappan | Liver Tumor Diagnosis using Computed Tomography Images | India |
| Sunil Moon | Data security using data hiding in image | India |
| Aayush Sharma | Step Integration based Fusion Algorithm for Multimodal Biometrics | India |
| Daniele Marinazzo | Multiscale analysis of short term cardiorespiratory signals | Italy |
| Romana Rytsar | Human head models for the EEG forward problem | Switzerland |
| Christos Constantinou | Integration of biomechanical measrements with ultrasound imaging of the female pelvic floor | United States America |
| Sadao Isotani | A system for ploidy analysis of malignant nuclei | Brasil |
| Rui Lima | Micro-scale flow dynamics of red blood cells in circular microchannel | Japan |
| João Figeiredo | Movement Detection in 2-D Images with Adaptive Variable | Portugal |
| Wing Shum Tsui | Study of airflow in nasal cavity models derived from cone beam and spiral CT scans using CFD | Hong Kong |
| Filipa Sousa | Behaviour of the Medial Gastrocnemius and Soleus Muscles during Human Drop Jumps | Portugal |
| Antonio Sousa | Fast and Straightforward Method to Estimate Sub-pixel Level Displacement Field | Portugal |
| Juan Manuel Vilardy Ortiz | Acquisition Electronic System for Visualization, Registering and Filtering of ECG Signals | Columbia |
| Jose Carlos Peña Matos | Identification of Maceral Groups using Digital Correlation | Columbia |
| Jaime Santos | Medical Interface for echographic free-hand images | Portugal |
| Adérito Araújo | Numerical experiments for segmenting medical images using level sets | Portugal |

| 1st Author | Title | Country |
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| Celine Gouttiere | Detection of synthetic singularities in digital mammographies using spherical filters | Belgium |
| Daniel Marinho | The use of Computational Fluid Dynamics in swimming resarch | Portugal |
| Fernando Moitinho | A Drusen Volume Quantification Method based on a Segmentation Algorithm | Portugal |
| André Marçal | Automatic extraction and classification of DNA profiles in digital images | Portugal |
| Joël De Coninck | Automated training detection for Computer Aided Detection algorithms in early breast cancer detection | Belgium |
| Turgay Ibrikci | Clustering MRI Images with Principal Component Analysis Methods | Turkey |
| Maria Geraldes | A Mathematical Modelling Simulation of the Thermal Behaviour in Textile Structures | Portugal |
| Antonio Vernet | Measurement of the IMT using a semi-automated software (ThickSoft): a validation study | Spain |
| Andrea Chincarini | Volume properties of the hippocampal region as predictors of AD development | Italy |
| Nuno Belino | Needlepunched nonwoven surface analysis with content based image retrieval | Portugal |
| Manuel González-Hidalgo | Fuzzy Morphology based on Uninorms: Image Edge Detection. Opening and Closing | Spain |
| Paulo Antunes | Nonlinear 3D foot FEA modelling from CT scan medical images | Portugal |
| Denis Santos | Alternative lossless compression algorithms in X-ray cardiac images | Portugal |
| Pavel Ruzicka | Image registration procedure used in intrasubject comparison of pelvic configuration | Czech Republic |
| Antoine Bouhours | Segmentation of left ventricle in ecocardiograms using the active contours model | Brazil |
| Philippe Young | Direct approach for constructing volumetric meshes from 3D image data | United Kingdom |
| Kathrin Tingelhoff | Analysis of Manual Segmentation in Medical Image Processing | Germany |
| Candida Pereira | Customized Implant Optimization for Maxillo-Mandibular Osteotomy | Portugal |
| Candida Pereira | Engineering Assisted Surgery Applied to a Pulmonary Tumour Ablation | Portugal |
| Enrique Alegre | Acrosome integrity classification of boar spermatozoom images using DWT and texture descriptors | Spain |
| Gianfranco Gargano | Computer-Aided Detection System for Nodule Detection in Lung CTs. | Italy |
| Analia Moral | Paranasal Sinuses Segmentation/Reconstruction for Robot Assisted Endonasal Surgery | Germany |
| Jorge Suit Pérez Ronda | Fluid-Structure interaction applied to blood flow simulations. | Spain |

