

Program Schedule
2nd International Conference on Trends in Optics & Photonics, 2011
 December 7 – 9, 2011, Kolkata, India

Dec 7, 2011		
9.00 AM-10.00 AM	Registration	
10.00 AM-10.45 AM	Inauguration	
10.45 AM-11.00 AM	Tea/Coffee Break	
11.00 AM-11.45 AM	Key Note Address : Prof. Jeremy Coupland	Chair: Prof. J Ojeda-Castaneda
11.45 PM-12.15 PM	Plenary Session 1: Prof Sushanta Duttagupta	Chair : Prof. L.N. Hazra
12.15 PM-12.45 PM	Plenary Session 2: Prof. J. Cole	
12.45 PM-1.15 PM	Prof. Manoranjan De – A Tribute	
1.15 PM-2.15 PM	Lunch	
2.15 PM-3.30 PM	Technical Session 1.1 Optical Metrology	Technical Session 1.2 Nonlinear Optics
3.30 PM-3.45 PM	Tea/Coffee Break	
3.45 PM-5.00 PM	Technical Session 2.1 Imaging Technology-1	Technical Session 2.2 Biophotonics
5.00 PM-6.15 PM	Technical Session 3.1 Diffractive Optics	Technical Session 3.2 Fiber Optic Sensors and Instrumentation
6.15 PM-8.00 PM	Cultural Program	
8.00 PM-9.00 PM	Dinner	
Dec 8, 2011		
9.00 AM-10.00 AM	Registration	
10.00 AM-11.15 AM	Technical Session 4.1 Guided wave, Nonlinear & Quantum Optics	Technical Session 4.2 Optical Techniques for Material Characterization
11.15 AM-11.30 AM	Tea/Coffee Break	
11.30 AM-12.00 Noon	Plenary Session 3: Dr. Upendra Singh	Chair: Prof. A. Ghosh
12.00 Noon-12.30 PM	Plenary Session 4: Prof. Y. Otani	
12.30 PM-1.00 PM	Plenary Session 5: Prof. J Ojeda Castaneda	
1.00 PM-2.00 PM	Lunch	
2.00 PM-3.15 PM	Technical Session 5.1 Imaging Technology-2	Technical Session 5.2 Integrated Optics & Devices
3.15 PM-4.30 PM	Technical Session 6.1 Optical System Design	Technical Session 6.2 Laser Systems and Applications
4.30 PM-4.45 PM	Tea/Coffee Break	
4.45 PM-6.00 PM	Technical Session 7.1 Optical Metrology-2	Technical Session 7.2 Optical Interferometry, Holography & Laser Speckle
6.00 PM-6.30 PM	Plenary Session 6: Prof. B.P. Pal	Chair: Dr. Upendra Singh
6.30 PM-7.00 PM	Plenary Session 7: Prof. L.N. Hazra	
7.00 PM-8.00 PM	Banquet Dinner	
Dec 9, 2011		
10.00 AM-10.30 AM	Plenary Session 8: Prof. D. Goswami	Chair: Prof. J Coupland
10.30 AM-11.00 AM	Plenary Session 9: Prof. T. Yatagai	
11.00 AM-12.15 PM	Technical Session 8.1 Imaging Technology-3	Technical Session 8.2 Photonic Components & Devices
12.15 PM-1.15 PM	Lunch	
1.15 PM-2.30 PM	Technical Session 9.1 Nano-Photonics & Plasmonics	Technical Session 9.2 Optical Techniques
2.30 PM-3.30 PM	Technical Session 10.1 Optical Network & Components	Technical Session 10.2 Optical Computing
3.30 PM-4.00 PM	Valedictory & Closing Ceremony	

Detailed Schedule

Technical Session 1.1

Dec 7, 2011, Time: 2.15 PM-3.30 PM

Optical Metrology-1

Chair: Prof. K. Bhattacharya

Sanjib Chatterjee (Invited)- [On Applications of Cyclic Path Optical Configuration](#)

Paper No.8: K K Pant, L M Pant, M P Singh and A Ghosh, [Measurement of Short Focal Length lenses using Lateral Magnification method and its application to Micro Lens Array](#)

