# **2009 International Conference on Emerging Trends in Electronic** and Photonic Devices & Systems

**(ELECTRO-2009)** 

Varanasi, India 22-24 December 2009



IEEE Catalog Number: CFP0967H-PRT **ISBN:** 

978-1-4244-4846-3

## CONTENTS

	The IEEE is not, as a body, responsible for the opinions expressed by individual authors or speakers
Page No.	
1	<b>Photonic and Electronic Cooling</b> Richard I. Epstein University of New Mexico USA
5	<b>Room Temperature Nano Quantum Engineering</b> Yossi Paltiel Hebrew University ISRAEL
10	A Key Distribution Scheme for Sensor Networks Using Structured Graphs Abhishek Parakh & Subhash Kak Oklahoma State University USA
14	The Role of Ballistic Mobility and Saturation Velocity in Performance Evaluation of a Nano-CMOS Circuit Vijay K. Arora Wilkes University USA Desmond C. Y. Chek Universiti Teknologi Malaysia MALAYSIA Michael L. P. Tan University of Cambridge UK
18	Quantum Teleportation Hari Prakash University of Allahabad INDIA
24	Novel Dilute III-V-Ns: From Physics to Applications Devki N. Talwar Indiana University of Pennsylvania USA
29	A New Transistor of Dual-gate SOI and Evidence for Diminished

Short Channel Effects Mohamad Kazem Anvarifard, Mahdi Gordi Armaki & Seyed Ebrahim Hosseini Sabzevar Tarbiat Moallem University IRAN

- 33 Modeling and numerical simulation of gate leakage current in strained-Si channel nMOSFETs with high-k gate dielectrics Srirupa Goswami & Abhijit Biswas University of Calcutta INDIA
- **37 Impact of high-k dielectrics and spacer layers on the electrical performance of symmetrical double gate MOSFETs** Swagata Bhattacherjee& Abhijit Biswas University of Calcutta INDIA

41

INDIA

- Influence of temperature on the threshold voltage and subthreshold slope of strained-Si/SiGe MOSFETs with polysilicon gates Abhijit Biswas University of Calcutta INDIA Moumita Basak Nath Department of Electronics and Communication Engineering, Techno
- 45 Determination of uniaxial stress of embedded Si<sub>1-y</sub>C<sub>y</sub> source/drain nMOSFETs using numerical simulation techniques Abhijit Biswas University of Calcutta INDIA
- 49 Effect of channel layer doping on the performance of nanoscale DG MOSFETs Saji Joseph & George James T. Pavanatma College INDIA Vincent Mathew St. Thomas College INDIA
- 53 A Novel Approach for Modeling the Threshold Voltage of Cylindrical Ion Sensitive Field Effect Transistor Mohendra Roy & Santanu Sharma

	Tezpur University INDIA
58	A comparative study of surface quantization effects in Si and strained-Si MOS structures with ultrathin gate oxides Munmun Dey & Sanatan Chattopadhyay University of Calcutta INDIA
62	<b>Transient Charge-Based Model for SiGe HBTs</b> Jobymol Jacob, Amitava Das Gupta & Anjan Chakravorty IIT Madras INDIA
66	Double Gate Underlap FinFET Device Optimization and Application in SRAM Design at 15 nm Tapas Dutta & Sudeb Dasgupta IIT Roorkee INDIA
70	Subthreshold Current Modeling of Surrounding Gate MOSFET: A Gaussian Approach Palash Roy, Binit Syamal, N. Mohankumar & C.K.Sarkar Jadavpur University INDIA
74	Effect of variation of topological changes on the equivalent circuit parameters of pseudomorphic HEMTs B. Naveen Kumar, Gaurav Srivastava & Amit Kumar Verma IT-BHU INDIA Mahadeva Bhat K, Sandeep Chaturvedi, G. Sai Saravanan & R. Muralidharan GAETEC INDIA
78	Performance Analysis of a Bandgap Engineered Silicon Bipolar Transistor Vishal, Ammar & R.K. Chauhan M.M.M. Engineering College INDIA
81	Study of Ex-situ and In-situ PMMA/-COOH Functionalized MWNT Composites M. Das JIS Engineering College