| 1st Author | Title | Country |
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| Annunziata D'Orazio | Automatic accuracy evaluation for distance measurement by medical ultrasound scanners | Italy |
| Enrique Alegre | Use of statistic texture descriptors to classify boar sperm images applying discriminant analysis | Spain |
| Teresa Azevedo | 3D Object Reconstruction from Uncalibrated Images using a Single Off-the-Shelf Camera | Portugal |
| Fernando Jorge Soares Carvalho | Eye Detection in Face Images using Deformable Templates | Portugal |
| Daniel Lopes | A geometric modeling pipeline for bone structures based on computed tomography data: a veterinary study | Portugal |
| Daniela Sousa | Gait events detection during normal walking using kinematic data | Portugal |
| Juan Manuel Vilardy Ortiz | Filtering ECG Signals using Fractional Fourier Transform | Columbia |
| Sushil Kumar Mendiratta | Test of algorithms for z localization of pathology in optical micrographs stack of a cell | Portugal |
| Sonia I. Goncalves-Verheij | Clustering of BOLD signals recorded during rest reveals more inter-subject constancy than EEG-fMRI correlation maps | Netherlands |
| Jose Carlos Peña Matos | A new macerals images segmentation method using color components | Columbia |
| Daniela Iacoviello | Analysis of pupil fluctuations for detection of deception | Italy |
| Peter Selby | Geometry calibration for X-ray equipment in radiation treatment devices | Germany |
| Emmanuel Audenaert | Predicting muscle fascicule paths for use in customized biomechanical models | Belgium |
| Marcello Melis | Biomedical Images segmentation using a Probability Driven Genetic Algorithm based approach | Italy |
| Antón Garcia | A novel model of bottom-up visual attention using local energy | Spain |
| Slimane Larabi | Coarse Comparison of Outlines Shapes Descriptors | Algeria |
| Juan Miguel Molina Rodriguez | Brain volumetry estimation based on a suitable combination of statistic and morphological techniques. | Portugal |
| Yun Tingjin | Human Detection in Infrared Images Based on Local Gradient Histogram's Characters | China |
| Mahmoud El-Sakka | Carotid Artery Ultrasound Image Segmentation using Graph Cuts | Canada |
| Michel Audette | A Tissue Relevance and Meshing Method for Computing Patient-specific Anatomical Models in Endoscopic Sinus Surgery Simulation | Germany |
| Filomena Soares | ECG Self-diagnosis system at P-R interval | Portugal |
| Mario Forjaz Secca | Normalization of local variations of volume along the hippocampus in Epilepsy | Portugal |

| 1st Author | Title | Country |
|---|---|---|
| John Felix | Lung and Chest Wall Structures Segmentation in CT Images Using Region Growing and Mathematical Morphology | Brasil |
| Raquel Pinho | Tracking Image Features using an Unscented Kalman Filter | Portugal |
| Nuno Lopes | Fuzziness Measure Approach to Automatic Histogram Threshold | Portugal |
| João Ferreira-Martins | Adaptation of myocardial material properties after acute muscle stretch: a Protein Kinase C-mediated decrease in myocardial stiffness. | Portugal |
| Alain Hore | A new image scaling algorithm based on the sampling theorem of Papoulis | Canada |
| Shang-Je Wu | Markov Chain Models Based on Genetic Algorithm for Image Classification | Taiwan |
| Ana Fonseca | Measuring critical exponents with a low cost camera in a human standing task | Portugal |
| Dan Liu | 3D reconstruction of retinal arterial tree based on fundus images using a linear self-calibration approach | United Kingdom |
| Dário Oliveira | Automatic Couinaud liver segmentation using CT images | Brazil |
| Germano Gomes | Individualizing biomechanical shoulder models using scaling, morphing and fittings | Belgium |
| Miguel Guevara | A new semiautomatic method for ICH segmentation and tracking from CT head images | Cuba |
| Huang Guo-Feng | Fast Motion Vector Generation for Video Coding by Gray Prediction | Taiwan |
| Chung-Ying Tsai | Improvement of the Background Subtraction and Shadow Detection in Grayscale Video Sequences | Taiwan |
| Patrícia Gonçalves | Segmentation of objects in images using physical principles | Portugal |
| Celso Olivete | Bone Age Maturation: Software diagnosis versus medical diagnosis | Brazil |
| Brígida Faria | A didactic application for creating new sights from multiple images using Light Fields | Portugal |
| Paulo Flores | Teaching kinematics and dynamics by using virtual reality capabilities | Portugal |
| Yun Tingjin | A Multi-Stage Candidates Selection Method for Human Detection in Infrared Images | China |
| Eurico Seabra | Advanced Graphical Tools on Modelling and Control of Automation Systems | Portugal |
| Carla Carmelo Rosa | Medical and Biological Imaging with optical coherence tomography | Portugal |
| Sadao Isotani | A module for nuclei demarcation of a system of the processing of images from microscope | Brazil |
| Fátima Alexandre | On the use of 3D reconstruction of pelvic floor for numerical simulation purposes | Portugal |
| Elza Figueiredo Chagas | An Application Of Hough Transform To Identify Breast Cancer In Images | Brazil |

| 1ˢᵗ Author | Title | Country |
|---|---|---|
| S. SarvaMangalaDevi | Discrimination of glaucomatous and non glaucomatous eyes by optic disc localization using morphological operations | India |
| Anitha Chandrasekaran | An Expert System For Retinal Blood Vessel Segmentation and Width Calculation | India |
| Paulo Macedo | A Simple Mathematical Model for the Woman's Breast Geometry and its use in the Breast Characterisation | Portugal |
| Francisco Oliveira | Matching the contours of objects represented in images using curvature information | Portugal |
| Pedro Martins | Image processing on the Poisson ratio calculation of soft tissue samples | Portugal |

**Resume**:

- − *10 Invited Keynotes;*
- − *90 Contributed Papers;*
- − *57 Oral Presentations;*
- − *33 Poster Presentations.*