Paper No. 22: Sulochana K, Divya Kannan and Vasa Nilesh J.. [Simultaneous Sensing of Ammonia and Water Vapor Using Single Super Luminescent Diode for Emission Monitoring](#)

Paper No.72: R Venkateswaran, K.V Sriram, T Krishna Murthy and Prashant Chakraborty. [High Speed Aspheric Fabrication by using CNC-Controlled Bonnet Polishing](#)

Paper No.82: Rahul Mandal, Kanik Palodhi, Jeremy Coupland, Richard Leach and Daniel Mansfield. [Measurement of the Point Spread Function in Coherence Scanning Interferometry](#)

Technical Session 1.2

Dec 7, 2011, Time: 2.15 PM-3.30 PM

Non-Linear Optics and Related Devices

Chair: Prof. A Basuray

Paper No.12: Adish Bindal and Surinder Singh. [Crosstalk Analysis in Fiber Raman Amplifiers for WDM Systems](#)

Paper No.32: Man Mohan Gupta, Arpita Shrivastava and Sarang Medhekar. [Switching Behavior of Photonic Crystal based Nonlinear Mach-Zehnder Interferometer](#)

Paper No.42: Parthasarathi Gupta. [Squeezing of Radiation in Coherent Anti-stokes Hyper-Raman Scattering Process](#)

Paper No.44: Shubhrajyotsna Aithal, Sreeramana Aithal and Gopalkrishna Bhat. [Nonlinear Absorption Studies of Disperse Orange doped Polymer Film](#)

Paper No.54: Ritapa Bhattacharjee, Sivabalan S, Senthilnathan K and Ramesh Babu P. [Designing Photonic Crystal Fiber for Enhanced Bandwidth as well as Interaction Length for Second Harmonic Generation](#)

Paper No.61: P. V. Kanaka Rao, Y. Suryanarayana Rao, A. Bindu Madhavi and T. Lakshmi Devi. [Polarization Mode Dispersion in Soliton systems](#)

Paper No.62: Uthayakumar T, Vasantha Jayakantha Raja R, Nithyanandan K and Porsezian K. [On the Propagation of Light through a Twin Core Photonic Crystal Fiber at 850 nm](#)

Technical Session 2.1

Dec 7, 2011, Time: 3.45 PM-5.00 PM

Imaging Technology-1

Chair: Prof. Y. Otani

Maxim Tomilin (Invited) [Viewing angle improvements in liquid crystal displays](#)

Paper No.1: Debesh Choudhury and H. John Caulfield. [Sensing and Perceiving Colors Using Microwaves](#)

Paper No.36: Parul Singh, Dhruv Shah and Arup Banerjee. [Estimated SNR performance of next generation Si based image sensor arrays](#)

Paper No.39: P V Kanaka Rao, B.S.S Sudheer Babu, K Srinivasa Reddy and P Raghavendra Rao. [Mueller Matrix Imaging of wood sample Albizia Odoratissima](#)

Paper No.69: Vishweshwar Rao Budhiraju, T. Krishna Murthy and K.V Sriram. [Development and Characterization of Ultraviolet Imaging Telescope \(UVIT\) Optics in visible & far ultra-violet wavelengths](#)

Technical Session 2.2

Dec 7, 2011, Time: 3.45 PM-5.00 PM

Biophotonics

Chair: Prof. A. K. Chakraborty

Subodh Sharma (Invited). [Characterization of Soft Biomedical Tissues by Elastic Angular Light Scattering](#)

Paper No 3: Mohammad Zaheer Ansari and Nirala A.K.. [Activity assessment of fruits through Biospeckle techniques.](#)

Paper No 20: Vishnu K, Nithyaja B and V P N Nampoori. [Effect of DNA on nonlinear optical properties of Rhodamine 6G – doped Silica Sol gel glasses.](#)

Paper No 48: Somen Ghosh, Sudip Kundu and Ajay Ghosh. [Rapid detection of malaria via digital processing of images of thin smears of peripheral blood.](#)

Paper No 97: Ratan K Saha, Subhajit Karmakar and Madhusudan Roy. [Photoacoustic Assessment of Blood Oxygen Saturation](#)