	<ul> <li>INDIA</li> <li>Sri. Bandyopadhyay</li> <li>University of New South Wales</li> <li>Australia</li> <li>D. Ray</li> <li>Calcutta University</li> <li>INDIA</li> <li>S. Banerjee</li> <li>Calcutta University</li> <li>INDIA</li> <li>N. R. Bandyopadhyay</li> <li>Bengal Engineering &amp; Science University</li> <li>INDIA</li> <li>A. Basumallick</li> <li>Bengal Engineering &amp; Science University</li> <li>INDIA</li> </ul>
84	<b>Noise Tolerance Enhancement in Low Voltage Dynamic Circuits</b> Kaushik Mazumdar & Manisha Pattanaik ABV-Indian Institute of Information Technology and Management INDIA
88	A 950-MHz fully differential Class-E Power Amplifier in 0.18µm CMOS for Wireless Communications Sambit Datta IIT Kharagpur INDIA Hiranmay Saha Jadavpur Univrsity INDIA
92	High Speed LVDS Driver for SERDES Hari Shanker Gupta, RM Parmar & RK Dave SAC-ISRO INDIA
96	Low Power Squaring and Square root Circuits Using Subthreshold MOS Transistors Amlan Nag NIT Silchar INDIA Roy P. Paily IIT Guwahati INDIA

Design of Pseudo Flip-around Sample- Hold Circuit for 10-bit, 5- Msamples/Sec Pipeline ADC M. Santosh, Kanhu Charan Behera & S.C.Bose CEERI INDIA
Design of a Generic Network on Chip Frame Work for Store & Forward Routing for 2D Mesh Topology Sanju V. & Bini Y. Baby Nitte Meenakshi Institute of Technology INDIA Niranjan N Chiplunkar NMAM Institute of Technology INDIA
Mobile Odor Tracking Robot Based On Embedded Technology B. Botre & S. Sadistap CEERI INDIA S. Wafare, D. Shirke, D. Gharpure & A. Shaligram University of Pune INDIA
A lens-less imaging holographic memory writer system for a programmable optically reconfigurable gate array Shinya Kubota & Minoru Watanabe Shizuoka University JAPAN
Design of Ultra-low Power CMOS Cells for Temperature Sensors in VLSI V. Nath, Ruchika Kumari, B. N. Das & R. N. Gupta BIT-Mesra INDIA K.S. Yadav CEERI INDIA L.K. Singh Dr. RML Avadh University INDIA Taikyeong Ted. Jeong Myongji University KOREA

120	FPGA Based Advanced Sowing and Planting Equipment Controller Design Jayendra Kumar, Pritesh, Nitish Bhardwaj & Anumeha NIT-Jameshedpur INDIA
124	<b>Performance Evaluation of Network on Chip Architectures</b> Pratiksha Gehlot & Shailesh Singh Chouhan DAVV INDIA
128	<b>DVCC Based Voltage-Mode Multifunctional Biquadratic Filter</b> Vijay Kumar Dixit B.S.A. College of Engg. & Tech. INDIA
132	FPGA Implementation of Fast Adders using Quaternary Signed Digit Number System Reena Rani & Neelam Sharma B.S.A. College of Engg. & Tech. INDIA Laxmi Kant Singh Dr. RML Avadh University INDIA
136	NUC Algorithm based on Kalman Filter for improvement in detector offset and gain drift Parul Goyal Dehradun Institute of Technology INDIA
140	Electronic interactions in quantum dots within the Keldsyh formalism Giuseppe Bevilacqua Universit`a di Siena ITALIA Giuseppe Pastori Parravicini Universit`a di Pavia ITALIA
144	A Novel Method for Modeling Semiconductor by Neuro Space Mapping Mahdi Gordi Armaki, Mohamad Kazem Anvarifard & Seyed Ebrahim Hosseini Sabzevar Tarbiat Moallem University IRAN

