2011 IEEE International Conference on Signal and Image Processing Applications

(ICSIPA 2011)

Kuala Lumpur, Malaysia
16 – 18 November 2011
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**Session Chair**: Prof. Marco Winzker

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**Session Chair**: Dr. Syed Abd Rahman

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Ayesha Amir Siddiqi, Dr. Attaullah Khawaja Mashal Tariq (N.E.D. University of Engineering and Technology)

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Sebastian Schmidt, Ze-Nian Li (Simon Fraser University)

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George A Cushen, Mark S Nixon (University of Southampton)

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Further Reduced Resolution Depth Coding for Stereoscopic 3D Video
N. S. Mohamad Anil Shah, H. Abdul Karim, and M. F. Ahmad Fauzi (Multimedia University)

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Session Chair: Dr. Maciej Smiatacz

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**Pattern Recognition 1: 14:00 - 15:20**

**Session Chair: Dr. Ze-Nian Li**

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**A New Preselection Method for Face Recognition in JPEG Domain Based on Face Segmentation**

Alireza Sepas-Moghaddam, Mohammad Shahram Moin (Islamic Azad University), Hamidreza Rashidy Kanan (Bu-Ali Sina University)

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**CORI: A Configurable Object Recognition Infrastructure**

Robert Sorschag (Vienna University of Technology)

**Filtering 1: 14:00 - 15:20**

**Session Chair: Dr. Vijanth S. Asirvadam**

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**Mismatched Filters for Doppler-Sensitive Active Sonar Pulses**

Raphaël F. Pallaud (Technical Trainers College), Philip R. Atkins (The University of Birmingham)
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Sidra Malik, Nazar Abbas Saqib (National University of Sciences and Technology SEECS)

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**Session Chair : Prof. Faouzi Soltani**

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**Hand Gesture Based User Interface for Computer Using a Camera and Projector**
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**Selecting and Evaluating Data for Training a Pedestrian Detector for Crowded Conditions**
Damien Simonnet, Sergio A Velastin, James Orwell (Kingston University), Esin Turkbeyler (Roke Manor Research)

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**A New Head Pose Estimating Algorithm Based on a Novel Feature Space for Driver Assistant Systems**
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V. J. Tiagrajah, V. J, O. Jamaludin, H. N. Farrukh (Universiti Tenaga Nasional)

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Maciej Smiatacz, Katarzyna Przybycien (Gdansk University of Technology)
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Montadar Abas Taher, Mahamod Ismail, Hussain Falih Mahdi, MT Islam (Universiti Kebangsaan Malaysia), JS Mandeep (Diyala University)

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**Noise Reduction Algorithm for Full-waveform Lidar Signal**
Manuel Fabiao Dionizio, Ali Shamsoddini, John C. Trinder (The University of New South Wales)

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**Scene & Event Recognition 3: 14:00 - 15:20**

**Session Chair : Syed Khaleel Ahmed**

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**Driver Drowsiness Detection Using Face Expression Recognition**
Mohammad Amin Assari (Islamic Azad University), Mohammad Rahmati (Amirkabir University of Technology)

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**Max-Pooling Convolutional Neural Networks for Vision-based Hand Gesture Recognition**
Jawad Nagi, Frederick Ducatelle, Gianni A. Di Caro, Dan Ciresan, Ueli Meier, Alessandro Giusti, Jürgen Schmidhuber, Luca Maria Gambardella (University of Lugano & SUPSI), Farrukh Nagi (University Tenaga Nasional)

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Elham Fathi-Azar, Seyed Kamaleedin Setarehdan (University of Tehran)

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M. Yakno, J. Mohamad Saleh, B. Affendi Rosdi (Universiti Sains Malaysia)
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Haidawati Nasir (Universiti Kuala Lumpur), Vladimir Stankovic, Stephen Marshall (University of Strathclyde)

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**A New Technique to Reproduced High-Dynamic-Range Images for Low-Dynamic-Range Display**
Tung Li Qian, Suhaidi Shafie, M. Iqbal Saripan (Universiti Putra Malaysia)

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**Segmentation 2: 15:40 - 17:00**

**Session Chair : Dr. Maged Marghany**

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**Segmentation and Characterization of Masses in Breast Ultrasound Images Using Active Contour**
Abdul Kadir Jumaat, Wan Eny Zarina W.A. Rahman, Arsmah Ibrahim (Universiti Teknologi MARA), Rozi Mahmud (Universiti Putra Malaysia)

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M. M. Fraz, P. Remagnino, A. Hoppe, Sergio Velastin, S. A. Barman (Kingston University), B. Uyyanonvara (Thammasat University)

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**A Novel Fuzzy Metric for Objective Evaluation of Interactive Image Segmentation Algorithms Based on Correlation**
Elham Askari, Amir Masoud Eftekhari Moghadam (Azad University of Qazvin)

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Nicolas Widynski, Max Mignotte (University of Montreal)

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**Session Chair : Prof. Saif alZahir**

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**A Study of Different Unwarping Methods for Omnidirectional Imaging**
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**Greyscale Image Magnification Using Edge-Directed Lagrange Time Delay Interpolation Model**
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Saliha Bouagar, Slimane Larabi, Nabil Djellouli (University of Sciences and Technologies Houari Boumediene)

Signal Processing 3: 15:40 - 17:00
Room 4

**Session Chair : Dr. Pragya Varshney**

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**A New Method for Extraction of Fetal Electrocardiogram Signal Based on Adaptive Neuro-Fuzzy Inference System**
Maryam Nasiri (Islamic Azad University), Karim Faez (University of Technology), Ali Motie Nasrabadi (Shahed University)

