

### A City Guide for the participants of NCC 2013

Welcome to NCC 2013. We would like to make this conference a memorable one. We hope that you will find the following information and the map helpful in planning your visit.

The weather is cold at night and pleasant during the day. Early morning fog causing landing problems at the airport is a usual feature of Delhi's winters and you should plan your flight accordingly. IIT Delhi is about 8 km from Terminal 1 and about 17 km from Terminal 3. Please take a prepaid taxi (travel time=20 min, approximate cost =Rs. 300/- + extra luggage charge for Terminal 1; travel time=35 min, approximate cost=Rs. 500/- + extra luggage charge for Terminal 3). IIT Delhi is about 15 km from the New Delhi railway station - please take a pre-paid taxi (travel time=50 min, approximate cost =Rs. 450/- + extra luggage charge) from the pre-paid taxi booth just outside either of the platforms no. 1 (Paharganj) or no. 12 (Ajmeri Gate). An auto-rickshaw would charge about Rs.200/- and take 45 minutes for the same trip. The Main Guest House is closer to the IIT Main Gate while the Faculty Guest House and the Zanskar Hostel are closer to the IIT Hostel Gate. You can enter by a vehicle only through the Main Gate. The Guest Houses and the Zanskar Hostel are a considerable distance from the Main Gate: so retain your conveyance till you reach your booked accommodation. All gates have internal phones.

It is not advisable – specially for ladies - to travel alone by auto-rickshaw at late hours.

**Climate:** Winter (Nov. to Feb.): Cold and pleasant

**Clothing:** Winter woollens

Some important phone numbers (prefix 2659 to call these phone numbers from a direct P&T line, i.e., to call 1050 from outside IITD, you would dial 2659-1050) within IIT Delhi are:

Main Guest House: 6783 / 6830

Faculty Guest House: 1699 / 6670

E-mail: ncc2013@ee.iitd.ac.in

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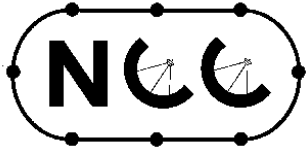
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## NINETEENTH NATIONAL CONFERENCE ON COMMUNICATIONS

FEBRUARY 15-17, 2013

PRE-CONFERENCE  
TUTORIALS AND INAUGURATION -  
FEBRUARY 15, 2013

### TECHNICAL PROGRAM

INDIAN INSTITUTE OF  
TECHNOLOGY DELHI



#### FRIDAY FEBRUARY 15, 2013

|              |  |
|--------------|--|
| 0845 onwards | Reception and Registration   |
| 0930-1045    | Tutorials T1, T2<br>T1. Next Generation Optical Access PON Evolution<br>T2. Large-Scale MIMO in 5G |
| 1045-1100    | Tea  |
| 1100-1215    | Tutorials T1, T2<br>(continued)  |
| 1215-1300    | Working Lunch  |
| 1300-1415    | Tutorials T3, T4<br>T3. 3D Television<br>T4. Modern ART  |
| 1415-1430    | Tea  |
| 1430-1545    | Tutorials T3, T4<br>(continued)  |
| 1600-1715    | Inauguration   |
| 1715-1745    | Tea  |
| 1930-2100    | Dinner   |

