2012 Ninth International Conference on Wireless and Optical Communications Networks

(WOCN 2012)

Indore, India
20-22 September 2012
WOCN 2012 CONFERENCE PROGRAM

Conference Venue @Indore Radisson Blu
Tutorial @Sri Aurobindo Institute of Technology, Indore

20 September, Thursday - Tutorials all day
Location: Sri Aurobindo Institute of Technology, Indore

Tutorials address location for entire day:

Engineering Conference Hall
Sri Aurobindo Institute of Technology
SAIMS Campus, Indore Ujjain Highway, Near MR-10 crossing, at Indore (M.P.)-453111
Phone: +91 731 4231611 or +91 731 4231616

Tutorial – 1
9:00 am - 10:00 pm - Room: Engineering Conference Hall

Associate Professor Vivek S Deshpande, Department of Information Technology
MIT College of Engineering, Pune, India.

Title: Challenges in Wireless Communication Networks

Tutorial – 2
2:00 pm - 5:00 pm - Room: Engineering Conference Hall

Professor Dr. Alok Kumar Das, Electronics & Communication Engineering Deptt.
Jadavpur University, Kolkata

Title: Optical Communications Networks and Devices

Tutorial – 3
10:30 am - 12:00 pm - Room: Engineering Conference Hall

Dr. Prakash D. Vyavahare, Senior Member IEEE, Professor, Department of Electronics and Telecom.
Engg. S. G. S. Institute of Technology and Science, INDORE (M. P.)

Title: Near Shannon Limit Channel Codes: Modified Turbo Codes

21 September, Friday - WOCN2012 Conference
Location: Indore Radisson Blu

8:45 – 10:30 am - Opening remarks - Room: Summit III & IV

Professor Dr. Durgesh Kumar Mishra, Sri Aurobindo Institute of Technology, Indore, India

Keynote Speakers / Invited Talk
Dr. Arvind K. Mishra, Karlsruhe Institute of Technology (KIT), Germany

Title: **OFDM Signal Transmission using Directly Modulated Lasers for Wireless Backhauling**

Professor Dr. Yatindra Nath Singh, EE/ACES, IIT Kanpur

Title: **Research issues in P2P computing**

10:00 am - 10:30 am also Coffee Break

10:30 am - 12:30 pm - Room: Summit III

SESSION 1. WIRELESS: Dynamic spectrum Access/Cognitive Radio Networks
Chair: Associate Professor Vivek S Deshpande, MIT College of Engineering, Pune, India

- Spectrum Sharing in Multi-hop Cognitive Radio Networks with Optimal Power Control  
  by Shobhita Gupta, Shashikala Tapaswi  
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- Anti-jamming in Cognitive Radio Networks Using Reinforcement Learning Algorithms  
  by Sangeeta Singh, Aditya Trivedi  
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- Priority Based MAC Scheme for Cognitive Radio Network: A Queuing Theory Modelling  
  by Lokesh Chouhan, Aditya Trivedi  
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- Secure and Trusted algorithm for Cognitive Radio Network  
  by Rajni Dubey, Sanjeev Sharmay, Lokesh Chouhan  
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- DSAT-MAC : Dynamic Slot Allocation based TDMA MAC protocol for Cognitive Radio Networks  
  by Satyam Agarwal, Rajeev K. Shakya, Y. N. Singh, Amitabha Roy  
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10:30 am - 12:30 pm - Room: Summit IV

SESSION 2. OPTICAL: Optical Communications and Networking
Chair: Professor Dr. Alok Kumar Das, Gargi Memorial Institute of Technology, Kolkata, India

- WDM PON Enhanced Capacity Architecture for Unicast, Multicast and Broadcast through Efficient Sideband Carrier Modulation  
  by Gaurav Pandey, Nupur Agarwal, Aditya Goel  
  29

- Design and Simulation of CSRZ Modulated 40 Gbps DWDM System in Presence of Kerr Non Linearity  
  by Lucky Sharan, V K Chaubey  
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- Comparison of Metaheuristic Approaches for Impairment Aware Transparent Optical Networks  
  by Urmila Bhanja, Debajyoti Mishra  
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- A Novel Architecture for Full Duplex WDM Radio Over Fiber System Converged With Wired Network Using Dual Drive MZM and Light Remodulation using RSOA  
  by Pradeep R, Karthikeya G. S, Jeevan M, Vijayakumar N  
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12:30 pm - 1:30 pm - Lunch

