

# IADIS International Conference

## Computer Graphics, Visualization, Computer Vision and Image Processing 2011

### CONFERENCE PROGRAM

**Sunday 24<sup>th</sup>, July 2011**

**08:30-19:00 Welcome Desk**

**09:45-10:00 Session O – Opening Session  
(Room: Space One)**

**OPENING SESSION**

*Profs Yingcai Xiao and Pedro Isaias*

**10:00-11:00 Session KL1 – Keynote Presentation  
(Room: Space One)**

**THE IMPACT OF IMMERSION ON HUMAN-COMPUTER INTERACTION**

*By Professor Anthony Steed, Head of Virtual Environments and Computer Graphics, University College London, United Kingdom*

**11:00-11:30 Coffee Break**

**11:30-13:05 Session FSP 24.1  
Image Segmentation // Image Generation  
(Room: Space One)**

**Chair: Ingemar Ragnemalm**

**TONGUE SEGMENTATION FROM MRI IMAGES USING ITK-SNAP: PRELIMINARY EVALUATION (F088)**

*Paula Martins, Catarina Oliveira, Samuel Silva, Augusto Silva and António Teixeira*

**SWITCHING PAIRWISE MARKOV CHAINS FOR NON STATIONARY TEXTURED IMAGES SEGMENTATION (F137)**

*Mohamed El Yazid Boudaren, Emmanuel Monfrini and Wojciech Pieczynski*

**INDICATION OF METHANE GAS IN IR-IMAGERY (S111)**

*Julia Åhlén and Stefan Seipel*

**MICRO MACRO IMAGE SEGMENTATION (S126)**

*Asmar A. Khan, Costas Xydeas and Hassan Ahmed*

**PHOTOMOSAIC USING QUAD-TREE STRUCTURE ON GPU (S057)**

*Jinsuk Yang, Choongjae Joo and Kyoungsu Oh*

**11:30-13:05 Session FSRP 24.2  
Computer Graphics // Geometric Modeling  
(Room: Space 4A)**

**Chair: Mohsen Ebrahimi Moghaddam**

**COMPUTATION AND VISUALIZATION OF SURFACE OF PROTEINS AND THEIR CHANNELS (F051)**

*Barbora Kozlíková, Igor Aleksandrowicz and Jiří Sochor*

**SURFACE FEATURE SHARPENING: OBSERVATION MINUS CALCULATION (O-C) APPROACH (F032)**

*V. Savchenko and M. Savchenko*

**DEFORMATION EXCHANGE BETWEEN LARGE MESHES (S134)**

*Benjamin Duplex, Gilles Gesquiere, Marc Daniel and Fabien Perdu*  
**DEPTH VALUE DEDUCTION USING OPTICAL FLOW FOR REVERSE ENGINEERING (S119)**

*Rahmita Wirza Rahmat and Suhail Azmi*

**IMPLEMENTING COMPOSITING MANAGERS IN EMBEDDED SYSTEMS (R044)**

*Mirto Musci*

**13:00-14:30 Lunch Break**

**14:30-15:50 Session FSRP 24.3  
Motion Detection and Tracking // Pattern Recognition  
(Room: Space One)**

**Chair: Yingcai Xiao**

**AN IMAGE FEATURE DESCRIPTORS-BASED RECOVERY ACTIVATION METRIC FOR FLIR TARGET TRACKING (F041)**

*Gianluca Paravati, Andrea Sanna and Fabrizio Lamberti*

**HUMAN ACTION ANALYSIS VIA VIDEO STREAMS AND WORKFLOW SCHEDULING (S106)**

*Anastastios Doulamis, Nikolaos Matsatsinis and Pavlos Delias*

**POLAR MOTION STATION-WEBCAM CALIBRATION FOR SOLAR TRACKING (S139)**

*Miguel Romero, Rafael Lemuz, Carlos Guillén, Cesar Bautista, Irene Ayaquica and Daniel Valdés*