#### SATURDAY FEBRUARY 16, 2013

|              |  |
|--------------|--|
| 0815 onwards | Reception and Registration   |
| 0830-0930    | Keynote Address:<br>"Millimeter-Wave Concurrent Dual-Band SiGe BiCMOS Single-Chip Transmitter for Radar and Communication Systems"                                   |
|              | Cam Nguyen   |
|              | Department of Electrical and Computer Engineering<br>Texas A&M University  |
| 0930-0945    | Tea  |
| 0945-1130    | Sessions<br>1.1, 2.1, 3.1, 4.1 (Parallel)  |
|              | 1.1. Cooperative Communications  |
|              | • Optimal Design of Timer-Based, Distributed Selection with Unknown Number of Nodes<br><i>R. Talak; N. B. Mehta</i>  |
|              | • Performance Analysis of Double Correlated Selection Combining for Cooperative Diversity Systems<br><i>S. Ramabadrana; M. D. Selvaraj; R. Roy</i>                   |
|              | • Precoder Design for Asymmetric Two-way AF Shared Relay<br><i>R. Budhiraja; B. Ramamurthi</i>   |
|              | • Performance Analysis of Two-Way AF Relaying Systems Over Cascaded Generalized-K Fading Channels<br><i>S. Yadav; P. K. Upadhyay</i>                                 |
|              | • On the Computation of Exact Moments and Performance Metrics for Multihop Transparent Weibull Relay Channels<br><i>C. K. Kanjirathumkal; S. M. Sameer; L. Jacob</i> |
|              | • Co-ordinate Interleaved Non-orthogonal Amplify and Forward Relaying Protocol<br><i>V. P. Sreekanth; K. V. Srinivas; S. Bhashyam</i>                                |
|              | 2.1. Optical Communications  |
|              | • Experimental Study on Aperture Averaging in Free Space Optical Communication Link<br><i>N. Mehta; H. Kaushal; V. K. Jain; S. Kar</i>                               |

- Study on FEC Schemes for Optical Communication Systems  
*P. Kaur; D. Dhawan; V. K. Jain; S. Kar*
- Energy Efficient Design for Green Optical Core Network  
*P. Biswas; Abhishek Singh; D. Chadha*
- All-Optical Packet Power Equalizer for DPSK Signal Using Nonlinear Micro Ring Resonator  
*B. B. Bhowmik; S. Gupta; R. Gangopadhyay*
- The Architecture of a Ring Based TDM PON to Improve Survivability and Robustness  
*G. Mishra; G. Das; A. Kanungoe*
- Effect of Phase Noise on All-Optical Wavelength Conversion of DQPSK Data Using FWM  
*A. Anthur; D. Venkitesh; R. Watts; J. Carroll; L. Barry*

#### 3.1. Audio and Speech Processing I

- A Cepstrum Based Approach for Identifying Tonic Pitch in Indian Classical Music  
*A. Bellur; H. A. Murthy*
- Development and Evaluation of Unit Selection and HMM-Based Speech Synthesis Systems for Tamil  
*R. Boothalingam; Sherlin Solomi V.; A. R. Gladston; Lilly S.; P. Vijayalakshmi; N. Thangavelu; H. A. Murthy*
- Analysis of Lombard and Angry Speech Using Gaussian Mixture Models and KL Divergence  
*S. Mittal; S. Vyas; S. R. Mahadeva Prasanna*
- Melodic Pitch Extraction From Music Signals Using Modified Group Delay Functions  
*R. Rajan; H. A. Murthy*
- Speech Based Emotion Recognition Based on Hierarchical Decision Tree with SVM, BLG and SVR Classifiers  
*V. Garg; H. Kumar; R. Sinha*

#### 4.1. Wireless Access Networks

- Power-Optimal Scheduling for a Green Base Station with Delay Constraints  
*A. Lalitha; S. Mondal; Satya Kumar V.; Vinod Sharma*
- Tradeoff of Average Power and Average Delay for a Point-to-Point Link with Fading  
*V. Bala Sukumaran; U. Mukherji*
- Call Admission Control for Real-Time Traffic in OFDMA Based Cellular Networks  
*S. Batabyal; S. S. Das*

- Novel Transport Layer Aware Uplink Scheduling Scheme for LTE-Based Networks  
*H. K. Rath; M. Sengupta; A. Simha*
- Optimal Power Allocation Auction for H.264/SVC Coded Wireless Video Transmission  
*G. Sekhar; A. K. Jagannathan*
- Cross-Layer Strategies for Throughput Maximization in a Data Aggregating Wireless Network  
*E. Vivek; V. Ramaiyan; S. Bhashyam*