148	Reduction of Off-State Leakage Current on Fully Depleted DG- MOSFETs George James T., Saji Joseph & Vincent Mathew St. Thomas College INDIA
152	<b>Stimulated Raman Scattering in one-dimensional Mott-Hubbard insulators: a novel THz source</b> Haranath Ghosh and Rama Chari RRCAT INDIA
156	<b>Modeling of Non-linear Crosstalk in Optical Fiber</b> Kunwar Bahadur Singh & Neeta Awasthy GCET INDIA
160	Investigation of interconnect parameters for high speed microelectronics devices applications V. K. Tomar, S.K. Gupta & S.G. Yadav B.M.A.S. Engineering College INDIA D. K. Gautam North Maharashtra University INDIA
162	Statistical Modelling of Wavelet Coefficients of CT Scan Image Basant Kumar MNNIT INDIA S.P. Singh, Anand Mohan & Animesh Anand IT-BHU INDIA Harsh Vikram Singh KNIT INDIA
166	Network model based automation of thermal processes using an embedded digital controller A. Balaji Ganesh, A. Lakshmi Sangeetha & V.R. Ravi Velammal College of Engineering INDIA
170	<b>FPGA Based ASM implementation for CCD Camera Controller</b> R. Srinivasan, Suneeta K. Anupama Vemama Institute of Technology

	INDIA S. K. Saha & Aditya Rao Indian Institute of Astrophysics INDIA
173	Design of a Low-Power 10GHz Frequency Divider using Extended True Single Phase Clock (E-TSPC) Logic Amin Bazzazi
	High Educational Institute of Mirdamad IRAN
	Abdolreza Nabavi Tarbiat Modares University IRAN
177	<b>Testing of embedded system using Fault Modeling</b> Saumya Srivastava Amity University
	INDIA
	Amit Prakash Singh Guru Gobind Singh Indraprastha University
	INDIA
181	Lossless Hidden Data Recovery Using Bit Depth Data Embedding— A New Concept
	Rajeev Nayan Tripathi, Anand Mohan & S. P. Singh IT-BHU INDIA
185	A Fuzzy Logic Based Neural Network Classifier for Qualitative Classification of Odors/Gases
	Ravi Kumar, R.R. Das, V.N. Mishra & R. Dwivedi
	IT-BHU INDIA
189	Fuzzy Modeling Based Palm Print Recognition System
	Asmita Rajawat & Shuchismita Pani
	ASET INDIA
	M.Hanmandlu
	IIT-Delhi INDIA
193	Comparison of different ANN techniques for automatic defect
	detection in X-Ray Images
	Amod P. Rale & D. C. Gharpure University of Pune

INDIA V. R. Ravindran VSSC INDIA

198	A novel approach for RFID based fire protection Sudip Dogra, Samrat Manna & Aritra Banik
	Meghnad Saha Institute of Technology
	INDIA Sourceth Moiti
	Somnath Maiti Future Institute of Engineering and Management
	INDIA
	Subir Kumar Sarkar
	Jadavpur University
	INDIA
202	Oxidised Macro Porous Silicon layer as an effective material for thermal insulation in thermal effect Microsystems
	B.Mondal
	Tezpur University
	INDIA P. K. Basu
	University of Brescia
	ITALY
	B. T. Reddy & H. Saha
	Jadavpur University
	INDIA
	P. Bhattacharya & C. Roychoudhury
	Bengal Engineering and Science University
	INDIA
207	Gas Sensor using Polymer films
	Anjula
	Amity University
	INDIA
211	Study of Vegetable Okra By Microwave Remote Sensing At X
	Band Abbishalt Danday, B. Drasad & N. S. Dainut
	Abhishek Pandey, R. Prasad & N. S. Rajput IT-BHU
	INDIA
215	Enhanced Antennae System with OFDM and FRM Technique
	Ajay Kr. Singh and Soni Kumari

Х-

Jaypee University of Information Technology

## INDIA

218	<b>Cache-Timing Attacks on AES and Remedies</b> K. L. Baishnab, Amlan Nag & F.A. Talukdar National Institute of Technology-Silchar INDIA
222	Design, Implementation and Realization of 64Kbps ½ QPSK Based Burst Demodulator for Onboard Application Deepak Mishra, Aasiya Topiwala & K.S .Dasgupta SAC-ISRO INDIA
226	<b>Design of Chebyshev Band pass filter</b> Amit Pal, Rajesh Kumar, Vishal Mohan & A. K. Tiwary BIT-Mesra INDIA
228	A Very High Efficient Input Shared Buffered Packet Switch for Broadband Wireless Communications K. L. Baishnab & Amlan Nag National Institute of Technology-Silchar INDIA
231	Design and Implementation of a Simulator for the Analysis of Bit Error rates by using Orthogonal Frequency Division Multiplexing Abhishek Datta, Rupam Chowdhury & Sudip Dogra Meghnad Saha Institute of Technology INDIA Subir Kumar Sarkar Jadavpur University INDIA
236	Design and Implementation of CIC Based Decimation filter For Improved Frequency Response R. K. Singh M.N.N.I.T Allahabad INDIA Richa CSJMU Kanpur INDIA Amit Katiyar H.B.T.I., Kanpur INDIA