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**Warped Linear Predictive Speech Coding**
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### Session Chair: Dr. Mohammad Faizal Ahmad Fauzi

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*Gabriel Mihai, Liana Stanescu, Dumitru Dan Burdescu, Cosmin Stoica Spahiu (University of Craiova)*

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*Nacéra Laiche, Slimane Larabi (USTHB University)*

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### Session Chair: Dr. Ashraf Zaher

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**Visibly Accurate Model-Based Binary Image Compression Scheme**  
*Saif alZahir (UNBC)*

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*Ehsan Akhtarkavan, M. F. M. Salleh (Universiti Sains Malaysia)*

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Seung-Jin Baek, Yeo-Jin Yoon, Kang-A Choi, Dae-Hong Lee, Sung-Jea Ko (Korea University)

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**Reversible Data Embedding in Golomb-Rice Code**
Mustafa S. Abdul Karim, KokSheik Wong (University of Malaya), Kiyoshi Tanaka (Shinshu University)

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**Efficient Motion Estimation Scheme for Downsizing H.264 Homogeneous Transcoding**
Ying Zhang, Sorina Dumitrescu (Mcmaster University), Jiao Wang (Advanced Micro Devices)

**Feature Extraction: 10:30 - 12:10**

**Room 4**

**Session Chair : Dr. Kamran Kazemi**

10:30 - 10:50
**The Effects of Anisotropic Gaussian Diffusion in Scale Invariant Feature Detection**
Warner Skoch, John Gauch (University of Arkansas)

10:50 - 11:10
**Finger-Vein Identification using Pattern Map and Principal Component Analysis**
Teoh Saw Beng, Bakhtiar Affendi Rosdi (Universiti Sains Malaysia)

11:10 - 11:30
**Spiral Unique Sequence: A New Rotation Invariant Feature for Small-size Image Block Matching**
Mohammad Akbarpour Sekeh, Mohd. Aizaini Maarof, Mohd. Foad Rohani, Malihe Motiei (Universiti Teknologi Malaysia)

11:30 - 11:50
**Extended 3D HLAC Pattern Features for Solid Textures**
Motofumi T. Suzuki, Yoshitomo Yaginuma, Haruo Kodama (The Open University of Japan), Tatsuya Shibata (Tokyo Denki University)

11:50 - 12:10
**Determining Effective Colour Components for Skin Detection Using a Clustered Neural Network**
Sepideh Araban, Fardad Farokhi, Kave Kangarloo (Islamic Azad University)
### Session Chair: Dr. Yasmin Hanum Md Thayoob

14:20 - 14:40
**Analysis of the Complex Sign Regressor Least Mean Fourth Adaptive Algorithm**  
Mohammed Mujahid Ulla Faiz, Azzedine Zerguine (King Fahd University of Petroleum and Minerals)

14:40 - 15:00
**The ε-Normalized Sign Regressor Least Mean Square (NSRLMS) Adaptive Algorithm**  
Mohammed Mujahid Ulla Faiz, Azzedine Zerguine (King Fahd University of Petroleum and Minerals)

15:00 - 15:20
**Comparative Algorithms for Automatic Detection of Oil Spill in MultiSAR of RADARSAT-1 SAR and ENVISAT Data**  
Maged Marghany, Mazlan Hashim (Universiti Teknologi Malaysia)

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### Communication: 14:20 - 16:00

**Session Chair: Dr. Mandeep Singh**

14:20 - 14:40
**Secure Communication Using Duffing Oscillators**  
Ashraf A. Zaher (Kuwait University)

14:40 - 15:00
**Multi-Receiver Modulation Classification for Satellite Communications Signals**  
M. Farhang, H. Dehghani, H. Bahramgiri (Malek-Ashtar University of Technology)

15:00 - 15:20
**A Design for Software Defined M-PSK Radio on FPGA for Low SNRs and Symbol Rates Upto 10MS/s**  
Vinay Kumar Velkururu, Abhay Samant (National Instruments)

15:20 - 15:40
**Preamble-based Channel Estimation in MIMO-OFDM/OQAM Systems**  
Eleftherios Kofidis (University of Piraeus), Dimitrios Katselis (Royal Institute of Technology)
Session Chair: Dr. Mahendra V. Chilukuri

14:20 - 14:40
**GRoM - Generalized Robust Multichannel Feature Detector**
Pavel Smirnov, Piotr Semenov, Mikhail Lyakh, Anthony Chun, Dmitry Gusev, Alexander Redkin, Sadagopan Srinivasan (Intel Labs)

14:40 - 15:00
**Skull and Fontanel Segmentation From Neonatal CT Data by Model Based Variational Level Set Using Localized Coefficient**
Nassim Jafarian, Mohammad Sadegh Helfroush, Mohamad Javad Dehghani (Shiraz University of Technology), Kamran Kazemi (Shiraz University of Technology, University of Picardie Jules Verne), Reinhard Grebe (University of Picardie Jules Verne), Fabrice Wallois (University of Picardie Jules Verne, North Hospital)

14:20 - 14:40
**A Fast Lossless Compression Algorithm for Arabic Textual Images**
Saif alZahir (University of Northern British Columbia)

15:00 - 15:20
**Watermarking Security Analysis Based on Information Theory**
Amir reza Fazli, Mohammad Eghbali Asli, Kamran Ghasedi, Hossein Sabz ali zanjankhah (Sadjad Institute of Higher Education)