**1135-1320 Sessions**  
**1.2, 2.2, 3.2, 4.2 (Parallel)**

**1.2. Microwaves and Antennas I**

- A Design of Microstrip Bandpass Filter with Narrow Bandwidth Using DGS/DMS for WLAN  
*A. Kumar; M. V. Kartikeyan*
- Investigation of Fractal DGS Microwave Filters  
*Arjun Kumar; A. Sawant; M. V. Kartikeyan*
- Printed Egg Curved Monopole Antenna for Ultrawideband Applications  
*S. Verma; Preetam Kumar*
- Miniaturized Planar Branch-Line Coupler with Asymmetrical n-Shaped Structure  
*D. Dasgupta; B. Sarkar; M. Pal; R. Ghatak*
- Broadband Sectoral Antenna Array Using Printed Dipole with Reflector for Wider Beam Coverage in H-Plane  
*P. K. Mishra; G. Kumar*
- Modified Sierpinski Carpet Fractal Shaped Slotted UWB Monopole Antenna with Band Notch Characteristic  
*B. Biswas; D. Poddar; R. Ghatak; A. Karmakar*

**2.2. Information Theory and Coding I**

- An Efficient Methodology for Parallel Concatenation of LDPC Codes with Reduced Complexity and Decoding Delay  
*Pravin Kumar; R. S. Kshetrimayum*
- Power Allocation for Interference Channels  
*A. K. Chaitanya; U. Mukherji; Vinod Sharma*
- On 2-adically Extended Projective Geometry Based Codes and Their Efficient Decoding Architecture  
*B. S. Adiga; S. Thaskani; G. Chandra; B. Venkateshulu*

- On the Secret Key Capacity of the Harary Graph PIN Model  
*N. Kashyap; M. Mukherjee; Y. Sankarasubramanian*

- Null-Space of Block Convolution Matrix  
*T. G. Krishna; I. Singh; K. Giridhar*

**3.2. Audio and Speech Processing II**

- Unified Pitch Markers Generation Method for Pitch and Duration Modification  
*S. R. Mahadeva Prasanna; Govind D.*
- Speech Enhancement Using Spectral Subtraction and Cascaded-Median Based Noise Estimation for Hearing Impaired Listeners  
*S. K. Waddi; P. C. Pandey; N. Tiwari*
- Single Channel Speech Dereverberation Using the LP Residual Cepstrum  
*H. Padaki; K. Nathwani; R. M. Hegde*
- Confidence Measures for Detecting Speech Recognition Errors  
*J. Gada; P. Rao; S. K. Vijaya*
- Significance of the MUSIC-Group Delay Method in an ICA-Beamforming Framework for Speech Separation in Multi Source Environments  
*L. Kumar; K. Singhal; R. Sinha; R. M. Hegde*
- Non-Negative Subspace Projection During Conventional MFCC Feature Extraction for Noise Robust Speech Recognition  
*Pavan Kumar D. S.; R. Bilgi; Umesh S.*
- Subspace Modeling Technique Using Monophones for Speech Recognition  
*B. Srinivas Ch.; N. Joy; R. Bilgi; Umesh S.*

**4.2. Network Performance Studies**

- Tradeoff of Average Service Cost and Average Delay for the State Dependent M/M/1 Queue  
*V. Bala Sukumaran; U. Mukherji*
- Statistics Based Energy Efficient Caching Decisions for IPTV Services  
*A. Dewangan; D. Jalihal*
- Optimizing Transport Technology Choices for Virtual Machines (VMs) in Data-Center and Cloud Environments  
*A. Shankar; D. Bhamare; M. Krishnamoorthy; A. A. Gumaste*

- MIXD-TCP: Completely Decoupled End to End Congestion Control Algorithm  
*V. Sawant; P. Chaporkar; M. Belur*
- Novel Rate-Jitter Control Algorithms for TDMoIP  
*M. Sikha; Manivasakan R.*
- Development of a Remote Lab with Microprocessor & DSP with FPGA Accelerator  
*A. Kulkarni; A. Jhunjhunwala*

**1320-1430 Lunch**

**1430-1615 Sessions**  
**1.3, 2.3, 3.3, 4.3 (Parallel)**

**1.3. Wireless Communications I**

- Best-Fit Mobile Recharge Pack Recommendation  
*S. Thomas; J. Wilson; S. Chaudhury*
- Communicating Under Channel Phase Uncertainty  
*N. Warsi; R. Vaze; T. Shah*
- Uplink Power Allocation Schemes for Heterogeneous Cellular Networks  
*S. N. Pradhan; R. Devarajan; S. C. Jha; V. Bhargava*
- Survey of Techniques for Achieving Topological Diversity  
*R. P. Singh; G. Poonacha*
- A New Technique for Derivation of LCR and AFD in Wideband Wireless Channel  
*S. Hazra; R. Bhattacharjee*
- Frame Alignment and Interference Cancellation Strategies for Cell Search in HetNets  
*N. Rajmohan; A. P. Kannu*
- Data Combining Scheme for ICI Conjugate Cancellation Scheme in OFDM Systems  
*A. Goel; M. Agrawal*