241 Wavelet based Image Registration using Mutual Information

	Anjali Malviya TSEC INDIA S. G. Bhirud VJTI INDIA
245	Comparison of SISO and MIMO Techniques in 802.11n Wireless Local Area Network Sneha Moghe Truba College of Engineering & Technology INDIA Raksha Upadhyay DAVV INDIA
247	Single Input Single Output Technology in 802.11n Sneha Moghe Truba College of Engineering & Technology INDIA Raksha Upadhyay DAVV INDIA
250	<b>Design and Simulation of Sigma-Delta Modulator for Advanced New</b> <b>Generation Mobile Technology</b> Vikash Ranjan & Avireni Srinivasulu BIT-Mesra INDIA
254	<b>Design, Implementation and Realization of On-board Base Band</b> <b>Processor &amp; Switching System for Advanced communication Paylo</b> Sanjay Mehta, Gopichand Khot, Varsha Bhatt & T.V.S. Ram SAC-ISRO INDIA
258	Wavelet and Energy Based Approach for PVC Detection Awadhesh Pachauri & Manabendra Bhuyan Tezpur University INDIA
262	<b>LDPC for Wi-Fi and WiMAX Technologies</b> Sindhu Hak Gupta & Bindya Virmani AMITY University INDIA

266	Shared Power Allocation among Subcarriers of OFDM Systems Vidya Kant Dwivedi, Shivesh Tripathi, Vijay Shanker Tripathi, Rajeev Tripathi & Sudarshan Tiwari MNNIT INDIA
270	<b>Traffic Engineering in Multi Domain Optical Networks</b> Uma Rathore Bhatt & Sanjiv Tokekar DAVV INDIA
274	Improvement in Power Updating Algorithm in Wireless DS-CDMA Networks Manish Rai & Chhavi Sharma M.J.P. Rohilkhand University INDIA
278	Design of a Mammary gland Specific Gamma Imaging System (MSGIS) Sarbajit Pal & T. Bhattacharjee Department of Atomic Energy INDIA S. K. Saha Indian Institute of Astrophysics INDIA
281	Novel Performance of QPSK Modulator Subsystem with Matched Filters for GSAT-4 Satellite K L Sah & K S Dasgupta SAC-ISRO INDIA S. Jit IT-BHU INDIA
285	Design and Study of a 2x2 Microstrip Patch Antenna Array for WLAN/MIMO Application Chandan Kumar Ghosh Dr. B.C. Roy Engineering College INDIA Susanta Kumar Parui Bengal Engineering and Science University INDIA
289	<b>Design of Dual Wide Band CPW-Fed Fractal Antenna</b> Raj Kumar DIAT (DU)

310	A New Dual Band Frequency Reconfigurable Antenna
307	Design of A Single Layer L-Shaped Microstrip Patch Antenna Piyush Moghe Sanghvi Institute of Management & Science INDIA P. K. Singhal Madhav Institute of Technology & Science INDIA
303	<b>Broadband Dual Frequency Hexagonal Microstrip Antenna for</b> <b>Modern Communication Systems</b> Manoj Dubey, D. Bhatnagar, V.K. Saxena & J.S. Saini University of Rajasthan INDIA
300	For high-speed wireless networks broadband and high-gain e-shaped microstrip antennas Monika Bhatnagar IMS Engineering College INDIA
296	Graphical Analysis of Microstrip Line Matching Network for 2.4 GHz Microwave LNA via Matlab Coding Devesh Kumar & Rahul Verma AMITY University INDIA B. R. Taunk SVNIT INDIA
293	Improved CAD Formulae to Calculate the Input Impedance of an Equilateral Triangular Microstrip Patch Including Radome Effect Manotosh Biswas West Bengal State University INDIA Anirban Mandal Future Institute of Engineering and Management INDIA
	INDIA P. Malathi D.Y. Patil College of Engg. INDIA

