ISSPIT 2014 Program

Monday, December 15, 2014

8:45am - 8:50am	**Remarks from VC, JIIT**
8:50am - 8:55am	**Statements from PC Chairs**
8:55am - 9:00am	**Statements from Steering Committee Chair Reda Ammar**

9:00am- 10:00am	**Keynote Talk: Nature inspired techniques in addressing communication problems** **Chair:** Christos Douligeris

Andreas Pitsillides (University of Cyprus), keynote talk

10:00am - 10:20am	**Coffee break**

10:20am - 12:00pm	**Parallel Sessions**

Session 1A: Signal Processing
Chair: Sanjeev Kubakaddi

- *Automatic Contrast Enhancement of Low-light Images Based on Naka-Rushton Visual Adaptation in Non-sub-sampled Shearlet Domain,* Biswajit Biswas, Ritamshirsa Choudhuri and Kasi Nath Dey
- *Enhancement of Speech Signal by Originating Computational Iteration using SAF,* Mahmudul Hasan, Ohidujjaman Tuhin and Mohammad Nurul Huda
- *An Automatic System for the Detection of Optic Disc and Pathologies in Retinal Images,* Sambasivarao Karlakunta, Priyanka Kirsali and Pankaj Badoni
- *A Novel Medical Image Watermarking Technique for Detecting Tampers inside ROI and Recovering Original ROI,* Rayachoti Eswaraiah and Edara Sreenivasa Reddy

Session 1B: Information Technology
Chair: Sanguthevar Rajasekaran

- *Network Topology Optimization for Data Aggregation with Splitting,* Soham Das and Sartaj Sahni
- *A novel authentication method for security systems using multidimensional charecteristics of cost-effective flex sensors,* Gururaj Mulay and Akshay Yembarwar
- *Neural Network Based Decision Support System for Optimal Incinerator Control,* Prakash Gi, Samson Saju, Snehil Mitra and Vedant Sharma
- *Comparison of Score Normalization Methods Applied to Multi-label Classification,* Lucie Skorkovská, Zbyněk Zajíc and Luděk Müller

12:00pm - 12:20pm	**Coffee break**

12:20pm - 02:00pm	**Parallel Sessions**

Session 2A: Signal Processing
Chair: Abhinoy Kumar Singh

- *Preliminary Analysis of Causes of Infant Cry,* Shubham Asthana, Naman Varma, and Vinay Kumar Mittal
- *Non Linear Sparse Recovery Algorithm,* Pallavi Das, Mansi Jain and Angshul Majumdar
- *Joint Estimation of Target State and Ionospheric Contamination in Multi-input Multi-output Over-the-Horizon Radar,* Zhongtao Luo, Zishu He, Kun Lu and Xuyuan Chen
- *Evaluation Schema for SAR image Segmentation based on Swarm Optimization in Neutrosopic Domain,* P. Mangalraj and Anupam Agarwal

Session 2B: Information Technology
Chair: Anibal Ferreira

- *Efficient Pipeline Architectures for Underwater Big Data Analytic,* Ayman Alharbi, Hesham Alhumyani, Reda Ammar, Jun-Hong Cui and Sanguthevar Rajasekaran
- *User-Based Video Abstraction Using Visual Features,* Kaveh Darabi, Gheorghita Ghinea, Rajkumar Kannan and Suresh Kannaiyan
- *Preliminary Arabic Speech Emotion Classification,* Ali Meftah, Yousef Alotaibi and Sid-Ahmed Selouani
- *Fregent Itemsets Mining on Weighted Uncertain Data,* Manal Alharbi, Sudipta Pathak and Sanguthevar Rajasekaran

02:00pm - 03:00pm	Lunch
03:00pm - 04:15pm	Parallel Sessions

Session 3A: Signal Processing
Chair: V. K. Mittal

- *Automatic Segmentation of Optic Disc using Modified Multi-level Thresholding,* Mila Kankanala and Sanjeev Kubakaddi
- *Domain Specific Audio Indexing Using Linguistic Information,* Laxmi Pandey, Karan Nathwani, Sukhjeet Kaur, Ishtiyaq Husain, Rameshwar Pathak, Gaurav Singh, Sumit Tiwari and Rajesh M. Hegde
- *Automated Segmentation of Mitotic Cells for in vitro Histological Evaluation of Oral Squamous Cell Carcinoma,* Dev Kumar Das, Subhranil Koley, Prof. Chandan Chakraborty and Asok Maiti