1:30 pm - 3:00 pm - Room: Summit III

SESSION 3. Application of Communications and Information Security
Chair: Professor Dr. Yatindra Nath Singh, EE/ACES, IIT Kanpur
An Improved Cryptographic Algorithm using UNICODE and Universal Colors  
by Hemant Suryavanshi, Pratosh Bansal

Automated Multilevel Defence Model to Investigate Packets for Web Interface  
by Seema Verma, Tanya Singh

Digital Watermark Performance with Visual Secret Sharing on Either of RGB Plane of Colour Image  
by Ankita Sengar, Preeti Verma

Dynamic Key Management Method for Wireless Sensor Networks  
by Vijay Anand H.M, G.Varaprasad

Efficient Algorithm for Intrusion Attack Classification by Analyzing KDD Cup 99  
by N. S. Chandolikar, V. D. Nandavadekar

12:30 pm - 1:30 pm - Lunch
1:30 pm - 3:00 pm - Room: Summit IV
SESSION 4. MIMO and Beam forming and OFDM
Chair: Dr. Arvind K. Mishra, Karlsruhe Institute of Technology, Germany

Space-Time-Frequency Turbo Coded MIMO-OFDM Systems Over Frequency Selective Fading Channels  
by Neeraj Shrivastava, Sapna Bishoriya, Aditya Trivedi

Time and Frequency Synchronization Techniques for OFDM Systems  
by Ratna Gour, Raksha Upadhyay

Investigation Effect of Phase Noise of OFDM System and Realization LO (Local Oscillator) with and without Phase Locked Loop (PLL)  
by Krishna Kumar Pandey, Uma Rathore Bhatt, Raksha Upadhyay

Optimized Data Allocation & Combining Scheme for ICI Self Cancellation in OFDM Systems  
by Ashish Goel, Ankit Nagpal, Jasmeet Kaur

3:00 pm - 3:30 pm - Coffee Break
3:30 pm - 5:00 pm - Room: Summit III
SESSION 5. Mobile Ad-Hoc and Sensor Mesh Networks I
Chair: Dr. Muralidhar Kulkarni, National Institute of Technology Karnataka, Surathkal, Karnataka, India

Performance Simulation of MANET Protocols with the Combination of Horizontal and Vertical Topology using NS2  
by Santosh Kumar Soni

A Novel Spatial Correlation Model for Wireless Sensor Network Applications  
by Rajeev K. Shakya, Yatindra Nath Singh, Nishchal K. Verma

Mobile Ad hoc Network Performance Improvement Using Strategical RED  
by Jeetendra Kumar Patel, Jigyasu Dubey
Impact of Mobility and Terrain Size on Performance of AODV and DSR in Mobile Ad hoc Network  
*by* Banoj kumar Panda, Manoranjan Das, Benudhar Sahu, Rupanita Das

A Comparative Study on Routing schemes of IP based Wireless Sensor Network  
*by* Suman Sankar Bhunia, Dilip Kanti Sikder, Sarbani Roy, Nandini Mukherjee

A Density Control Energy Balanced Clustering Technique for Randomly Deployed Wireless Sensor Network  
*by* Sanjeev Kumar Gupta, Neeraj Jain, Poonam Sinha

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<td>3:30 pm - 5:00 pm</td>
<td>Room: Summit IV</td>
<td>Professor Dr. Prakash D. Vyavahare, Department of Electronics and Telecom Engg. S. G. S. Institute of Technology and Science, Indore</td>
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Automated Patch System to Interface between HF and VHF Radios with De-Noising using Wavelet Transform  
*by* Rajorshee Raha, Arnab Pramanik

Performance Analysis of Effect of Transmission Power in Mobile Ad hoc Network  
*by* Manoranjan Das, Banoj Kumar Panda, Benudhar Sahu

Performance Comparison of 802.11 DCF in Fading with OFDM and Diversity  
*by* Raksha Upadhyay, Sanjiv Tokekar, P. D. Vyavahare

Self-Adjustment Channel Rank Based on Reordered Cholesky Factorization  
*by* Rabah Maoudj, Christophe Alexandre, Michel Terre

Decision Driven Risk Measurement Model to Quantify Reengineering Risk in Stakeholder Perspective of Legacy System  
*by* Er. Anand Rajavat, Vrinda Tokekar