**2.3. Information Theory and Coding II**

- On the Sum Capacity of Multipath Fading MAC with Distributed CSI  
*V. Anavangot; B. K. Dey; S. R. B. Pillai*
- EXIT Chart Based Design of LDPC Codes for Higher Order Constellations  
*B. Joshi; A. Thangaraj*
- An Improved Technique to Find the Trapping Sets of the Irregular LDPC Codes  
*K. Deka; A. Rajesh; P. K. Bora*

- Achieving Adaptive Sum-Capacity of Fading MACs with Distributed CSI and Non-identical Links by Rate-splitting  
*S. Sreekumar*
- Novel Hardware Implementation of LLR-based Non-binary LDPC Decoders  
*L. Bhargava; R. Bose; M. Balakrishnan*
- Implementation of Physical Layer Key Sharing Schemes Using Software Defined Radios  
*V. S. Kambala; A. Thangaraj*

**3.3. Speaker Analysis**

- Speaker Verification in Noisy Environment Using GMM Supervectors  
*S. Sarkar; S. Rao*
- Analysis of Glottal Signals for Speaker Information  
*Ramesh K.; G. Pradhan; S. R. Mahadeva Prasanna*
- A Two-Level Approach for Speaker Recognition Using Speaker-Specific-Text  
*B. Bharathi; N. Thangavelu*
- Speaker Dependent, Speaker Independent and Cross Language Emotion Recognition From Speech Using GMM and HMM  
*M. Bhaykar; J. Yadav; S. Rao*
- Classification of Infant Cries Using Epoch and Spectral Features  
*A. K. Singh; J. Mukhopadhyay; K. S. Rao*

**4.3. Wireless Sensor Networks**

- Information Theoretic Self-Management of Wireless Sensor Networks  
*S. Das; S. Misra*
- Energy Efficient Elliptic Curve Point Multiplication for WSN Applications  
*R. K. Kodali; K. Patel; N. V. S. N. Sarma*
- Revisiting Distributed Transmit Power Control in Ad Hoc Wireless Networks with ODC Capability  
*M. M. Vegad; S. De; B. Lall*
- MobilL: A 3-Dimensional Localization Scheme for Mobile Underwater Sensor Networks  
*T. Ojha; S. Misra*
- Weight Based Clustering in Wireless Sensor Networks  
*R. Tandon; B. Dey; S. Nandi*
- Feasibility Analysis on Integrated Recharging and Data Collection in Pollution Sensor Networks  
*P. Gupta; K. Kandakatla; S. De; S. Jana*

1615-1630 Tea

1630-1745 Panel Discussion:  
"Role of Cloud in Communication"

Chair: Ashok Jhunjunwala

Department of Electrical  
Engineering

Indian Institute of Technology  
Madras

1745-1930 Sessions  
1.4, 2.4, 3.4, 4.4 (Parallel)

1.4. Communication Theory and  
VLSI for Communications

- An Adaptive Notch Filter for Narrow Band Interference Removal  
*N. Varshney; R. C. Jain*
- Sequential Change Detection Using Estimators of Entropy & Divergence Rate  
*D. Juvvadi; R. K. Bansal*
- UWB CMOS Transmitters for UWB Communications  
*R. Xu; Y. Jin; M. Miao; C. Nguyen*
- Low-Cost Integrated-Circuit Transmitter and Receiver for UWB Communications  
*H. Jeongwoo; C. Nguyen*
- Dual-Injection-Locked 1/2 Divider with Optimized VCO Loaded Q and Current  
*S. Lee; S. Jang; C. Nguyen*
- A Time Reversal Technique for Minimizing Equalizer Complexity in High Rate Multi-antenna UWA Link  
*S. Banerjee; M. Agrawal*
- An Alternate Method for Calculating Average Probability of Error in Log-normal Channel for UWB  
*C. Kundu; R. Bose*

