

PREMI 2017: Technical Sessions

All the accepted papers will be presented orally. The contributed papers are scheduled for 15 minutes, which includes 12 minutes for the presentation and 3 minutes for questions.

All the programmes like Inauguration, Keynote talk, Invited talks, Special Sessions, Industrial Sessions etc. will be held in the PJA Building(PJAB) Auditorium.

All the Technical Sessions will be held in NAB-I and NAB-II Lecture Halls.

DATE: DECEMBER 5, 2017

TIME: 12:15 TO 13:30

VENUE: PJAB AUDITORIUM

Special Technical Session on Fuzzy Sets

Dedicated to the memory of Prof. Lotfi A. Zadeh

Feature selection and fuzzy rule mining for epileptic patients from clinical EEG data

Abhijit Dasgupta, Losiana Nayak, Ritankar Das, Debasis Basu, Preetam Chandra and Rajat De

Improving the Performance of Deep Learning based Speech Enhancement System Using Fuzzy Restricted Boltzmann Machine

Suman Samui, Indrajit Chakrabarti and Soumya K Ghosh

A Fuzzy-LP Approach in Time Series Forecasting

Pritpal Singh and Gaurav Dhiman

Third Order Backward Elimination Approach for Fuzzy-Rough Set based Feature Selection

Soumen Ghosh, Sai Prasad P.S.V.S. and Raghavendra Rao C.

DATE: DECEMBER 5, 2017

TIME: 16:30 TO 18:30

VENUE: PJAB AUDITORIUM

Special Session on Deep Learning

Learning Deep Representations for Place Recognition in SLAM

Aritra Mukherjee, Satyaki Chakraborty and Sanjoy Kumar Saha

Performance of Deep Learning Algorithms vs. Shallow models, in extreme conditions - some empirical studies

Samik Banerjee, Prateep Bhattacharjee and Sukhendu Das

- Space-Time Super-Resolution using Deep Learning based Framework
Manoj Sharma, Santanu Chaudhury and Brijesh Lall
- A spatio-temporal feature learning approach for Dynamic Scene
 Recognition
Ihsan Ullah and Alfredo Petrosino
- Stacked Features Based CNN For Rotation Invariant Digit Classification .
Ayushi Jain, Gorthi R.K. Sai Subrahmanyam and Deepak Mishra
- A Study on Deep Convolutional Neural Network Based Approaches for
 Person Re-Identification
Harendra Chahar and Neeta Nain
- Two-Stream Convolutional Network with Multi-level Feature Fusion
 for Categorization of Human Action from Videos
Prateep Bhattacharjee and Sukhendu Das

DATE: DECEMBER 5, 2017

TIME: 16:30 TO 18:30

VENUE: NAB - I

Technical Session – I: Pattern Recognition and Machine Learning

- kNN Classification with an Outlier Informative Distance Measure
Gautam Bhattacharya, Koushik Ghosh and Ananda S. Chowdhury
- Tree-based Structural Twin Support Tensor Clustering with square loss
 function
Reshma Rastogi Née Khemchandani and Sweta Sharma
- Kernel Entropy Discriminant Analysis for Dimension Reduction
Aditya Mehta and Chandra Sekhar C.
- Machine Learning Approach for Identification of miRNA-mRNA
 Regulatory Modules in Ovarian Cancer
Sushmita Paul and Shubham Talbar
- Label Correlation Propagation for Semi-Supervised Multi-Label Learning
Aritra Ghosh and Chandra Sekhar C
- Formulation of Two Stage Multiple Kernel Learning using Regression
 Framework
Shiju S S, Asif Salim and Sumitra S.
- A Two-Stage Conditional Random Field Model based Framework for
 Multi-Label Classification
Abhiram Kumar Singh and Chandra Sekhar C.