Technical Session 3.1

Dec 7, 2011, Time: 5.00 PM-6.15 PM

Diffraction Optics

Chair: Prof. A.K. Chakraborty

Paper No 29: Mekala Venkanna and Dasari Karuna Sagar. [Improving the Edge Imaging characteristics of Defocused Coherent Optical Systems by Apodised Shrunken Apertures](#)

Paper No. 37 Shashi Prabhakar, Ashok Kumar, Gangi Reddy, A Aadhi and Ravindra P. Singh. [Determination of Order of Vortex from Intensity Distribution](#)

Paper No. 59 Ravindra Singh, Pravin Vaity, Ashok Kumar, S. G. Reddy and A. Aadhi. [Dynamics of fractional charge optical vortices](#)

Paper No. 60 Pravin Vaity and Ravindra Singh. [Measurement of topological charge of optical vortex using Airy function](#)

Paper No. 83 Nasrin Reza, Pubali Mukherjee and Lakshminarayan Hazra. [Dual Optical Traps using radial Walsh Filters](#)

Paper No. 85 Ujjal Dutta and Lakshminarayan Hazra. [Imaging Performance of mixed zone plates and kinoform lenses](#)

Technical Session 3.2
Dec 7, 2011, Time: 5.00 PM-6.15 PM

Fiber Optic Sensors and Instrumentation

Chair: Prof. A. Basuray

Sunil Khijwania (Invited)- [Optical Fiber Sensors: A Versatile Platform for All-optical Structural Health Monitoring](#)

Paper No. 25: Jinesh Mathew, Yuliya Semenova and Gerald Farrell. [Polymer Coated Photonics Crystal Fiber Interferometer for Relative Humidity Sensing](#)

Paper No. 28: Paradorn Pakdeevanich. [Plastic Fiber-Optic pH sensor using Liquicoat® solution and pH indicator](#)

Paper No. 52: Manjusha Ramakrishnan, Ginu Rajan, Yuliya Semenova, Andrzej Domanski, Tomasz Wolinski, Anna Boczkowska and Gerald Farrell. [Detection of thermal expansion of carbon and glass reinforced fiber composite materials using polarimetric and fiber Bragg grating sensors](#)

Technical Session 4.1
Dec 8, 2011, Time: 10.00 AM-11.15 AM
Guided Wave, Nonlinear & Quantum Optics

Chair: Prof B.K. Das

A.K. Gupta (Invited) - [Nonlinear Optical Materials for Mid-Infrared and Terahertz Generation](#)

Paper No. 33: Ram Krishna Sarkar, Shraddha Prasad and Sarang Medhekar. [Spatial Soliton Pairing in Radially Inhomogeneous Nonlinear Media](#)

Paper No. 43: Indranil Bayal, Bibhas Kumar Dutta, Pradipta Panchadhyayee and Prasanta Kumar Mahapatra. [Phase control of absorption, dispersion and gain of weak signal field in erbium doped optical fiber](#)

Paper No. 64: Nithyanandan K, Vasantha Jayakantha Raja R, Uthayakumar T and Porsezian K. [Modulational Instability in the regime of minimum group velocity dispersion for a relaxational saturable medium](#)

Technical Session 4.2
Dec 8, 2011, Time: 10.00 AM-11.15 AM
Optical Techniques for Materials Characterization

Chair: Prof. S.K. Sarkar

G.R.C. Reddy (Invited) - [A Comparison of Interferometric Methods for Temperature Measurements in Small Channels](#)

Paper No.9: Sathiesh Kumar, Nilesh Vasa and R. Sarathi. [Optical emission spectroscopy technique for studying lightning discharge characteristics on glass fiber reinforced plastic](#)

Paper No.16: Sk. Faruque Ahmed, Myoung-Woon Moon and Kwang-Ryeol Lee. [Optical Properties of Nanostructure Polypropylene Induced by Ar plasma irradiation](#)

Paper No. 55: Sandip Kamat, Vaishali Patil, Vijaya Puri and R. Puri. [Effect of thickness on the optical properties of vacuum evaporated poly \(3-methyl thiophene\) thin films](#)