	Pramendra Tilanthe Truba College of Engineering and Technology INDIA P. C. Sharma S. D. Bansal College of Technology INDIA
313	A multilayer rectangular patch antenna for broadband operation Prabhakar Singh, Nagendra Prasad Yadav & J. A. Ansari University of Allahabad INDIA Babau R. Vishvakarma IT-BHU INDIA
317	A broadband U-slot loaded circular disk patch antenna N. P. Yadav, Anurag Mishra, P. Singh & J. A. Ansari University of Allahabad INDIA Babau R. Vishvakarma IT-BHU INDIA
320	W-Slot Loaded Patch Antenna for Dual-Band Operation Anurag Mishra, Satyakesh Dubey & J. A. Ansari University of Allahabad INDIA Babau R. Vishvakarma IT-BHU INDIA
324	Analysis and Designing of E-Shape Microstrip Patch Antenna for the Wireless Communication Systems M. K. Verma, Sapna Verma & D. C. Dhubkarya Bundelkhand Institute of Engineering & Technology INDIA
328	<b>Design of rectangular stacked microstrip antenna for Dual-band</b> Rajesh Kumar Vishwakarma Jaypee Institute of Engineering and Technology INDIA
332	Broadband Circular Patch Microstrip Antenna with Diamond Shape Slot for Space Communication Garima, D. Bhatnagar, V.K. Saxena & J.S. Saini University of Rajasthan INDIA

336	Microwave Absorbing Polymer Composites M. Murugan Vishwakarma Institute of Information Technology INDIA V. K. Kokate College of Engineering INDIA
340	Design and Analysis of Microstrip Elliptical Low Pass Filter Pramod Kumar Manipal Institute of Technology INDIA Ashvini Chaturvedi National Institute of Technology Karnataka INDIA
343	Transmission Characteristics of Rectangular Dielectric guide in the Millimeter Wave Region with Embedded Metallic Discontinuities Jigyasa Sharma N.I.E.C INDIA Dhirendra Kumar MAIT INDIA Asok De D. C. E. INDIA
346	Radiation Characteristics of Rectangular Patch Antenna using Air Substrates C. Chandan, A. Ghosh, S. K. Ghosh & S. Chattopadhyay Siliguri Institute of Technology INDIA
349	<b>Design of Compact Seven Poles Low Pass Filter using Defected</b> <b>Ground Structure</b> Ashwani Kumar & A.K. Verma University of Delhi South Campus INDIA
353	Single Feed Circularly Polarized Edge Truncated Elliptical Microstrip Antenna Pratibha Sekra, D. Bhatnagar, V.K. Saxena & J.S. Saini University of Rajasthan INDIA

357	<b>Dual Frequency Microstrip Hexagonal Patch Linear Array Antenna</b> <b>Integrated with RF-MEMS Switches</b> Naveen Kumar Saxena & P.K.S. Pourush Dr. Bhim Rao Ambedkar University INDIA
360	Design and Development of a Compact and Low Cost Folded-Hairpin Line Bandpass Filter for L-Band Communication Jagdish Shivhare Institute of Technology and Management INDIA S B Jain Indraprashth University INDIA
364	<b>Performance of H-Shaped Microstrip Antenna using IE3D</b> Ravi Kant, Pawan Singh & D. C. Dhubkarya B.I.E.T. INDIA
367	Dual Wideband Printed Monopole Antenna with Periodic EBG Structure for WLAN/WiMAX Applications A. K. Shrivastav SAMEER-CEM INDIA Pramod Kumar Galgotia's College of Engineering and Technology INDIA Jugul Kishor ITS Engineering College INDIA
370	<ul> <li>Designing of a Compact Microstrip Antenna Resonating at 4.8 (GHz.)</li> <li>by Using Size Reduction Technique</li> <li>Pramod Kumar &amp; Rashid Mahmood</li> <li>Galgotia's College of Engineering and Technology</li> <li>INDIA</li> <li>Jugul Kishor</li> <li>ITS Engineering College</li> <li>INDIA</li> <li>A. K. Shrivastav</li> <li>SAMEER-CEM</li> <li>INDIA</li> </ul>
274	A New Wide David Antenna with C Shared Slatin Counted Diana