Liquid Crystal Polymer Dual Band Pan Slot Antenna  
*by* B.T.P.Madhav, P. Syam Sundar, K. Sarat Kumar, A.N.V.Kishore, Ankit Kumar Jain

Neural Modelling Of Smart Antenna Array Using Radial Basis Function for Beam Shipping of GSM Transmitter  
*by* Rahul Shrivastava, Abhishek Rawat, Yogendra Kumar Jain, R.N. Yadav, S.C. Shrivastava

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<td>Professor Aditya Trivedi, IIITM, Gwalior, India</td>
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Performance Study of Ad-hoc Routing Protocols for IEEE802.11 and IEEE802.11e Standards  
*by* Shailendra Kumar Pathak, Raksha Upadhyay, Rajdeep Shrivastava

A Survey on Threats in Routing Security in MANET for Trust Management using SMC Protocols  
*by* Shubham Joshi, Durgesh Kumar Mishra
by Nishant Joshi D, K S Shivaprakasha, Muralidhar Kulkarni

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by Jayashree Agrakhed, G. S. Biradar, V. D. Mytri

Stimulate Non-Cooperative Nodes Using Incentive based Mechanism in MWN  179
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by K. A. Unnikrishna Menon, Deepa Maria, Hemalatha Thirugnanam

**5:00 pm - 6:30 pm - Room: Summit IV**
**SESSION 8. Simulation, Modeling, Analysis and Performance Evaluation II**
**Chair: Dr. Ram Bilas Pachori, IIT, Indore, India**

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by Abdul Latif Sarker, Moon Ho Lee

A Performance Analysis of Network under SYN-Flooding Attack  194
by Rakesh Kumar Sahu, Narendra S. Chaudhari

A New Tree Based Double covered Broadcast Protocol for VANET  197
by Yashpal Singh, Anurag Sharma

Pre-processing Matrix Based Iterative Detection Algorithm in Asynchronous V-BLAST System  200
by Tian Liu, Taofu Mo, Liang Han, Youxi Tang

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by Arnab Pramanik, Rajorshee Raha

A Highly Efficient Distributed Indexing System Based on Large Cluster of Commodity Machines  209
by Govind S. Pole, Madhuri A. Potey

Multiclass Classifier Designing by Modified Crossover and Point Mutation Technique using Genetic Programming  213
by Anwar Mohd Mansuri, Deepali kelkar, Roopesh Kumar, Prithviraj Singh Rathore, Amit Jain

**6:30 – 7:30 pm Panel Session**
**Panel Title: Compact Waveguide Devices and Switching Implementation in Optical Network**

**7:30 - 10:30 pm Banquet Dinner**
22 September, Saturday - WOCN2012 Conference

8:30 am – 9:00 am - Room: Summit III & IV

Keynote Speakers / Invited Talk

Swati Chaudhari, Raja Ramanna Centre for Advanced Technology (RRCAT), Department of Atomic Energy (DAE), Govt. of India, Indore.

Title: Next Generation Protocol (NGP): A Roadmap

9:00 am - 10:30 am - Room: Summit III

SESSION 9. Health Care and Home Networking

Chair: Saroj Shakya, Nepal College of Information Technology, Nepal

An Intelligent Decision Support System for Enhancing an M-Health Application by Maneesha V Ramesh, Anu T. A., Hemalatha Thirugnanam

Swift - A Low Complexity Protocol for Event & Location Tracking in Wireless Sensor Networks by Dheryta Jaisinghani

A Mobile Software for Health Professionals to Monitor Remote Patients by Maneesha V Ramesh, Sruthy Anand, Rekha P

Interference Mitigation Between WBAN Equipped Patients by Judhistir Mahapatro, Sudip Misra, Manjunatha M, Nabiul Islam

8:30 am - 10:00 am - Room: Summit IV

SESSION 10. Higher and Lower layers protocols, Network Management and Services

Chair: Dr. N.S. Chouadri, IIT, Indore, India

Design and Implementation of a Cross Layered Protocol Stack for Sensor Networks in an Indoor Environment by Anupama K r, Nishad Kamdar, Dhruv Vyas, Ishaan Baokar, Siddharth Sahu, Philip George