**UNSUPERVISED OPTIMAL DISCRIMINANT PLANE WITH UNCORRELATED FEATURES (S081)**

*Su-Qun Cao, Yun-Feng Bu, Xiao-Ming Zuo and Quan-Yin Zhu*

**AN OFF-LINE PERSIAN HANDWRITTEN FORGERY DETECTION METHOD (S016)**

*Behzad Helli and Mohsen Ebrahimi Moghaddam*

**A COMPARISON OF OPTICAL FLOW TECHNIQUES FOR A BLIND SPOT CAMERA (R083)**

*Lorenz Van den Heuvel, Kristof Van Beeck and Toon Goedemé*

**14:30-16:00 – Session FSP 24.4  
Image Manipulation // Image Restoration // CGVCVIP in Medicine  
(Room: Space 4D)**

**Chair: Azza Ouled Zaid**

**A HEURISTIC APPROACH TO MULTI-FOCUS IMAGE FUSION (F046)**

*Po-Whei Huang, Cheng-I Chen and Phen-Lan Lin*

**BRAIN MEDICAL IMAGE FUSION BASED ON IHS AND LOG-GABOR WITH SUITABLE DECOMPOSITION SCALE AND ORIENTATION FOR DIFFERENT REGIONS (F053)**

*Phen-Lan Lin, Po-whei Huang, Cheng-I Chen, Tsung-Ta Tsai and Chin-han Chan*

**SUPER-RESOLUTION IMAGING: THE USE CASE OF OPTICAL ASTRONOMY (F087)**

*Thilo Bauer*

**SEGMENTATION AND DISCRIMINATION OF BREAST TUMORS IN ULTRASONIC IMAGES USING**

**AN ENSEMBLE CLASSIFIER AND APPLICATION TO A DIAGNOSTIC SUPPORT SYSTEM (S098)**

*Atsushi Takemura*

**16:30-17:00 Coffee Break**

**17:00-18:35 Session FSP 24.5**

**Animation // Virtual Reality // Natural Phenomena Modeling**

**(Room: Space One)**

**Chair: Konstantinos Moustakas**

**ADAPTIVE CHARACTER MOTION SYNTHESIS BY QUALITATIVE APPROACH (F050)**

*Fangde Liu, Xiaosong Yang and Jianjun Zhang*

**ANIBOT - ANIMATION ROBOT FOR A LIFE (F061)**

*Masashi Furukawa, Michiko Watanabe, Ikuo Suzuki and Masahito Yamamoto*

**3D DOCUMENTATION OF NATURAL HERITAGE FOR VIRTUAL ENVIRONMENTS AND WEB — CASE STUDY: VALLEY OF GEYSERS, KAMCHATKA (S033)**

*Andrey Leonov, Alexander Aleynikov, Dmitriy Belosokhov, Alexander Bobkov, Evgeny Eremchenko, Pavel Frolov, Andrey Klimenko and Stanislav Klimenko*

**MEASURE OF INDIVIDUAL EYE-HEAD COORDINATION COMPARED IN REAL AND VIRTUAL ENVIRONMENT (S103)**

*Gildas Marin, Marine Faure, Marc le Renard and Damien Paillé*

**BUBBLING IN LIQUIDS (S074)**

*H. Sato and Y. Kawaguchi*

**11:30-12:30 Session KL2 – Keynote Presentation**

**(Room: Space 100)**

**INTELLIGENT PATTERN RECOGNITION AND APPLICATIONS --- MODELING AND SIMULATION IN INTERACTIVE E-LEARNING**

*Prof. Patrick S. P. Wang, Zijiang Visiting Chair Professor, ECNU, Shanghai, NTUST, Taipei & Founding President and CEO, Wang Teknowledge Lab*

