

ISSPIT 2014 Program

Monday, December 15, 2014

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

9:00am- **Keynote Talk: Nature inspired techniques in addressing communication problems**
10:00am **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 Tamperers 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 Sahnii
- [A novel authentication method for security systems using multidimensional characteristics 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
- [Frequent 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, Ishtiyag 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 -
05:50pm

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- **Keynote Talk : Computational Theory of Distributed Sensor Networks**
10:00am **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 Lambrinouidakis
- [*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

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*](#)

- [An Approach for Leukocytes Nuclei Segmentation based on Image Fusion](#), Jyoti Rawat, A. Singh Bhadauria, and H. 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

- [modelling techniques in a cloud computing environment](#), Dimitrios Kallergis, Thomas Chavakis, Chrysoula Papacharalampou, Konstantinos Chimos and Christos Douligeris

- [Handwritten Odia Numeral Recognition: Combining Gestalt Configurational Superiority Effect and Inner Distance Based Complexity Metric](#), Kalyan Sourav Dash, Niladri Puhana 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 \$\pm 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 Perna Singh

Session 8B: Information Technology
Chair: Suresh Kannaiyan

- [Motion estimation for Human-Machine Interaction](#), Gayatri Phade, Perna Uddharwar, Pravin Dhulekar, and Sanjay Gandhi
- [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:

Reda Ammar (Director of the International Academic Partnerships, Univ. of Connecticut),
keynote talk: Hierarchical Performance Modeling and Analysis

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*](#), Prema 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](#), Anibal 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
- [Comparative 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

Notes