Session 3B: Information Technology
Chair: Saumik Bhattacharya

- *Re-configurable Coherent Event Forwarding Mechanism for Multiprocessor Systems,* Vasant Easwaran, Mihir Mody and Prithvi Shankar
- *Change Propagation based Incremental Data handling in a Web Service Discovery Framework,* Sowmya Kamath S and Ananthanarayana V.S.
- *Performance Improvement of Transmission in Unmanned Aerial Systems Using Multipath TCP,* Robert Chirwa and Adrian Lauf

04:15pm - 04:35pm	Coffee break
04:35pm - 5:50pm	Parallel Sessions

Session 4A: Signal Processing + IT
Chair:

- *Nonorthogonal DCT block convergence for JPEG-75 forensics,* Gamal Fahmy
- *Customization of De-blocking Filter Edge Order for High Performance: Study of H.264 AVC/SVC, H.265,* Niraj Nandan, Mihir Mody, Hetul Sanghvi, and Prithvi Shankar

- *An Improved Approach to Word Sense Disambiguation,* Pradeep Sachdeva, Surbhi Verma and Dr.Sandeep Kumar Singh

Session 4B: Information Technology
Chair: Dimitrios Kallergis

- *ParaMASK: a Multi-Agent System for the Efficient and Dynamic Adaptation of HPC Workloads,* Pascal Bouvry
- *Energy-Aware Heuristics for Scheduling Parallel Applications on High Performance Computing Platforms,* Ahmed Ebaid, Reda A. Ammar and Sanguthevar Rajasekaran
- *A Generalized Model for Performance Analysis of Airborne Radar in Clutter Scenario,* Prateek Agarwal, Vinod Kumar Jaysaval and Suchith Rajagopal

Tuesday, December 16, 2014

9:00am-10:00am	**Keynote Talk : Computational Theory of Distributed Sensor Networks** **Chair:**

S.S. Iyengar (Florida International University), keynote talk

10:00am - 10:20am	**Coffee break**

10:20am - 12:00pm	**Parallel Sessions**

Session 5A: Signal Processing
Chair: Alok Aggarwal

- *A Modified Goblet Shaped Antenna for Bluetooth and Ultra Wide Band Applications,* Rajesh Raj, Umesh Soni, Vinit Tak, Roopkishor Sharma and Krishna Rathore
- *Rotation-Invariant Cell Shape Representation and Modeling with Level Sets and Graphical Models,* Alireza Nejati, Charles P. Unsworth and Euan S. Graham
- *Full pass-band signal combining technique for a randomly distributed sensor array,* Ming Tang, Yunpeng Hu and Caiyao Shen
- *Supervised Texture Identification Using Dictionary Based Data Modelling,* Raju Ranjan, Sumana Gupta and Venkatesh K.S

Session 5B: Special Session
Chair: Christos Xenakis

- *Exposing Resource Consumption Attacks in Internet Multimedia Services,* Zisis Tsiatsikas, Georgios Kambourakis and Dimitris Geneiatakis
- *Bypassing XSS Auditor: Taking Advantage of Badly Written PHP Code,* Anastasios Stasinopoulos, Christoforos Ntantogian, and Christos Xenakis
- *Towards an Augmented Authenticator in the Cloud,* Nikolaos Pitropakis, Nikolaos Yfantopoulos, Dimitris Geneiatakis and Costas Lambrinoudakis
- *A Methodology for Building a Log Management Infrastructure,* Vasileios Anastopoulos and Sokratis Katsikas

12:00pm - 12:20pm	**Coffee break**

12:20pm - 02:00pm	**Parallel Sessions**

Session 6A: Signal Processing
Chair: Shovan Bhaumik

- *Whittle maximum likelihood estimator for isotropic fractional Brownian images,* Rachid Harba, Gerard Jacquet, Carlos Wilhes, Martha Zaquera and Luis Vilvahuaman
- *Robust Impaired Speech Segmentation using Neural Network Mixture Model,* Sunday Iliya, Dylan Menzies, Ferrante Neri, Pip Cornelius and Lorenzo Picinali
- *An Approach for Leukocytes Nuclei Segmentation based on Image Fusion,* Jyoti Rawat, A. Singh Bhadauria, and H.

