

2012 5th International Conference on Computers and Devices for Communication

(CODEC 2012)

**Kolkata, India
17 – 19 December 2012**



**IEEE Catalog Number: CFP1201I-PRT
ISBN: 978-1-4673-2619-3**

Papers By Invitation for CODEC-2012

Keynote Address

- **Information and Communications Technologies for Ubiquitous Healthcare**
 - *M. Jamal Deen, McMaster University, Canada*

Plenary Papers

- **Wireless Communications Research: the Next Two Decades**
 - *U. Madhow, University of California, Santa Barbara, US*
- **Radio Communication, Radio Astronomy and Space Science**
 - *S. Ananthkrishnan, University of Pune, India*
- **Review on PPLN Waveguide-based Photonic Processing for Phase-coded Signals in New Generation Optical Networks**
 - *Antonio Malacarne, Antonella Bogoni, Emma Lazzeri, Gianluca Berrettini, CNIT, Pisa, Italy*
- **Rough-fuzzy Image Analysis: Granular Mining**
 - *Sankar Pal, ISI, Kolkata, India.*

Invited Papers

- **Optical Properties of Semiconductor Quantum Structures Relevant for Practical Applications**
 - *Sandip Ghosh, Dept. of Condensed Matter Physics and Material Science, TIFR, Mumbai*
- **Investigating Dilute Nitride Materials for Broad Band SOAs for Optical Communications**
 - *Judy M Rorison, Xiao Sun, Nikolaos Vogiatzis, Univ. of Bristol, UK*
- **From Biosensors to Lab-on-Chip: Developing Chip-based Biosensors for Environmental and Clinical Applications**
 - *Martin Mkandawire, Cape Breton University, Canada*
- **An End-to-End Mobile Platform for Pervasive Healthcare**
 - *Ranjan Gangopadhyay, LNMIIT, India*
- **Intelligent Proximity Sensors**
 - *Somnath Mukherjee, RB Technology, MILPITAS, CA, USA.*
- **A Novel Multilayer/3D Technology for Advanced Microwave and Millimetre-wave Wireless Circuits and Systems**
 - *Kamal Samanta, University of Leeds, UK.*
- **III-V Nanowires for Optoelectronic Applications**
 - *H.H. Tan, N. Jiang, Y.H. Lee, D. Saxena, P. Parkinson, Q. Gao, L. Fu and C. Jagadish, Australian National University, Canberra, Australia.*
- **Study of light Propagation in Photonic and Plasmonic Crystals through Fourier Image Spectroscopy**
 - *M. López-García, Univ. of Bristol, UK.*

- **A Novel Proposal of Chipless RFID Using Layered Metal Patches**
 - *Goutam Chakraborty, Iwate Prefectural University, Japan*
- **Terahertz Science, Technology, and Communication**
 - *Goutam Chattopadhyay, Jet Propulsion Laboratory, California Institute of Technology, USA.*
- **Radio Science and Wireless Communications for the Smart Grid**
 - *I. A. Glover, J. M. R. de Souza Neto, S. A. Bhatti, J. S. da Rocha Neto, M. F. Vieira, R. Atkinson, M. Judd and J. J. Soraghan, Engineering University of Strathclyde, Glasgow, UK.*
- **Image Processing using Quadratic Volterra Filters**
 - *Sanjit K. Mitra, University of California, Santa Barbara, California.*
- **Adaptive Blind Equalization Based on the Minimum Entropy Principle**
 - *Asoke K. Nandi, Univ. of Liverpool, UK.*
- **Application-specific Microstructured specialty Optical Fibers: An Emerging Platform for Exotic Fiber Designs**
 - *Bishnu P. Pal, IIT Delhi, India.*
- **Bio-inspired Algorithms for Optimal Feature Subset Selection**
 - *Basabi Chakraborty, Iwate Prefectural University, Japan.*
- **Future Perspectives of SAR Polarimetry with Applications to Multi-parameter Fully Polarimetric POLSAR Remote Sensing & Geophysical Stress-Change Monitoring**
 - *W. M. Boerner, University of Illinois at Chicago, USA.*
- **Space Weather Effects on the Performance of Satellite-based Communication Systems**
 - *Archana Bhattacharyya, Indian Institute of Geomagnetism, India*
- **Nano-Structured Metal-Semiconductor-Metal Photo-Detectors for Enhanced Light Absorption**
 - *Narottam Das, Farzaneh Fadakar Masouleh, and Hamid Reza, Curtin Univ. Australia*
- **Radio Environment Characterization for Radio Communication and other Applications in India**
 - *S. K. Sarkar, NPL, India.*
- **Evolution to New Generation Network**
 - *Somnath Maity, BSNL, Kolkata, India*