374 A New Wide Band Antenna with C Shaped Slot in Ground Plane

Pramendra Tilanthe Truba College of Engineering and Technology INDIA P. C. Sharma S. D. Bansal College of Technology, INDIA

376

#### Design of Broad Band Microstrip Shorted Patch Antenna With Semicircular Cut on Non Radiating Edge

Pramod Kumar & Rashid Mahmood Galgotia's College of Engineering and Technology INDIA Jugul Kishor ITS Engineering College INDIA A. K. Shrivastav SAMEER-CEM INDIA

379

#### 2.45 GHz Low Level CW Microwave Radiation Affects Embryo Implantation Sites and Single Strand DNA Damage in Brain Cells of Mice, Mus musculus

Vineet Prakash Singh, Priyanka Singh & Chandra Mohini Chaturvedi Banaras Hindu University INDIA Ritesh K. Shukla & Alok Dhawan Indian Institute of Toxicology Research INDIA

Ravi Kumar Gangwar & Surya Pal Singh IT-BHU INDIA

383

Control of Band Stop Responses of Very Compact Size Microstrip Filter of Improved Q factor & Sharp Transition by Using hexagonal Transmetal DGS Pramod Kumar & Rashid Mahmood Galgotia's College of Engineering and Technology INDIA

Jugul Kishor ITS Engineering College INDIA A. K. Shrivastav SAMEER-CEM

INDIA

387	Analysis of Square Patch Antennas for Resonant Frequency, Return Loss, Gain and Bandwidth Using ANN Rajeev Wakodkar, Bhaskar Gupta & Samik Chakraborty Jadavpur University INDIA
391	A Textile Antenna for WLAN Applications S. Sankaralingam & Bhaskar Gupta Jadavpur University INDIA
395	Study of Effect of Room Window on Through Wall Imaging in UWB range Abhay N. Gaikwad, Dharmendra Singh & M. J. Nigam Indian Institute of Technology Roorkee INDIA
399	<b>Study of Interaction structure for 120GHz,1MW Gyrotron</b> Anita Saini, M.K. Alaria, Hasina Khatun, A. Bera & A.K. Sinha CEERI INDIA
402	Effect of magnetic field on the performance of S- band linear accelerator system T. Tiwari & Manoj Phatangare SAMEER INDIA
405	<b>Design of SWS for a Ku-Band 140W Short-Length TWT</b> V. Srivastava, Dheeraj Kumar & R.K. Sharma SAMEER INDIA
409	<b>Thermal and Structural Analysis of Electron Gun for high efficiency</b> <b>Space TWT</b> V. Gahlaut, R.K. Sharma & V. Srivastava SAMEER INDIA
413	<b>Dispersion Analysis of Two Dimensional Metallic Photonic Band Gap</b> <b>Structures</b> Ashutosh & P. K. Jain IT-BHU INDIA
418	PIC Simulation of S-Band Magnetically Insulated Line Oscillator

	Smrity Dwivedi & P. K. Jain IT-BHU INDIA
421	Effect of Inhomogeneous Dispersion Shaping of a Helical SWS on the Backward-Wave Oscillation Criterion R. Seshadri, P. Raja Ramana Rao, K. V. Rao, S. K. Datta & S. Kamath MTRDC INDIA P. K. Jain IT-BHU INDIA
426	Characterization of Vane-loaded Cylindrical Wave Guiding Structure using NRP Technique by Simulated Experiment S. Umamaheswara Reddy, P. Raja Ramana Rao, Bhanu Naidu & Lalit Kumar MTRDC INDIA P. K. Jain IT-BHU INDIA
429	Development and cold testing of vacuum RF window for C band 250 kW CW power klystron O S Lamba, Ms. Meenu Kaushik, Sushil Kumar, Sh Vishnu Jindal, Vijay Singh, Ms. Shilpam Ratan, Debasish Pal, Deepender Kant & L. M. Joshi CEERI INDIA
432	A Wavelet Based Approach for Solving Poisson's Equation S.M. Quraishi & K. Sandeep IT-BHU INDIA
436	<b>Si-based Photodetectors in Optical Communication</b> N. R. Das University of Calcutta INDIA
442	<b>Detectors for the astronomical applications</b> Swapan K. Saha Indian Institute of Astrophysics INDIA