2.4. Cooperative Communications  
and MIMO Systems

- Joint Power Allocation and Routing Optimization in BER Constrained Multihop Wireless Networks  
*S. Gupta; R. Bose*

- Outage Analysis of Full Duplex Decode and Forward Relaying Over Nakagami-m Channels  
*P. K. Sharma; P. Garg*
- Power Allocation Strategy Using Node Cooperation for Transmit Power Minimization Under Correlated Fading  
*S. Ghose; R. Bose*
- Outage Performance of Two-Way Amplify-and-Forward Relaying with Multiple Co-channel Interferers  
*A. K. Mandpura; S. Prakriya; R. K. Mallik*
- Multi-Level SINR Thresholding for Reduced Complexity MIMO Detection  
*A. K. Sinha; M. Agarwal; A. K. Chaturvedi*
- An Iterative MIMO-DFE Receiver with MLD for Uplink SC-FDMA  
*B. Dhivagar; K. Kuchi; K. Giridhar*
- Performance Analysis of Alamouti Transmit Diversity with A Sub-Optimum Joint Transmit-Receive Antenna Selection Scheme  
*J. Chakravarti; Y. N. Trivedi*

3.4. Signal Processing in  
Communications

- Low-complexity DFT-pair Carrier Acquisition  
*S. Jayasimha; J. Paladugula; S. B. Balantrapu*
- Overmodulation Protection in FM Transmitters  
*S. Murali; Pankaj Gupta*
- Performance Enhancement of GMSK and LDPC Based VLF Communication in Atmospheric Radio Noise  
*Arun Kumar; R. Bahl; R. Gupta; H. Choudhary*
- Overcoming the SNR-Wall for Energy Detection Using the Autocorrelation of Cyclic Prefix Based OFDM Signal  
*S. Karar; A. Das Barman*
- Algorithms for Change Detection with Unknown Number of Affected Sensors  
*P. Sarath Kumar; B. Sai Kiran; A. P. Kannu; S. Bhashyam*
- Dynamic Allocation for Watermark Payload in MC-CDMA System Under Fading Attack  
*S. P. Maity; S. Maity; J. Sil; C. Delpha*
- Principal Architectural Changes in Polar Transmitter in DRP Design for WLAN  
*S. Gunturi; J. Tangudu; S. Ramakrishnan; J. Jayawardhan; D. Sahu; S. Mukherjee*

4.4. Optical Switching and  
Networking

- Effect of Link Margin on Spectrum Saving and Advantages of Flexgrid Optical Networking  
*A. Mitra; S. Kar; A. Lord*
- A Novel Optical Control Plane for Switching a Limited Range Wavelength Converter Based Electro-Optical Hybrid Node in Translucent WDM Optical Networks  
*S. Iyer; S. P. Singh*
- Power Impairment Aware Methodology with Segment Based Shared Path Protection in Survivable Optical Packet Switched Networks  
*R. Pandya; V. Chandra; D. Chadha*
- 4x4 Optical Data Vortex Switch Fabric: BER Analysis  
*S. Gopalan; D. Chadha; V. Chandra*

2015-2315 Banquet

**SUNDAY FEBRUARY 17, 2013**

0815 onwards Reception and  
Registration

0830-0930 Plenary Lecture:  
"Implementing a Wireless  
Geophysical Sensor Network"  
Tracy Camp

Department of Electrical  
Engineering and Computer Science  
Colorado School of Mines

0930-0945 Tea

0945-1130 Sessions  
1.5, 2.5, 3.5, 4.5 (Parallel)

1.5. Cognitive Radio

- Robust Dual Cumulative Sum Algorithm for Cooperative Spectrum Sensing  
*S. Kadam; G. Sharma; R. K. Bansal*
- Cooperative Spectrum Sensing Under Noisy Control Channel for Cognitive Radio Network  
*S. Sesham; S. Sabat; S. K. Udgata*