Contributory Papers for CODEC-2012

- [1 to 3 GHz Wideband Low Noise Amplifier Design](#) - RSS-7-5942
 - *Abhay P. Kulkarni, S. Ananthakrishnan*
- [2D Defected Ground Structures in Microstrip Line](#) - APS-25-4928
 - *Chandra Shekhar Gautam, Avanish Bhadauria*
- [2D Matrix Switching with Optical Phase Conjugation in Gold Nanoparticle Doped-alumina \(Au:Al₂O₃\): a Theoretical Study](#) - OLT-36-7570
 - *Tanay Chattopadhyay, Panchatapa Bhowmik, Jitendra Nath Roy*
- [A Compact Super Ultra-wideband \(UWB\) Printed Monopole Antenna](#) - APS-9-519
 - *Pritam Singh Bakariya, Santanu Dwari*
- [A Compact Triangular SRR loaded CPW Line and its Use in Highly Selective Wideband Bandpass Filter for WiMAX Communication System](#) - APS-30-3610
 - *Asit Kumar Panda, K. Satyabrat Sahu, Rabindra K. Mishra*
- [A CPW-fed Printed Monopole Antenna using Circular CSRR for WCDMA/WiMAX/WLAN Applications](#) - APS-33-8451
 - *Suryanarayan Patra, Kumar Satyabrat Sahu, Asit K. Panda*
- [A Detail Simulation Study on Extended Source Ultra-Thin Body Double-Gated Tunnel FET](#) - EDM-17-9986
 - *Sayan Kanungo, Hafizur Rahaman, Partha Sarathi Gupta, Partha Sarathi Dasgupta*
- [A Diode Based Millimeter Wave Frequency Doubler](#) - MMT-10-921 -
 - *Bijit Biswas, Arun Kumar*
- [A Generalized Current Mode First Order Filter Using Single Current Controlled Differential Difference Current Conveyor](#) - CIS-11-7394
 - *Ashish Ranjan, Sajal K. Paul*
- [A High Order \(x10\) Planar Active Frequency Multiplier at 1.5GHz for Satellite Applications](#) - MMT-13-5987
 - *Jyotsna Ladkani, Akhil, Jayesh Thakkar*
- [A Ka-Band Double Balanced Upconverter MMIC For Space Application](#) - MMT-7-7442
 - *Abhay Jain, Pritam Sinha, R. S. Sharma A.N. Bhattacharya*
- [A Microstrip Patch Antenna for Biomedical Application at 2.45GHz](#) - APS-27-6515
 - *Shashiketan Samal, Ashudeb Dutta, Santanu Dwari, S Pradeep Reddy*
- [A Multimode Interference Star Coupler with S-Bend Waveguide](#) - OLT-10-3985
 - *S. K. Raghuvanshi, Santosh Kumar*
- [A Noise-Tolerant Framework for Aerial Images Classification Based on Gabor Energy Feature](#) - TEA-11-4760 Md.
 - *Abdul Alim Sheikh, S. Mukhopadhyay*
- [A Novel Delay Minimization Technique For Low Leakage Wide Fan-In Domino Logic Gates](#) - MEV-19-4684
 - *Akanksha Chouhan, Vikas Mahor, Manisha Pattanaik*
- [A Novel Method for Delay Analysis of CMOS Inverter with On-Chip RLC Interconnect Load](#) - MEV-11-4176
 - *Vikas Maheshwari, S. Mazumdar, Rajib Kar, D. Mandal, A. K. Bhattacharjee*
- [A Novel Process Variation Tolerant Wide Fan-In Dynamic OR Gate with Reduced Contention](#) - MEV-17-9716