446	Feasibilty of Laser Action in Strained Ge and Group IV Alloys on Si Platform P. K. Basu, Gopa Sen & Bratati Mukhopadhyay University of Calcutta INDIA
450	<ul> <li>Tailoring the single-mode electronic region in zigzag graphene nanoribbons</li> <li>A. Cresti</li> <li>CEA, LETI-Minatec</li> <li>FRANCE</li> <li>G. Grosso &amp; M. Ruberti</li> <li>NEST-CNR-INFM and Department of Physics "E. Fermi"</li> <li>PISA, ITALY</li> <li>G. Pastori Parravicini</li> <li>NEST-CNR-INFM and Department of Physics "A. Volta"</li> <li>PAVIA, ITALY</li> </ul>
454	Synthesis and characterization of Gallium Nitride nanocrystals V. Ganesh, S. Suresh, S. Sudhakar, T. Premkumar & K. Baskar Anna University INDIA
457	<b>Effect of Barrier Asymmetry on Tunneling Current in Double Barrier</b> <b>Quantum Well Structure</b> Kasturi Mukherjee & N. R. Das University of Calcutta INDIA
461	Photoconductivity, Dark-Conductivity and Photoluminescence Study of Hydrothermally Synthesized ZnO Nanoparticles Sheo K. Mishra, Rajneesh K. Srivastava, S.G.Prakash Raghvendra S. Yadav & A.C.Panday University of Allahabad INDIA
465	<b>Dielectric properties of zinc oxide pellets</b> R.K.Shukla, Atul Srivastava, K.C.Dubey & Nishant Kumar University of Lucknow INDIA
467	Effect of channel implantation on the design of high frequency nanoscale n-FinFETs M. Sengupta & S. Chattopadhyay University of Calcutta INDIA C. K. Maiti

495	Reduction in carrier concentration by calcium doping in ZnO thin films
491	Bismuth Sulfide nanoparticle doped optical current sensors with enhanced Verdet constant Ganapathy Kumar & Satish M. Mahajan Tennessee Technological University USA Rajendra P. Panmand, Bharat B. Kale & S. W. Gosavi University of Pune INDIA
487	Phase Shifted Photonic Crystal Based Filter with Flat-Top Response Shounak Dasgupta MCKV Institute of Engineering INDIA Chyanika Bose Jadavpur University INDIA
483	Hexagonal GaN Based Photo-Irradiated IMPATT Devices for Application in MM-Wave Communication Systems Moumita Mukherjee University of Calcutta INDIA
479	Calculating the Noise Equivalent Bandwidth of a Ge–Based Schottky Photodetector at 1.55 mm Wavelength Himadri Sekhar Dutta & N. R. Das University of Calcutta INDIA
475	Numerical Study on Field Effect MOS Transistor Detection Response to Modulated Terahertz Radiation Signal Yinglei Wang, Zhifeng Yan, JingXuan Zhu, Xinnan Lin & Frank He Peking University CHINA
471	<b>Prediction of band offsets of the ternary alloy Si<sub>1-x-y</sub>Sn<sub>x</sub>C<sub>y</sub> on Si Gopa Sen, Bratati Mukhopadhyay &amp; P. K. Basu University of Calcutta INDIA</b>
	Indian Institute of Technology Kharagpur INDIA

	Kamakhya Prakash Misra, K. C. Dubey, R. K. Shukla & Anchal Srivastava University of Lucknow INDIA
497	<b>Preparation and optical characterization of ZnO thin film for optoelectronic applications</b> R. Elilarassi & G. Chandrasekaran Pondicherry University INDIA
500	All-angle negative refraction in gain assisted Metallo-Semiconductor Photonic Crystal for visible light: Effect of Plasmonic Metals and Nano-photonic device application Monika Rajput & R. K. Sinha Delhi College of Engineering INDIA
504	Zero dispersion demonstration for Chalcogenide Glasses (As2Se3 and As2S3) Photonic Crystal Fiber: analysis and evolution Bhawana Dabas & R. K. Sinha Delhi College of Engineering INDIA
508	Ultrafast switching property in one dimensional defect photonic crystals Khem B. Thapa & Rahul Pandey Chhatrapati Sahu Ji Maharaj University INDIA P. C. Pandey & S. P. Ojha IT-BHU INDIA
511	Grain Boundary Recombination and Efficiency of Polycrystalline Silicon Solar Cells Kiran Sharma Graphic Era University India D. P. Joshi D.B.S. (P.G.) College INDIA D. P. Bhatt Govt. (PG) College India