- Cooperative Spectrum Sensing with Censoring of Cognitive Radios in Rayleigh Fading Under Majority Logic Fusion  
*S. Nallagonda; S. Dhar Roy; S. Kundu; G. Ferrari; R. Raheli*
- On the Performance of Generalized Energy Detector Under Noise Uncertainty in Cognitive Radio  
*S. S. Kalamkar; A. Banerjee*
- Subcarrier and Power Allocation Schemes for Multiuser OFDM-based Cognitive Radio Systems  
*S. Chakraborty; P. Dhanuka; Anand Kumar; S. P. Maity*
- Cognitive Radio Implementation for a Frequency Hopping Primary Signal  
*Prasanna R.; B. Amrutur*

2.5. Microwaves and Antennas II

- Implantable CPW Fed Circular Slot Antenna for ISM Band  
*S. A. Kumar; T. Shanmuganatham*
- A Compact and High Performance Band-Stop Filter Using Open Complementary Split Ring Resonator  
*K. V. P. Kumar; S. S. Karthikeyan*
- Concurrent 85GHz/94GHz Slotted Gap Coupled Parasitic Microstrip Antenna for Millimeter Wave Applications  
*S. Agarwal; N. P. Pathak; D. Singh*
- Design, Analysis and Simulation of Hybrid Integrated NRD Guide Based QPSK Modulator for LMDS Applications At 28GHz  
*S. K. Bhagat; A. Yadav; Vivek Sharma; N. P. Pathak*
- Design of a Practical Dual-band Planar Monopole Antenna for WLAN and WiMAX Applications  
*S. V. Reddy; Aditya Singh; Y. Nath; M. J. Akhtar*
- Implantable CPW Fed Z-Shaped Antenna for ISM Band  
*S. A. Kumar; T. Shanmuganatham*
- Modeling, Design, and Automation of a 5 Gbps Serial Link Transceiver with Jitter Cancellation  
*N. Baladhandapani; T. Kukal; S. Prakriya*

3.5. Pattern Recognition and  
Machine Intelligence

- Statistical Analysis of Protein Molecules  
*K. Shah*

- An Efficient Multiclassifier System Based on Convolutional Neural Network for Offline Handwritten Telugu Character Recognition  
*S. Soman; A. K. Nandigam; S. Chakravarthy*
- Handwritten Assamese Numeral Recognizer Using HMM & SVM Classifiers  
*B. Sarma; K. Mehrotra; K. N. Rathlavath; S. R. Mahadeva Prasanna; S. Belhe; C. Mahanta*
- Least Significant Bit Matching Steganalysis Based on Feature Analysis  
*L. Vashishtha; T. Dutta; A. Sur*
- Assamese Spoken Query System to Access the Price of Agricultural Commodities  
*S. Shahnawazuddin; D. Thotappa; B. Dev Sarma; A. Deka; S. R. Mahadeva Prasanna; R. Sinha*
- Chronology of Sanskrit Texts: An Information-Theoretic Corroboration  
*A. A. Deshmukh; S. Jana*

#### 4.5. Network Systems and Security

- Performance Analysis of BitTorrent Protocol  
*P. Sharma; A. Bhakuni; R. Kaushal*
- Comprehensive Multimedia Encryption System Generalization and Comparison  
*G. Ramani; N. Kumar; B. Das*
- A Rule Relation Calculus for Verification and Validation of Firewalls  
*S. Kalita; S. M. Hazarika*
- A More Accurate Completion Condition for Attack-Graph Reconstruction in Probabilistic Packet Marking Algorithm  
*S. Saurabh; A. S. Sairam*

1135-1320 Sessions

1.6, 2.6, 3.6, 4.6 (Parallel)

#### 1.6. Wireless Communications II

- Bandwidth Partitioning and SINR Threshold Design Analysis of Fractional Frequency Reuse  
*S. Boddu; A. Mukhopadhyay, B. V. Philip, S. S. Das*
- Impact of Reduced Antenna Spacing on the Post-processing SINR of Interference Rejection Combining in Cellular Downlink Receivers  
*K. S. Karthik; B. Ramamurthi*
- Multirate Schemes for WH-spread-CI/MC-CDMA Over Correlated Frequency Selective Channel  
*M. Mukherjee; Preetam Kumar*