Session 6B: Special Session + IT
Chair: Christos Douligeris

- *Analyzing Intrusion Detection System: An Ensemble based Stacking Approach,* Sanjiban Sekhar Roy, P Venkata Krishna and Sumanth Yenduri

- *Classification of Emphatic Consonants and Their Counterparts in Modern Standard Arabic Using Neural Networks,* Yasser M. Seddiq, Yousef Alotaibi and Sid-Ahmed Selouani
- *Earth and groundwater visualisation using 3D modelling techniques in a cloud computing environment,* Dimitrios Kallergis, Thomas

S. Bhadauria
- *Automatic Modulation Recognition of PSK Signals with Sub-Nyquist Sampling Based on High Order Statistics*, Zhengli Xing, Jiangfeng Ye, Jie Zhou, Jun Yan, Lin Zou, Qun Wan and Jifeng Zou

Chavakis, Chrysoula Papacharalampou, Konstantinos Chimos and Christos Douligeris
- *Handwritten Odia Numeral Recognition: Combining Gestalt Configural Superiority Effect and Inner Distance Based Complexity Metric,* Kalyan Sourav Dash, Niladri Puhan and Ganapati Panda

02:00pm - 03:00pm	Lunch

03:00pm - 04:15pm	Parallel Sessions

Session 7A: Signal Processing
Chair: Sunday Illya

- *A Current-Mode Biquad Filter for Zigbee Applications using 45nm ±0.75V CMOS CDTA,* Deepanshu Dheer, Sagar Paliwal, Naved Ali and Mohd. Samar Ansari
- *A novel class of selective Cascaded Integrator- Comb(CIC) FIR filters with passband compensation,* Kanika Mehta, C.S Vinitha and Hemant Tulsani
- *A two-stage design of IIR filters using quadratic programming and particle swarm optimization,* Yasunori Sugita

Session 7B: Information Technology
Chair: Robert Chirwa

- *Deriving Complexity Metric Based on Use Case Diagram and its Validation,* Sangeeta Sabharwal, Ritu Sibal and Preeti Kaur
- *Intensity estimation method of the FID signal based on the high-order Prony Method including evaluation used to the priori information in quantitative NMR,* Tomoki Nakao, Takako Suematsu, Hiroaki Utsumi, Toshihiro Furukawa and Hajime Kubota
- *Robust and Reversible Watermarking Scheme in DFT Domain,* Asim Abbas, Sarah Aslam and Muhammad Kashif Samee

04:15pm - 04:35pm	Coffee break

04:35pm - 05:50pm	Parallel Sessions

Session 8A: Signal Processing
Chair:

- *Optimal Time Division Multiplexing Schemes for DOA Estimation of a Moving Target Using a Colocated MIMO Radar,* Kilian Rambach, Markus Vogel and Bin Yang
- *Active Speaker Detection Using Audio-Visual Sensor Array,* Jatin Kheradiya, Sandeep Reddy and Rajesh Hegde
- *Hybrid DWT-DCT based Method for Palm-print Recognition*, Vikas Varshney, Rashmi Gupta and Prerna Singh

Session 8B: Information Technology
Chair: Suresh Kannaiyan

- *Motion estimation for Human-Machine Interaction,* Gayatri Phade, Prerna Uddharwar, Pravin Dhulekar, and Sanjay Gandhe
- *Global vs. Local features for Gender Identification using Arabic and English Handwriting,* Ahmed Ibrahim, Amira Youssef and Lynn Abbott
- *Ontology and Parser Dependencies Approach for Spoken Dialogue System,* Mohammed Sidiyakoub, Sid-Ahmed Selouani and Roger Nkambou

6:00pm - 9:00pm	Banquet

Wednesday, December 17, 2014

9:00am-10:00am	Keynote Talk Chair:

Surendra Prasad (Ex-Director, Indian Institute of Technology, Delhi), keynote talk

10:20am - 12:00pm	Parallel Sessions

Session 9A: Signal Processing + IT
Chair: Pratik Shah

- *A PDE based Expectation Maximization algorithm adapted to Poisson noise for Medical Image Reconstruction,* Shailendra Tiwari and Rajeev Srivastava
- *A Feature Extraction Scheme from Region of Interest of Wireless Capsule Endoscopy Images for Automatic Bleeding Detection,* Tonmoy Ghosh, Syed Khairul Bashar, Shaikh Anowarul Fattah, Celia Shahnaz and Khan Wahid
- *Nyquist Filter Design using POCS Methods: Including Constraints in Design,* Sanjeel Parekh and Pratik Shah
- *Cost and Performance Analysis of Server-Centric Authentication Protocol in Supply Chain Management,* Adarsh Kumar, Krishna Gopal and Alok Aggarwal