- *Vikas Mahor, Akanksha Chouhan, Manisha Pattanaik*
- [A Security Enhancement Approach in Quantum Cryptography](#) - TEA-14-4172
 - *Akash Shrivastava, Manvendra Singh*
- [A Simple Analytical Model of Silicon on Insulator Tunnel FET](#) - EDM-L1
 - *Sayan Kanungo, Hafizur Rahaman, Parthasarathi Gupta, Parthasarathi Dasgupta*
- [A Simple Method to Avoid Interference of Unwanted Mode during Tuning of a Cavity Resonator](#) - MMT-15-7565
 - *Sanjay Mondal, Salil Kumar Biswas*
- [A Study on the Performance of Stress Induced p-channel MOSFETs with Embeded Si_{\(1-x\)}Ge_{\(x\)} Source/Drain](#) - EDM-25-1692
 - *Kunal Sinha, Hafizur Rahaman, Sanatan Chattopadhyay*
- [Adjustable Gain Controlled SOA for Optical Burst Receiver](#) - OLT-30-3356
 - *Ipsita Sengupta, Abhirup Das Barman*
- [Advanced High Speed Parallel Frame Synchronizer for High Data Rate Indian Remote Sensing Satellite Series](#) - RSS-2-5350
 - *R.Srinivas, L.Nithyanandan, P.V.V.Subba Rao, P.Naveen Kumar, G.Umadevi*
- [All Optical 2-bit Carry Look Ahead Adder Using Mach-Zehnder Interferometer](#) - OLT-24-545
 - *Indranil Jana, Dilip Gayen*
- [All-optical Binary Coded Decimal to Binary Converter with the help of Terahertz Asymmetric Demultiplexer based Switch](#) - OLT-17-9106
 - *Arunava Bhattacharyya, Dilip Kumar Gayen, Tanay Chattopadhyay*
- [All-optical Conversion Scheme from n to 2ⁿ Line Decoder Using Micro-ring Resonators](#) - OLT-8-312
 - *J.N.Roy, J.K.Rakshit, T. Chattopadhyay*
- [All-Optical Regeneration of Phase Modulated Signal Using a Vertical Cavity Semiconductor Saturable Absorber](#) - OLT-38-310
 - *Lokanath Mishra, Prasanta Kumar Datta*
- [All-optical XOR/XNOR Logic Gate Using Micro-ring Resonators](#) - OLT-9-5008
 - *J.K.Rakshit, J.N.Roy, T.Chattopadhyay*
- [An Affine Projection Algorithm Based DFE with Set-Membership Filtering](#) - CRC-24-7529
 - *Ramesh Chandra Mishra, Ratnajit Bhattacharjee, Abhijit Mitra*
- [An Analytical Modeling of Interface Charge Induced Effects on Subthreshold Current and Subthreshold Swing of strained-Si \(s-Si\) on Silicon-Germanium-on-Insulator \(SGOI\) MOSFETs](#) - EDM-9-9539
 - *Mirgender Kumar, Sarvesh Dubey, S. Jit, Pramod Kumar Tiwari*
- [An Approach to Analyze Planar Microstrip Circuits with Complementary Split Ring Resonator at the Ground Plane using Finite-Difference Time -Domain Method](#) - MMT-6-7338
 - *Santanu Dwari*
- [An Efficient High Performance Parallel Algorithm to Yield Reduced Wire Length VLSI Circuits](#) - MEV-L1
 - *Swagata Saha Sau, Rajat Kumar Pal*
- [An Improved Time Adaptive Ant System](#) - TEA-18-5606
 - *Abhishek Paul, Sumitra Mukhopadhyay*
- [An UWB Band Pass Filter with a Notch Band using Stub Loaded Multi-Mode Resonator](#) - MMT-5-3029