514	Design, In-House Fabrication and Analysis of Suspended Core Silica- Strand Photonic Crystal Fiber Sourabh Roy, Kajal Mondal, Sudip Kumar Chatterjee & Partha Roy Chaudhuri Indian Institute of Technology Kharagpur INDIA
518	Transfer Matrix Method for Computation of Electron Transmission Through Aperiodic MQW Jatindranath Gain Derozio Memorial College INDIA Madhumita Das Sarkar & Sudakshina Kundu West Bengal University of Technology INDIA
522	Enhancement of Specific Capacitance of Polyaniline by Secondary Metal Ion Doping Arun Kumar Singh, Bhavana Gupta & Rajiv Prakash IT-BHU INDIA
525	Electrical Properties of Multiwalled Carbon Nanotubes /Polyaniline Nanocomposite Sandeep Kumar Das & Rajiv Prakash IT-BHU INDIA
528	Optical Micro-ring Amplifier: A Novel Amplification Approach Ramapati Mishra KNIPSS Engineering College INDIA Laxmikant Singh Dr. R. M. L. Avadh University INDIA Rohit K Ramakrishnan I.I. Sc. Bangalore INDIA
532	Role of wave impedance in the formation of photonic band gaps in one-dimensional magnetic star wave guide structure Sanjeev K. Srivastava Amity University INDIA S. K. Srivastava BHU INDIA

	S.P. Ojha IT-BHU INDIA
536	Modelling of MEMS Optical Switches M. Shanmugapriya & M. Meenakshi Anna University INDIA
540	<b>Fiber Bragg Grating Sensor Packages for Sensing Water Pressures</b> <b>Inside Ocean</b> Guru Prasad. A S, Abhishek. B & Asokan .S I.I.Sc. Bangalore INDIA
544	Focusing property simulation of tapered-cladding single-mode hemispherical fiber micro-lenses Shuping Li Tibet Institute for Nationalities CHINA Xiaoguang Gao Xianyang Pianzhuan Group Corp CHINA Jingping Zhu, Yuzhou Sun & Tiantong Tang Xi'an Jiaotong University CHINA
548	<b>Designing Optical Filter with Absorption Effect by Using PSO</b> <b>Algorithm</b> Mahdi Gordi Armaki, Javad Baedi & Javad Haddadnia Sabzevar Tarbiat Moallem University IRAN
552	An optical configuration acceleration method using negative logic implementation Retsu Moriwaki & Minoru Watanabe Shizuoka University JAPAN
556	Impact of pulse walk off effect on Stimulated Raman scattering in a DWDM transmission system Gurmeet Kaur & M. S. Patterh Punjabi University INDIA M. L. Singh Guru Nanak Dev University INDIA

560	<b>Debye Temperature of Ternary Chalcopyrite Semiconductors</b> V. Kumar & A. K. Shrivastava Indian School of Mines University INDIA
564	Performance of a Wide FSR Optical Double Ring Resonator Sabita Brata Dey College of Engineering & Management INDIA S. Mandal Indian School of Mines University INDIA
568	All-Optical Switching in LOV2-C250S Protein Mutant from Chlamydomonas Reinhardtii Green Algae Purnima Sethi, Mohit Prasad & Sukhdev Roy Dayalbagh Educational Institute INDIA
572	<b>Study of singular phases in laser cavity modes</b> Sanjay Kumar Mishra, D. Mohan & A. K. Gupta IR&DE-DRDO INDIA Manoj Kumar Mridha Indian Institute of Technology Guwahati INDIA
576	<b>Optical Bistable Switching in a Hybrid Magnetic Semiconductor</b> S K Tripathy & Mihir Hota National Institute of Science and Technology-Berhampur INDIA
580	Slow Light Based Optical Buffer with high delay bandwidth product in Silicon-on-Insulator Photonic Crystal Waveguides Swati Rawal & Ravindra K. Sinha Delhi College of Engineering INDIA