Paper No. 94: Ranjit Das, Ajoy Ghosh and Rajib Chakraborty [Modified Fabry-Perot Interferometric technique for accurate alignment in the study of electro-optic modulation in LiNbO₃](#)

Technical Session 5.1

Dec 8, 2011, Time: 2.00 PM-3.15 PM

Imaging Technology-2

Chair: Prof. A. Ghosh

S.K. Saha (Invited): [Aperture Synthesis at Optical Wavelengths](#)

Paper No. 75: Pradipta Banerjee and Asit Datta. [An Unconstrained Frequency Domain Correlation Filter for Face Recognition with Reduced Misclassification rate](#)

Paper No. 38: Abhijit Chatterjee, Dhruv Shah, Arup Banerjee and Asit Patra. [Identification of Imaging Detector for Solar Coronagraphy](#)

Paper No. 49: Jorge Ojeda-Castaneda and Cristina Margarita Gomez-Sarabia. [Extending the Depth of Field: two simple approaches](#)

Paper No. 65: P.V. Kanaka Rao, K. Raj Kumar, G. Venugopal, M. Vasu Babu and M. Chandrashekar. [Shape from Shading models in Image Processing](#)

Technical Session 5.2

Dec 8, 2011, Time: 2.00 PM-3.15 PM

Integrated Optics & Devices

Chair: Prof. R. Chakraborty

Bijoy Krishna Das (Invited)- [Research Advances in SOI Based Waveguide Sensors](#)

Paper No. 34: Arpita Srivastava, Man Mohan Gupta and Sarang Medhekar. [Switching Behavior of a Nonlinear Mach-Zehnder Interferometer With Different Saturable Nonlinearities](#)

Paper No. 2: T. Ghosh, B. Samanta, P.C. Jana and P. Ganguly. [Simultaneous Determination of Refractive index Profile and Mode Index of single-mode LiNbO₃ Channel Waveguides](#)

Paper No. 57: Jyotiprakash Yadav, Sandip Kamat, Aviraj Jatratkar, Vijaya Puri and Ravindra Puri. [Vapour chopped polyaniline \(acidic\) thin film optical waveguide for integrated optics: effect of ambient air ageing](#)

Paper No. 80: Sushmita Paul and Mina Ray. [Effect of gap-distance on the Quality factor of a waveguide-coupled silica microring resonator](#)

Technical Session 6.1
Dec 8, 2011, Time: 3.15 PM-4.30 PM
Optical System Design

Chair: Dr. Amitava Ghosh

Paper No. 10: Arijit Saha, Kallol Bhattacharya and Ajoy Kumar Chakraborty. [A Zero-Order Achromatic Quarter-Wave Plate for Visible Spectrum](#)

Paper No. 17: Surajit Mandal and Ajay Ghosh. [Frequency Response Characteristics of a Birefringent Lens under Broadband Illumination](#)

Paper No. 18: Vishal Bhushan, Vimal Kant Mishra, Parmod Kumar Sharma and Ikkal Singh. [Optics Design for LWIR objective lens using Diffractive Optical Element](#)

Paper No. 70: Prashant Chakraborty and C.L Nagendra. [Design of Micro Bolometer Array Based Earth Sensor Optics](#)

Paper No. 84: Sourav Pal and Lakshminarayan Hazra. [Structural Design of Four-component Singular Type Mechanically Compensated Zoom Lenses](#)

Technical Session 6.2
Dec 8, 2011, Time: 3.15 PM-4.30 PM
Laser Systems and Applications

Chair: Dr. A.K. Gupta

S.K. Sarkar (Invited)- [Short tube He-Ne laser with radio frequency transverse discharge](#)

Paper No. 26: Venkataramesh Bhimasingu and Nilesh J. Vasa. [Pulsed Laser Deposition of SiC Thin Films on Crystalline-Si and Glass Substrates](#)

Paper No. 31: Faramarz Rahnema and Farzad Rahnema. [Potentiality of 275 nm Pulsed UV Laser for Photoablation of Parylene-C Coatings](#)