A Pragmatic Carbon Tax Billing Regime by Nakul Vyas

An Approach to Improve Performance of a Packet-Filtering Firewall by Ujita Thakar, Lalit Purohit, Akhilash Pahade

10:00 am - 10:30 am - Coffee Break

10:30 am - 12:30 pm - Room: Summit III

SESSION 11. WIRELESS Communications and Networking

Chair: Dr. M.G. Sharma, Mahakal Institute of Technology, Ujjain, India

Wireless Automation using ZigBee Protocols by Kartik Rathod, Nilay Parikh, Aesha Parikh, Vrushank Shah

Modified Turbo Codes for Next Generation Wireless Networks by Archana Bhise, Prakash D. Vyavahare
A Novel Connectivity Control Scheme for Next Generation Wireless System by using Short Coverage Antennas 268
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by Anand Bora, Abrar Chapalgaonkar, Nikhil Dalshania, Aditya Bhongle

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10:30 am - 12:30 pm - Room: Summit IV
SESSION 12. Satellite Communications Systems
Chair: Professor Dr. Prakash D. Vyavahare, Department of Electronics and TelecomEngg, S. G. S. Institute of Technology and Science, Indore

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Design of A Compact C-band Microstrip Bandpass Filter for Satellite Communications Applications 307
by Hussein Nasser Sham

Evaluation of Inductive Coupling and RF-DC for Wireless Power Transmission 311
by Amin Mehdipour, Behrouz Moarref, Abouzar Shahraki kia, Marzieh Yazdanipour

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by Hussein Nasser Sham

12:30 pm - 1:30 pm - Lunch
1:30 pm - 3:00 pm - Room: Summit III
SESSION 13. Application of Information and Communications Technologies I
Chair: Professor Dr. Durgesh Kumar Mishra, Sri Aurobindo Institute of Technology, Indore, India

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Comprehensive review and Selection criteria for Virtual Network Computing Technology  
by Marzieh Yazdanipour, Davood Mahmoudi, Afsaneh Yazdanipour, Mina Yazdanipour, Amin Mehdipour

Data Mining: Prediction for Performance Improvement of Graduate Students using Classification  
by Kamal Bunkar, Rajesh Bunkar, Umesh Kumar Singh, Bhupendra Pandya

Data Perturbation and Feature Selection in Preserving Privacy  
by Thanveer Jahan, G.Narsimha, C.V Guru Rao

12:30 pm - 1:30 pm - Lunch  
1:30 pm - 3:00 pm - Room: Summit IV  
SESSION 14. Optical Passive and Active Components and Devices, Internet application and QOS  
Chair: Professor Dr. Alok Kumar Das, Gargi Memorial Institute of Technology, Kolkata, India

A Simple Card to Backplane Polymeric Optical High Speed Interconnect Coupler for Computer Motherboards  
by Alok K Das, Biplab K Ray

Reduction of Channel Power Instabilities in Raman Amplifiers for ROADM Configured WDM Networks  
by Pradeep R, Jeevan M, Karthikeya G.S, Vijayakumar N

An Enhance Approach For Web Services Discovery with QoS  
by Abhishek Jain, Santosh Easo

Designing Secure Email Infrastructure  
by Dharmendra Choukse, Umesh Kumar Singh, Lokesh Laddhani, Rekha Shahapurkar

Enhanced Traffic Aware LSP Selection Method in MPLS Networks  
by Ravindra Kumar Singh, N. S. Chaudhari, Kanak Saxena

3:00 pm - 3:30 pm - Coffee Break  
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SESSION 15. Application of Information and Communications Technologies II  
Chair: Professor Dr. Yatindra Nath Singh, EE/ACES, IIT Kanpur

A Framework for Pure Peer-to-Peer Computing System  
by Jigyasu Dubey, Vrinda Tokekar

Image Distortion in AWGN Communication Channel  
by Madan Gopal Sharma Mieee

Machine Learning Techniques for Mobile Intelligent Systems: A Study  
by Archana Chaudhary, Savita Kolhe, Raj Kamal

Complete Industrial Solution for Automation in Temperature and Humidity Monitoring using LabVIEW  
by Rohit Agrawal, Saumitra Mohan
SESSION 16. WLAN and WIMAX and Mobile Communications
Chair: Associate Professor Vivek S Deshpande, MIT College of Engineering, Pune, India

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~ End of WOCN2012 conference program ~