A Matrix Factorization & Clustering based Approach for Transfer Learning
V. Sowmini Devi, Vineet Padmanabhan and Arun K. Pujari

DATE: DECEMBER 5, 2017

TIME: 16:30 TO 18:30

VENUE: NAB - II

Technical Session – II: Computer Vision and Video Processing

Unlocking the Mechanism of Devanagari Letter Identification using Eye Tracking
Chetan Ralekar, Tapan Gandhi and Santanu Chaudhury

Unsupervised Feature Descriptors based Facial Tracking over Distributed Geospatial Subspaces
Shubham Dokania, Ayush Chopra, Feroz Ahmad, Sreedevi Indu and Santanu Chaudhury

Adaptive TerraSAR-X Image Registration (AIR) using Spatial Fisher Kernel Framework
Sirisha B, Chandrasekhar P, Chandrasekhara Sastry A S and Sandhya B

A Robust Color Video Watermarking Technique Using DWT, SVD and frame differences
Sai Shyam Sharma, Sanik Thapa and K. Chaitanya Pavan Tanay

Object Tracking with Classification Score Weighted Histogram of Sparse Codes
Mathew Francis and Prithwijit Guha

A Machine Learning Inspired Approach for Detection, Recognition and Tracking of Moving Objects from Real-time Video
Anit Chakraborty and Sayandip Dutta

Face detection based on frequency domain features
Rajesh D S and Shekar B H

DATE: DECEMBER 6, 2017

TIME: 16:30 TO 18:00

VENUE: NAB - I

Technical Session – V: Soft and Natural Computing

A Novel OCR System based on Rough Set Semi-Reduct
Ushasi Chaudhuri, Partha Bhowmick and Jayanta Mukherjee

- Rough set rules determine disease progressions in different groups of Parkinson's patients
Andrzej Przybyszewski, Stanislaw Szlufik, Piotr Habela and Dariusz Koziorowski
- Detection of Atypical Elements by Transforming Task to Supervised Form
Piotr Kulczycki and Damian Kruszeowski
- Adversarial Optimization of Indoor Positioning System using Differential Evolution
Feroz Ahmad and Sreedevi Indu
- Fast Convergence to Near Optimal Solution for Job Shop Scheduling using Cat Swam Optimization
Vivek Dani, Aparna Sarswat, Vishnu Swaroop, Shridhar Domanal and G.Ram Mohana Reddy
- Music-Induced Emotion Classification from the Prefrontal Hemodynamics
Pallabi Samanta, Diptendu Bhattacharya, Amiyangshu De, Lidia Ghosh and Amit Konar

DATE: DECEMBER 7, 2017

TIME: 10:00 TO 11:45

VENUE: NAB - I

Technical Session – III: Computer Vision and Video Processing

- A Study on the Properties of 3D Digital Straight Line Segments
Mousumi Dutt, Somrita Saha and Arindam Biswas
- Does Rotation Influence the Estimated Contour Length of a Digital Object?
Sabyasachi Mukherjee, Oishila Bandyopadhyay, Arindam Biswas and Bhargab B. Bhattacharya
- Aggregated Channel Features With Optimum Parameters for Pedestrian Detection
Blossom Bastian and Jiji Victor
- Variants of Locality Preserving Projection for Modular Face and Facial Expression Recognition
Gitam Shikkenawis and Suman K Mitra
- Video Stabilization using Sliding Frame Window
Keerthan S Shagrithaya, Eeshwar Gurushankar, Deepak Srikanth, Pravin Bhaskar Ramteke and Shashidhar G. Koolagudi

Abnormal Crowd Behavior Detection Based on Combined Approach of
Energy Model and Threshold
Madhura Halbe, Vibha Vyas and Yogita Vaidya

Deep Learning in the Domain of Multi-Document Text Summarization . .
Rajendra Kumar Roul, Jajati Keshari Sahoo and Rohan Goel

DATE: DECEMBER 7, 2017
TIME: 10:00 TO 11:45

VENUE: NAB - II

Technical Session – VI: Bioinformatics and Computational Biology

A New Method to Address Singularity Problem in Multimodal Data
Analysis
Ankita Mandal and Pradipta Maji

Efficient and Effective Multiple Protein Sequence Alignment Model
Using Dynamic Progressive Approach with Novel Look Back Ahead
Scoring System
Sanjay Bankapur and Nagamma Patil

Classification of Vector-borne Virus through Totally Ordered Set of
Dinucleotide Interval Patterns
Uddalak Mitra and Balaram Bhattacharyya