Paper No. 35: G. Amutha, Iyamperumal Anand Palani, Nilesh Vasa and M. Kumaravel. [Investigations on crystallization and ablation characteristics in annealing of amorphous silicon films with nano- and pico-second pulsed Nd³⁺:YAG laser](#)

Paper No. 50: Janki Vallabh Choudhary and Sucharita Sanyal. [Optical Design of Efficient Lens-Ducts for Diode-Pumped Nd:Yag Lasers](#)

Paper No. 63: Yogesh Shinde. [Laser Rang Finder \(LRF\) for aerial vehicle design and realization](#)

Technical Session 7.1
Dec 8, 2011, Time: 4.45 PM-6.00 PM
Optical Metrology-2

Chair: Prof. T. Yatagai

Paper No. 45: Anil Kumar, K K Pant, L M Pant, S Mishra and A Ghosh. [Optimization of the Lens Diameter with Test Plate Diameter to ensure Precision Manufacturing Tolerances on Lens Surfaces](#)

Paper No. 46: Kanchan Chandra, Mahendra Pratap Singh, Neeaj Pandeya and Amitava Ghosh. [Adaptive erode algorithm for constant spot size from cross hair image](#)

Paper No. 66: Budhiraju Vishweshwar Rao, R Venkateswaran and K.V Sriram. [Mounting techniques and characterization of high-performance large-aperture light-weight aspheric optics for space applications](#)

Paper No. 96: Sanjukta Sarkar, Nandini Ghosh and Kallol Bhattacharya. [An interference microscope for quantitative phase analysis](#)

Technical Session 7.2

Dec 8, 2011, Time: 4.45 PM-6.00 PM

Optical Interferometry, Holography & Laser Speckles

Chair: Prof. J. Ojeda-Castaneda

V. Venediktov (Invited)- [Real-Time Digital Asymmetrization of Interference Pattern Contour](#)

Paper No. 13: Rakesh Singh, Dinesh N. Naik, Hitoshi Itou, Yoko Miyamoto and Mitsuo Takeda. [Characterization of polarization speckle](#)

Paper No. 51: Arindam Banerjee, Atin Mukherjee and Debesh Choudhury. [VHDL Implementation of Fourier Processing](#)

Paper No. 86: Somparna Mukhopadhyay, Kallol Bhattacharya and Lakshminarayan Hazra. [Characterization of a Reflective SLM for Synthesizing Phase Filters to Enhance Resolution in Microscopic Imagery](#)

Paper No. 92: Rahul Mandal and Ajay Ghosh [Singular Optics and Structurally Stable Beam](#)

Technical Session 8.1

Dec 9, 2011, Time: 11.00 AM-12.15 PM

Imaging Technology-3

Chair: Prof. V. Venediktov

K.G. Gupta (Invited)- [ARIES Aluminizing Facilities and Maintenance of 104cm Telescope Optics since 1972](#)

Paper No. 53: Jorge Ojeda-Castaneda and Cristina Margarita Gomez-Sarabia. [Novel image transfer matrix using orthonormal series expansions](#)

Paper No. 67: U. V. Sreeram Kumar, S Elumalai, U.Rama Subrahmanyam and I. Nandana. [Development Of Advanced Wide Field Sensor Camera Lens Assemblies For Resourcesat Satellites](#)

Paper No. 71: C.V Ramana Reddy, R Venkateswaran and Prashant Chakraborty. [Corner Cube Retro-Reflector \(CCRR\) Array for IRNSS Satellite](#)

Paper No. 76: Jorge Ojeda-Castaneda and Cristina Margarita Gomez-Sarabia. [Similarity analysis using orthonormal expansions](#)

Technical Session 8.2
Dec 9, 2011, Time: 11.00 AM-12.15 PM
Photonic Components & Devices

Chair: Prof. A.K. Datta

S. Chakrabarti (Invited)- [Molecular Beam Epitaxy of Quaternary \(InAlGaAs\) capped In\(Ga\)As/GaAs Quantum Dot Materials and Devices](#)

Paper No. 7: [Celine Joseph and Ajay Saxena. Performance of 10.5micron Quantum Well Infrared Photodetector for Astronomical applications](#)