- *Sharmili Adhikari, Manimala Pal, Ishita Rakshit, Pankaj Sarkar, Rowdra Ghatak*
- [Analog/RF Performance Evaluation of Nanoscale Non-overlap SOI MOSFETs with High-k Stack on Spacer](#) - EDM-33-40
 - *Indra Vijay Singh, M. Shah Alam*
- [Analysis and Measurement of High Power Vacuum-Tube RF Transmitters: Matrix Method](#) - CIS-14-2929
 - *H. K. Pandey, A. Chakrabarti, K. P. Ray*
- [Analysis of Mixed CNT Bundle Interconnects: Impact on Delay and Power Dissipation](#) - TEA-22-2047
 - *Manoj Kumar Majumder, B. K. Kaushik, S. K. Manhas*
- [Analysis of Performance of QAM system when subjected to Sharpened Raised Cosine Filter](#) - RSS-5-5950
 - *Mahua Pal, Sudipta Pal*
- [Analytical Modeling of Crosstalk Effects in Coupled Copper Interconnects in Deep Sub Micron Technology](#) - CIS-12-5479
 - *Manodipan Sahoo, Hafizur Rahaman*
- [ANN Based Adaptive Beamforming for Faded Wireless Channels](#) - CRC-23-9057
 - *Barnalee Sarma, Kandarpa Kumar Sarma*
- [Application of Synthetic Storm Technique to Predict Time Series of Rain Attenuation from Rain Rate Measurement for a Tropical Location](#) - APS-6-3340
 - *Dalia Das, Animesh Maitra*
- [Broad Band Gain Incorporating Quantum-dot Fluctuations for a GaInNAs Semiconductor Optical Amplifier](#) - OLT-L2
 - *X. Sun, N. Vogiatzis, J.M. Rorison*
- [Carrier and Symbol Recovery using Digital Phase Locked Loop in Severely Faded Nakagami-m Channels](#) - CRC-26-5187
 - *Basab Bijoy Purakayastha, Kandarpa Kumar Sarma*
- [Cognitive Approach for Target Detection](#) - CRC-15-206
 - *Amit Agarwal, Soumyasree Bera, Arun Kumar Singh, Samarendra Nath Sur, Debasish Bhaskar, Rabindranath Bera*
- [Compact Circularly-Polarized Microstrip Patch Antenna on Reactive Impedance Substrates](#) - APS-10-9049
 - *Indrasen Singh, Vijay Shanker Tripathi, Sudarshan Tiwari*
- [Compact Dual-Band Bandpass Filter Using Concentric Stepped Impedance Resonator](#) - MMT-4-3053
 - *Manimala Pal, Biswajit Sarkar, Pankaj Sarkar, Rowdra Ghatak*
- [Compact Stop Band Filter Based on Double Tuned Rectangular Split Ring Defected Microstrip Structure For ISM Band Applications](#) - MMT-14-2874
 - *Somdotta Roy Choudhury, Tapan Mondal, Susanta Kumar Parui, Santanu Das*
- [Comparison of Propagation Delay in Single- and Multi-layer Graphene Nanoribbon Interconnects](#) - TEA-23-425
 - *Manoj Kumar Majumder, Narasimha Reddy K, B. K. Kaushik, S. K. Manhas*
- [Cooperative Spectrum Sensing in Cognitive Radio Network with Power Control](#) - CRC-12-5111
 - *Abhijit Bhowmick, Sanjay Dhar Roy, Sumit Kundu*
- [Correcting Beam Astigmatism in Laser Diode by the use of Single Anamorphic GRIN Lens](#) -

OLT-13-8932

- *Md Asrafal Sekh, N SoodBiswas, S K Sarkar, A Basuray*
- **Design and Analysis of Solidly Mounted Resonator Utilising a Conductive Bragg Reflector to Improve Q and Resonant Frequency** - MMT-12-3601
 - *Abhilash Amsanpally, Srikanth Enjamuri, K C James Raju*
- **Design and Development of a Hand-held RFID Reader for Recording Attendance** - CIS-7-8668
 - *Subhabrata Mazumder, Vineet Kumar Rakesh, Tapas Samanta*
- **Design and Performance Evaluation of A Sensor Based on Electrical Impedance Tomography** - TEA-20-2021
 - *Deborshi Chakraborty, Madhurima Chottopadhyay*
- **Design and Simulation of MEMS based Thermally Actuated Positioning System** - TEA-21-4344
 - *Dhiman Mallick, Pranay K. Podder, Anirban Bhattacharyya*
- **Design and Simulation of Micro-pump, Micro-valve and Micro-needle for Biomedical Applications** - TEA-25-756
 - *Pranay Kanti Podder, Dhiman Mallick, Dip Prakash Samajdar, Anirban Bhattacharyya*
- **Design of “Chess-board” like Photonic Crystal Structure for Enhancement of LED Light Extraction** - OLT-34-367
 - *Saroj Kanta Patra, Sonachand Adhikari and Suchandan Pal*
- **Design of a Bandpass Filter using Multimode Resonators for Ultra-Wideband Application** - MMT-16-8197
 - *Pratik Mondal, Arabinda Roy, S.K.Parui*
- **Design of a compact SOI Polarization Rotator for mid-IR application** - OLT-35-331
 - *Ajanta Barh, Bishnu P. Pal, R. K. Varshney, B. M. Azizur Rahman*
- **Design of a MIMO Geometry for High Capacity and Full Coverage mm-wave System** - CRC-13-1276
 - *Tommaso Cella, Pål Orten*
- **Design of a Wide Band Frequency Selective Surface (FSS) for Multiband Operation of Reflector Antenna** - APS-36-6596
 - *Gobinda Sen, Susanta Mahato, Tanumay Mandal, Surajit Mondal, Shuvodip Majumdar, Partha Pratim Sarkar*
- **Design of Drive Control System for High Efficiency Compact Ground Station Antenna for Remote Sensing Satellites** - APS-7-8954
 - *Heera Singh R, B. Rami Reddy, BCS Rao, M. Satyanarayana*
- **Design of Flexible Photonics-Based RF Transmitter and Receiver for Future Mobile Networks** - OLT-22-476
 - *Paolo Ghelfi, Antonella Bogoni*
- **Design of Multifunction Biquad Structure using OTA** - MEV-2-2365
 - *Mousumi Bhanja, Kasturi Ghosh, Baidyanath Ray*
- **Design of Resonator Based Ultra Wideband Bandpass Filter in Low Temperature Cofired Ceramic Technology** - MMT-18-4952
 - *CHL N Pavan, K C James Raju*
- **Design Optimization of Erbium-Doped Fiber Ring Laser For C and L Band Amplification Incorporating Chirped Fiber Bragg Grating** - OLT-1-2979
 - *Ricky Anthony, Rini Lahiri, Sambhunath Biswas*
- **Digital Holomicroscopy for Nanometer Depth resolution** - OLT-16-4565