A quasi-clique mining algorithm for analysis of the human
protein-protein interaction network
Brijesh Sriwastava, Subhadip Basu and Ujjwal Maulik

Prediction of Thyroid Cancer genes using an ensemble of Post
Translational Modification, Semantic and Structural similarity based
clustering results
*Anup Kumar Halder, Pritha Dutta, Mahantapas Kundu, Mita Nasipuri
and Subhadip Basu*

mRMR+: An Effective Feature Selection Algorithm for Classification
Hussain Chowdhury and Dhruva Bhattacharyya

Topological Inquisition into the PPI Networks Associated with Human
Diseases through Graphlet Frequency Distribution
*Debjani Bhattacharjee, Sk Md Mosaddek Hossain, Raziya Sultana and
Sumanta Ray*

DATE: DECEMBER 7, 2017

TIME: 15:00 TO 16:00

VENUE: PJAB AUDITORIUM

Special Session on Spatial Data Science and Engineering

Spatial Distribution based Provisional Disease Diagnosis in Remote Healthcare

Indrani Bhattacharya and Jaya Sil

Extraction of Phenotypic Traits for Drought Stress Study using Hyperspectral Images

Swati Bhugra, Nitish Agarwal, Shubham Yadav, Soham Banerjee, Santanu Chaudhury and Brejesh Lall

Spatio-temporal Prediction of Meteorological Time Series Data: An Approach based on Spatial Bayesian Network (SpaBN)

Monidipa Das and Soumya Ghosh

DATE: DECEMBER 7, 2017

TIME: 15:00 TO 16:30

VENUE: NAB - I

Technical Session – IV: Signal and Image Processing

Selection of Relevant Electrodes based on Temporal Similarity for Classification of Motor Imagery Tasks

Jyoti Singh Kirar, Ayesha Choudhary and R.K. Agrawal

Automated Measurement of Translational Margins and Rotational Shifts in Pelvic Structures using CBCT Images of Rectal Cancer patients

Sai Phani Kumar Malladi, Bijju Kranthi Veduruparthi, Jayanta Mukherjee, Partha Pratim Das, Saswat Chakrabarti and Indranil Mallick

Exploring the scope of HSV color channels towards simple shadow contour detection

Jayeeta Saha and Arpitam Chatterjee

Linear Curve Fitting-based Headline Estimation in Handwritten Words for Indian Scripts

Rahul Pramanik and Soumen Bag

Object Segmentation in Texture Images using Texture Gradient based Active Contours

Priyambada Subudhi and Susanta Mukhopadhyay

A Variance Based Image Binarization Scheme and Its Application in
Text Segmentation
Ranjit Ghoshal, Aditya Saha and Sayan Das

DATE: DECEMBER 7, 2017

TIME: 15:00 TO 16:30

VENUE: NAB - II

**Technical Session – XI: Applications of Pattern Recognition and
Machine Intelligence**

Hierarchical Ranking of Cricket Teams Incorporating Player Composition
Abhinav Agarwalla, Madhav Mantri and Vishal Singh

Smart Water Management: An Ontology-driven Context-aware IoT
application
Deepti Goel, Santanu Chaudhury and Hiranmay Ghosh

Structured Prediction of Music Mood with Twin Gaussian Processes
Santosh Chapaneri and Deepak J Jayaswal

Differentiating Pen Inks in Handwritten Bank Cheques using
Multi-layer Perceptron
Prabhat Dansena, Soumen Bag and Rajarshi Pal

Analysis of Causal Interactions and Predictive Modelling of Financial
Markets Using Econometric Methods, Maximal Overlap Discrete
Wavelet Transformation and Machine Learning: A Study in Asian Context
Indranil Ghosh, Manas K. Sanyal and R. K. Jana

Concept-Based Approach for Research Paper Recommendation
Ritu Sharma, Dinesh Gopalani and Yogesh Meena

DATE: DECEMBER 8, 2017

TIME: 10:15 TO 11:45

VENUE: NAB - I

**Technical Session – VII: Speech and Natural Language Processing –
1**

Analysis of Features and Metrics for Alignment in Text-Dependent
Voice Conversion
Nirmesh Shah and Hemant Patil