- Pilot Aided Joint Estimation of Doubly Selective Channel and Carrier Frequency Offset in High Mobility OFDMA Uplink  
*P. Muneer; S.M. Sameer*
- Power Allocation for OFDM-based Cognitive Radio Systems Under Average Interference Constraint  
*K. P. Kulkarni; A. Banerjee*
- A FICA Based Contention Scheme for WLAN with Non Cooperation  
*T. Sarkar; T. Bodas*
- Performance Analysis of Dual-Switch and Stay' Combiner Over Correlated KG Fading Channels  
*B. R. Manoj; P. R. Sahu*

#### 2.6. Microwaves and Antennas III

- Broadband Sectoral Slot Cut Microstrip Antenna  
*A. Deshmukh; A. Jain; K. P. Ray*
- Broadband Gap-Coupled Slot Cut Rectangular Microstrip Antennas  
*A. Deshmukh; A. Joshi; T. Tirodkar; K. P. Ray*
- Adaptable Concurrent Dual-Band Symmetrical Stubbed T-Junction Power Splitter  
*Vivek Sharma; N. P. Pathak*
- Design and Analysis of Fractal Based UWB Monopole Antenna  
*A. Karmakar; U. Banerjee; R. Ghatak; D. Poddar*
- Design of a Compact Reconfigurable RDRA  
*R. D. Gupta; S. Agrawal; S. Behera*

#### 3.6. Image and Video Processing I

- Low Complexity Detail Preserving Multi-Exposure Image Fusion for Images with Balanced Exposure  
*A. V. Vanmali; S. Deshmukh; V. M. Gadre*
- An Adaptive Wavelet Thresholding Image Denoising Method  
*M. Biswas; H. Om*
- A Robust Compressed Domain Video Watermarking in P-frames with Controlled Bit Rate Increase  
*T. Dutta; A. Sur; S. Nandi*
- Contrast Enhancement of Medical Images Using Type II Fuzzy Set  
*T. Chaira*
- Enhancement of Inscription Images  
*Indu S.; R. Pandey; Jayanthi N.; G. Bhola; S. Chaudhury*

#### 4.6. MANETs and Social Networks

- Mobile Agent Based Node Monitoring Protocol for MANETs  
*M. B. Channappagoudar; V. Pallapa*
- Traffic Patterns Affecting Disruption in Vehicular Communication  
*S. F. Hasan; N. H. Siddique; S. Chakraborty*
- Tracking On-line Radicalization using Investigative Data Mining  
*P. Wadhwa; M. P. S. Bhatia*
- Rumor Dynamics with Inoculations for Correlated Scale Free Networks  
*Anurag Singh; Y. N. Singh*
- A Method of Designing an Access Mechanism for Social Networks  
*S. S. Ninawe; V. Pallapa*
- Bridging the Digital Gap in Rural India VIVEKDISHA: A Novel Experience  
*P. Goswami; R. Mahapatra; Sw. Divyasananda*

1320-1430 Lunch

1430-1615 Sessions

1.7, 2.7 (Parallel)