**13:00-14:30 Lunch Break**

**14:30-15:30 – Posters Session**

**(Room: Space One)**

**Chair: Yingcai Xiao**

**A FLEXIBLE FRAMEWORK FOR MULTI-VOLUME DATA VISUALIZATION (P028)**

*Nikolay Gavrilov, Alexandra Belokamenskaya and Vadim Turlapov*

**EDGE-DIRECTED IMAGE UPSAMPLING METHOD BASED ON DIRECTIONAL KERNEL INTERPOLATION (P079)**

*Jungho Yoon and Yeon Ju Lee*

**HOMOGRAPHY USING TOPOLOGICAL INFORMATION FROM SCATTERED FEATURE POINTS (P090)**

*Rishu Gupta and Lee Byung Gook*

**ADEQUATE 3D VISUALIZATION OF REMOTELY SENSED ICE SHELF AND SEA SURFACE TEMPERATURE DATA (P097)**

*Guido Staub*

**A VISUAL ANALYSIS TOOL FOR AMPLIFYING STORY GENERATION CYCLE (P129)**

*Mina Akaishi, Makoto Sato and Koichi Hori*

## **Monday 25<sup>th</sup>, July 2011**

**08:30-16:00 Welcome Desk**

**09:00-11:00 Session FSP 25.1**

**Computer Vision**

**(Room: Space One)**

**Chair: Vladimir Savchenko**

**A FAST AND SPACE-EFFICIENT DISCRETE FOCAL STACK TRANSFORM (F108)**

*Fernando Pérez Nava and Sergio Fumero*

**3D RECONSTRUCTION OF SMALL SOLAR SYSTEM BODIES USING PHOTOCINOMETRY BY DEFORMATION (F136)**

*Claire Capanna, Laurent Jorda, Philippe Lamy and Gilles Gesquiere*

**POINT-BASED SIMILARITY ESTIMATION BETWEEN 2.5D VISUAL HULLS AND 3D OBJECTS (F030)**

*Konstantinos Moustakas, Georgios Stavropoulos and Dimitrios Tzovaras*

**EVALUATION OF TWO RECONSTRUCTION SYSTEMS BASED ON STEREOVISION (S058)**

*Amira Soudani and Ezzeddine Zagrouba*

**EYE CENTRE LOCATION WITH HOUGH TRANSFORM (S015)**

*Ivan A. Matveev*

**APPROXIMATION OF 3D DATA WITH PIECEWISE SERIES EXPANSIONS FOR SURFACE INSPECTION (S131)**

*Sebastian Von Enzberg and Bernd Michaelis*

**15:45 Conference Tour and Dinner**

## **Tuesday 26<sup>th</sup> July 2011**

**08:30-13:45 Welcome Desk**

**09:00-10:55 Session FSP 26.1**

**Visualization**

**(Room: Space One)**

**Chair: Mohmed El Yazid Boudaren**

**A FRAMEWORK FOR IDENTIFYING USER SUITABILITY TO VISUALISATION APPROACHES (F055)**

*Christopher Moir and G. Stewart Von Itzstein*

**MOVEMENT EPENTHESIS WITH PROSODY CONTROL FOR CHINESE SIGN LANGUAGE VIDEO SYNTHESIS (F022)**

*Ru Wang, Lichun Wang, Dehui Kong, Baocai Yin and Qingming Huang*

**ZAPP – A MANAGEMENT FRAMEWORK FOR DISTRIBUTED VISUALIZATION SYSTEMS (F072)**

*Georg Tamm, Alexander Schiewe and Jens Krüger*

**DATA VISUALISATION AND VALIDATION FOR HYDROLOGICAL MODELS (F104)**

*Karsten Rink, Thomas Fischer and Olaf Kolditz*

**MEDICAL IMAGE 3D VISUALIZATION BY VECTOR BASED METHODS (S048)**

*Katrina Bolochko, Mihails Kovalovs and Aleksandrs Glazs*

**11:00-11:30 Coffee Break**

**11:00-11:30 Coffee Break**

**11:30-13:20 Session FSP 26.2**

**Image Processing**

**(Room: Space One)**

**Chair: Yingcai Xiao**

**TEXTURE COMPRESSION IN MEMORY  
AND PERFORMANCE-CONSTRAINED EMBEDDED  
SYSTEMS (F109)**

*Jens Ogniewski, Andréas Karlsson and Ingemar Ragnemalm*

**ACCURATE MULTI-MODAL IMAGE REGISTRATION  
USING COMPRESSION (F127)**

*Pere-Pau Vázquez and Jordi Marco*

**INTEGRATION DATA HIDING WITH JP3D COMPRESSION  
ON VOLUMETRIC MEDICAL IMAGES (S021)**

*Marouen Toueti and Azza Ouled Zaid*

**GAUSSIAN MIXTURE BACKGROUND MODEL  
WITH SHADOW INFORMATION (S130)**

*Jung-Ming Wang, Sei-Wang Chen and Chiou-Shann Fuh*

**A SIMILARITY MEASURE BASED ON GEOMETRIC  
CONSISTENCY FOR IMAGE RETRIEVAL USING LOCAL  
DESCRIPTORS (S089)**

*A. Najjar and E. Zagrouba*

**COMPUTING THE EUCLIDEAN DISTANCE TRANSFORM  
ON THE EPUMA PARALLEL HARDWARE (S086)**

*Ingemar Ragnemalm and Andréas Karlsson*

**13:20 Best Paper Awards Ceremony and Closing Session**

**(Room: Space One)**

*Profs Yingcai Xiao and Pedro Isaías*