Effectiveness of Mel Scale-Based ESA-IFCC Features for Classification
of Natural vs. Spoofed Speech
Madhu Kamble and Hemant Patil

Novel Phase Encoded Mel filterbank Energies for Environmental Sound Classification	<i>Rishabh Tak, Dharmesh Agrawal and Hemant Patil</i>
An Adaptive i-vector Extraction for Speaker Verification with Short Utterance	<i>Arnab Poddar, Md Sahidullah and Goutam Saha</i>
Spoken Keyword Retrieval using Source and System Features	<i>Maulik Madhavi, Hemant Patil and Nikhil Bhendawade</i>
Novel Gammatone Filterbank Based Spectro-Temporal Features for Robust Phoneme Recognition	<i>Ankit Nagpal and Hemant Patil</i>

DATE: DECEMBER 8, 2017

TIME: 10:15 TO 11:45

VENUE: NAB - II

Technical Session – IX: Data Mining and Big Data Analytics – 1

K-Means Algorithm to Identify k1-Most Demanding Products	<i>Ritesh Kumar, Partha Sarathi Bishnu and Vandana Bhattacharjee</i>
Mining Rare Patterns using Hyper-Linked Data Structure	<i>Anindita Borah and Bhabesh Nath</i>
Random Binary Search Trees for Approximate Nearest Neighbour Search in Binary Space	<i>Michal Komorowski and Tomasz Trzcinski</i>
Opinion Mining using Support Vector Machine with Web based Diverse Data	<i>Mir Shahriar Sabuj, Zakia Afrin and K. M. Azharul Hasan</i>
Harnessing Online News for Sarcasm Detection in Hindi Tweets	<i>Santosh Kumar Bharti, Sathya Babu Korra and Sanjay Kumar Jena</i>
Incremental learning of Non Stationary Temporal Causal Networks for Telecommunication Domain	<i>Ram Mohan, Santanu Chaudhury and Brejesh Lall</i>

DATE: DECEMBER 8, 2017

TIME: 15:00 TO 16:30

VENUE: NAB - I

Technical Session – VIII: Speech and Natural Language Processing – 2

Neural Networks Compression for Language Modeling

Artem Grachev, Dmitry Ignatov and Andrey Savchenko

A Metaphor Detection Approach using Cosine Similarity

Malay Pramanick and Pabitra Mitra

Named Entity Identification Based Translation Disambiguation Model . . .

Vijay Sharma and Namita Mittal

LEXER: LEXicon based Emotion analyzeR

Shikhar Sharma, Piyush Kumar and Krishan Kumar

Lexical TF-IDF: An n-gram Feature Space for Cross-Domain
Classification of Sentiment Reviews

Atanu Dey, Mamata Jenamani and Jitesh J Thakkar

A Method for Semantic Relatedness based Query Focused Text
Summarization

Nazreena Rahman and Bhogeswar Borah

DATE: DECEMBER 8, 2017

TIME: 15:00 TO 16:30

VENUE: NAB - II

Technical Session – X: Data Mining and Big Data Analytics – 2

A Graphical Model for Football Story Snippet Synthesis from Large
Scale Commentary

Anirudh Vyas, Sangram Gaikwad and Chiranjoy Chattopadhyay

Palmprint and Finger Knuckle based Person Authentication with
Random Forest via Kernel-2DPCA

Gaurav Jaswal, Amit Kaul and Ravinder Nath

An efficient approach for mining frequent subgraphs

*Tahira Alam, Sabit Anwar Zahin, Md. Samiullah and Chowdhury Farhan
Ahmed*

An Efficient Encoding Scheme for Dynamic Multidimensional Datasets . .

Mehnuma Tabassum Omar and K.M. Azharul Hasan

Image Annotation using Latent Components and Transmedia Association
Anurag Tripathi, Abhinav Gupta, Santanu Chaudhury and Brejesh Lall

Effectiveness of representation and length variation of shortest paths in
graph classification
Asif Salim, Shiju S S and Sumitra S