Paper No. 21: [Taraprasad Chattopadhyay and Prosenjit Bhattacharyya. A Scheme for Low Noise Optical Pulse Generation](#)

Paper No. 81: [R. Ghosh, K. K. Ghosh and R. Chakraborty. Narrow-Band 1D Photonic Filter with III-Phosphide Binary Periodic Defective Structure](#)

Technical Session 9.1
Dec 9, 2011, Time: 1.15 PM-2.30 PM
Nano-Photonics & Plasmonics

Chair: Prof. S.K. Sharma

Partha Roy Chaudhuri (Invited) [Photonic Crystal Fiber in designing high performance fiber amplifier and fiber laser](#)

Paper No. 11: [Shahram Hosseinzadeh. Determination of Dispersion Diagram for the Cylindrical Magnetoplasmonic Waveguide](#)

Paper No. 78: [Mahua Bera and Mina Ray. Field Analysis of Multilayer Coupled Plasmonic Resonant Structures using Bimetallic Nanofilms](#)

Paper No. 79: [Kaushik Brahmachari, Sharmila Ghosh and Mina Ray. Substrate dependence of surface plasmon resonance sensor with a multilayer structure using admittance loci method](#)

Paper No. 90: [Rimlee Deb Roy and Shyamal Bhadra. Asymmetric Optical Waveguides: Theory, Fabrication and Application](#)

Technical Session 9.2
Dec 9, 2011, Time: 1.15 PM-2.30 PM
Optical Techniques

Chair: Prof. S.K. Sarkar

C.S. Narayanmurthy (Invited)- [Michelson Interferometer : Revisited](#)

Paper No. 23: [Mausumi Pohit. Rotation Invariant Recognition with One Dimensional Correlation Based Connectionist Model](#)

Paper No. 74: [Aditya K. Mamgain, Awakash Dixit, D. Mohan and A. K. Gupta. Aperture Dependency of Turbulence Strengths: A Statistical Analysis Using Laboratory Se](#)

Paper No. 95: [Arpita Haldar, Biswanath Roy and Samir K Sarkar. Design and Application of Light Pipe Integrated Lighting System](#)

Paper No. 98: [Bodhisattwa Chakraborty and Sukadev Meher. 2D Trajectory-Based Position Estimation and Tracking of the Ball in a Basketball Video](#)

Technical Session 10.1
Dec 9, 2011, Time: 2.30 PM-3.30 PM
Optical Networks and Components

Chair: Prof. A. Basuray

P.P. Sahu (Invited)- [Dispersion Reduction Routing and Wavelength Assignment for Optical Networks](#)

Paper No. 30: Manoj Dutta. [Modeling and Performance Analysis of Modified OBS Ring Network Using Proxy Node](#)

Paper No. 68: Partha Pratim Sahu and Bidyut Deka. [Comparative Study of Tooth-Shaped Grating Assisted Compact Directional Coupler, Two-mode Interference Coupler and Multimode Interference Coupler](#)

Paper No. 77: Kamran Akbari, Saeid Nikmehr and Shahram Hosseinzadeh. [Gaussian Mode Analysis of Electromagnetic Field Depolarization along Linear Magnetoplasmon-Dielectric Interface](#)

Technical Session 10.2
Dec 9, 2011, Time: 2.30 PM-3.30 PM
Optical Computing

Chair: Prof. M. Ray

Paper No. 6: Subhendu Biswas and Sourangshu Mukhopadhyay. [An all optical approach of developing a tree based Quaternary triggered Demultiplexer and multiplexer using kerr cell and simulated verification of their operation.](#)

Paper No. 14: Jitendra Roy, Chinmoy Taraphdar and Tanay Chattopadhyay. [All-optical integrated ternary MIN and MAX gate](#)

Paper No. 19: Rik Chattopadhyay. [Determination of wavefront by using Transport of Intensity Equation](#)

Paper No. 93: Indranil Jana, Dilip Kumar Gayen and Faraz Yusuf. [All-Optical 4 bit Incrementer based on Symmetric Mach Zehnder Interferometer \(SMZI\) switch](#)