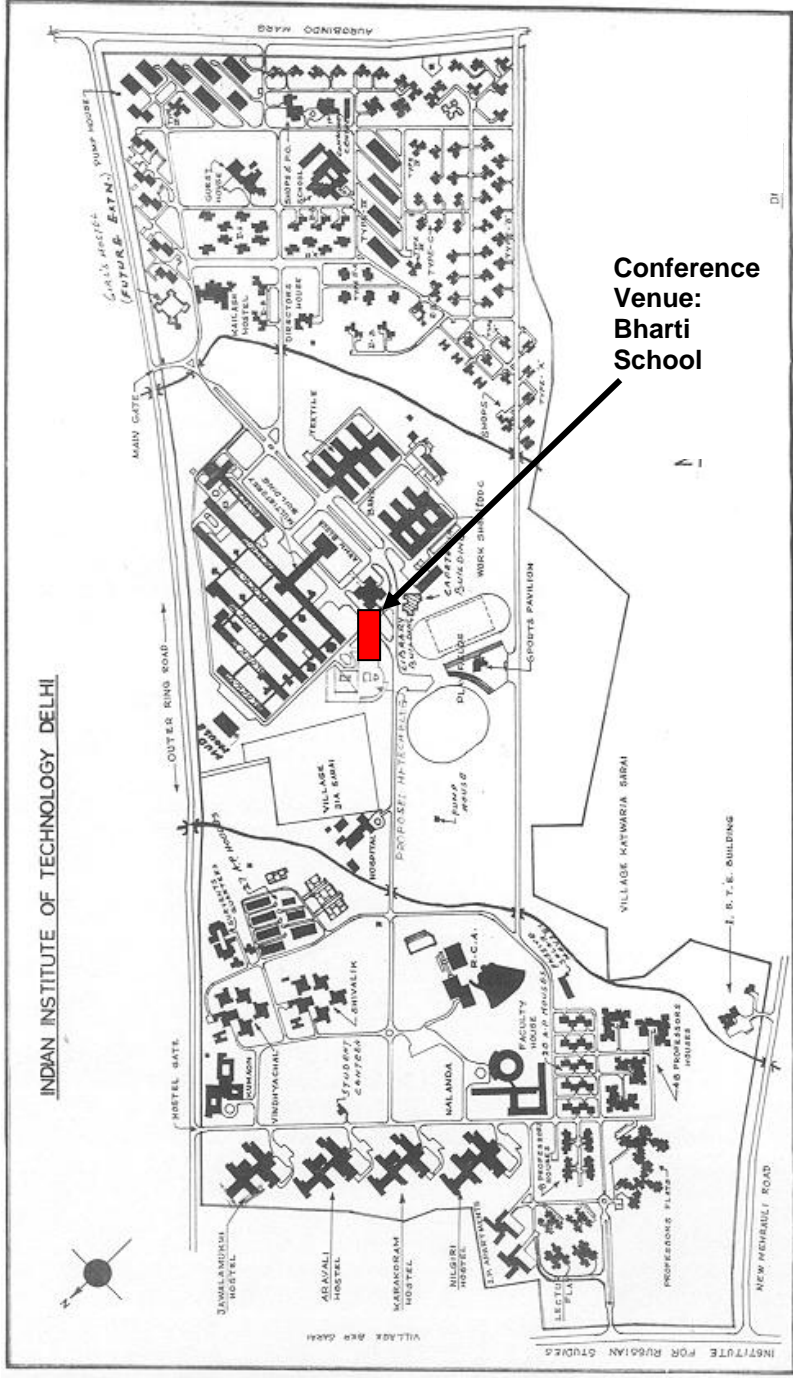
#### 1.7. Image and Video Processing II

- Sparsity Based Segmentation in Hybrid Color Space  
*R. Ranjan; R. Bhatt; Sumana Gupta; V. K. Subramanian*
- Dynamic Texture Synthesis for Video Compression  
*S. Bansal; S. Chaudhury; B. Lall*
- Noise Induced Segmentation of Noisy Color Image  
*O. Krishna; R. K. Jha; A. Tiwari; B. Soni*
- Parameterized Estimation of Common Motion for Image and Depth Sequences  
*M. Sudhakar; K. K. Vupparaboina; S. Jana*

#### 2.7. Advanced Signal Processing

- Low Complexity Architecture of Linear Periodically Time Varying Filter Based on a Switching Representation  
*Sridevi S.; R. Dhuli; Saketh K.; L. H. V. P. Puvvada*
- Matrix Adaptive Synthesis Filter for Uniform Filter Bank  
*S. Patel; R. Dhuli; B. Lall*
- Wavelet Regularization for Frequency Domain Volume Rendering  
*C. Marathe; V. M. Gadre*
- Improving the Performance of the LMS Algorithm Via Cooperative Learning  
*R. L. Das; B. K. Das; M. Chakraborty*
- Multi Stage Adaptive Filter for Identification of the Systems with Variable Sparsity  
*B. K. Das; R. L. Das; M. Chakraborty*
- An Algorithm to Mitigate Channel Distortion in Blind Modulation Classification  
*G. J. Phukan*

1615-1700 High Tea



Conference  
Venue:  
Bharti  
School