Session 9B: Information Technology
Chair: M. Madheswaran

- *Intelligent Classification of Electronic Music*, Siva Sankalp Patel, Trinayan Baruah, Shlesh Tiwari and Sankar Ganesh S.
- *A Robust Feature for Single Image Camera Identification Using Local Binary Patterns*, Farbod Razzazi and Alireza Seyedabadi
- *Platform Independent Real Time Copyright Protection Embedding and Extraction Algorithms on Android and Embedded Framework,* Mohammad Farukh Hashmi, Ronak J Shukla, and Avinash G Keskar
- *Desktop Operations Procreate Ease for Visually Impaired,* Prerna Mishra and Urmila Shrawankar

12:00pm - 12:20pm	Coffee break
12:20pm - 02:00pm	Parallel Sessions

Session 10A: Signal Processing
Chair: Vishal Satpute

- *Performance evaluation of Frequency domain techniques for efficient storage of patient information with medical images,* Mousami Turuk, Ashwin Dhande and Pranita Kalgaonkar
- *Improved Cell Tracking via Automated Removal of Particulates,* Alireza Nejati, Charles P. Unsworth and E. Scott Graham
- *Speech Dereverberation in Multisource Environment using LCMV Filter,* Karan Nathwani and Rajesh M. Hegde
- *Software Localization Kit for Indian Mass,* Varsha Tomar and Manisha Bhatia

Session 10B: Information Technology
Chair: Rajaseh Kumar

- *Detecting The Number of Fingers Raised and Performing Real Time Applications,* Kapil Goyal, Manoj Makhija and Dr. Megha Agarwal
- *Pixel-based Bayesian Classification for Meningioma Brain Tumor Detection using Post Contrast T1-weighted Magnetic Resonance Image,* Subhranil Koley, Dev Kumar Das, Prof. Chandan Chakraborty and Anup Sadhu
- *A Simple Miniaturized Dual Band Notched UWB Antenna*, Krishna Rathore, Akanksha Singh, Rajesh Raj, Vinit Tak and Roopkishor Sharma

02:00pm - 03:00pm	Lunch

03:00pm - 04:15pm	Parallel Sessions

Session 11A: Signal Processing
Chair: Pratik Shah

- *Voice Based Biometric Authentication using Collapsing Classes Discriminative Space Transform*, Waquar Ahmad, Harish Karnick and Rajesh Hegde
- *Sparse Recovery on GPUs: Accelerating the Iterative Soft-Thresholding Algorithm,* Achal Shah and Angshul Majumdar
- *Localized Image Enhancement Using Depth Map*, Saumik Bhattacharya, K.S. Venkatesh and Sumana Gupta

Session 11B:
Chair:

- *Nonlinear Estimation with Transformed Cubature Quadrature Points,* Abhinoy Kumar Singh, Shovan Bhaumik and Rahul Radhakrishnan
- *Design of Efficient Decimation Filter Structure for WiMAX Applications with Memory Saving Approach,* Madheswaran Muthusamy and Jayaprakasan V
- *MPRF:Multisupport Polar Region Features for Image Description*, Rajkumar Kannan, Gheorghita Ghinea, Suresh Kannaiyan and Sridhar Swaminathan

04:15pm - 04:35pm	Coffee break

04:35pm - 05:50pm	Parallel Sessions

Session 12A:
Chair:

- *Tracking of Low Earth Orbit Satellite Using Cubature Quadrature Kalman Filter,* Abhinoy Kumar Singh and Shovan Bhaumik
- *On the possibility of speaker discrimination using a Glottal Pulse phase-related feature,* Aníbal Ferreira
- *A Blind Compressed Sensing Formulation for Collaborative Filtering,* Anuj Rajani, Paritosh Mittal, Aishwarya Jain and Angshul Majumdar
- *E-spline Based Image Interpolators,* Mamdouh Fahmy, Gamal Fahmy and Omar M. Fahmy

Session 12B:
Chair:

- *Induced Markov Chains for the Encoding of Graph-based Data,* Stefan P. Müller
- *Comparitive Analysis of Video Compression Techniques involving EZW Encoded 3D-DWT with AVI,* Naveen Ch, Vishal Satpute, Avinash Keskar and Dr. Kishor D. Kulat
- *A Secure Clustering Scheme for Geographically Routed Wireless Ad Hoc Networks,* Christos Tselikis
- *A Novel Block Matching Based Motion Compensation Using Hybrid Particle Swarm Optimization Technique for Efficient Video Compression,* Sobhan Kanti Dhara, Deepak Singh,Sukadev Meher

Notes