- *Sonali Chakraborty, Sanjukta Sarkar, Kallol Bhattacharya*
- [Drift and Temperature Compensation Scheme for an Intelligent Ion-sensitive Field Effect Transistor Sensory System](#) - EDM-10-7147
 - *M.P.Das, M.Bhuyan*
- [Dynamic Characteristics of Vibratory Gyro-accelerometer](#) - MEV-9-3667
 - *Payal Verma, Ram Gopal, Sandeep Kumar Arya*
- [ECG Signal Classification using Wavelet Transform and Back Propagation Neural Network](#) - ADC-2-7549
 - *Hari Mohan Rai, Anurag Trivedi*
- [Effect of Flatband Voltage and Surface Field on the MOS Capacitance Under Triangular Potential Well Approximation](#) - EDM-16-2273
 - *Chaitali Chakraborty*
- [Effect of Polysilicon Gate Doping Concentration Variation on MOSFET Characteristics](#) - EDM-24-6678
 - *Rajesh Dutta, Sudakshina Kundu*
- [Effect of Strain on the Band Offsets of III-V Quantum Wells: \$\text{In}_x\text{Ga}_{1-x}\text{P}/\text{GaAs}\$, \$\text{In}_x\text{Ga}_{1-x}\text{As}/\text{Al}_{0.2}\text{Ga}_{0.8}\text{As}\$ and \$\text{In}_x\text{Ga}_{1-x}\text{N}/\text{GaN}\$](#) - NEP-1-3390
 - *Tapas Das, Siddhartha Panda, Partha Pratim Bera, Dipankar Biswas*
- [Effect of Temperature and Kink Energy in Multilevel Digital circuit using Quantum dot Cellular Automata](#) - NEP-5-4358
 - *Ratna Chakraborty, Debashis De, Angshuman Khan, Chiradeep Mukherjee, Sayak Pramanik*
- [Effect on the Capacity of a Cognitive Radio Based Central Access Network in Different Fading Distributions](#) - CRC-14-1583
 - *Ashoka Chakravarthi, Mahipathi, Sanjay Dhar Roy*
- [Effective Classification of Radiographic Medical Images Using LS-SVM and NSCT based Retrieval System](#) - TEA-1-386
 - *Manish Chowdhury, Sudeb Das, Malay Kumar Kundu*
- [Effects of Width of the Quantum Well on the Shift in Transition Energy with Operating Current in \$\text{In}_x\text{Ga}_{1-x}\text{N}/\text{GaN}\$ Quantum Well Diodes](#) - NEP-2-1322
 - *Siddhartha Panda, Partha Pratim Bera, Dipankar Biswas*
- [Efficient Parabolic Similariton Generation by Third Order Dispersion Compensation](#) - OLT-20-9403
 - *Debasruti Chowdhury, Navonil Bose, Mousumi Basu, Sampad Mukherjee, Dipankar Ghosh*
- [Electron Mobility and Energy Relaxation Rate in GaAs/GaAlAs Superlattice](#) - EDM-7-3565
 - *Aniruddha Ghosal, Arindam Biswas*
- [Energy Efficient Layered Cluster Based Hierarchical Routing Protocol with Dual Sink](#) - CRC-11-577
 - *Aditi Sen, Madhuparna Das Gupta, Debashis De*
- [Equivalent Circuit Model of UTC Photodiode](#) - OLT-28-4510
 - *Abhirup Das Barman, Senjuti Khanra*
- [Equivalent Circuit Modeling of Dual-slot Antenna for Terahertz Application](#) - MMT-3-5133
 - *Paulraj Gunapandian, B. Manimegalai*
- [Estimation of Process-Induced Variations In Double-Gate Junctionless Transistor](#) - NEP-6-4402

- Ratul Kumar Baruah, Roy P. Paily
- **Extended Data Rate Prediction for Cognitive Radio using ANFIS with Subtractive Clustering** - CRC-9-7520
 - Shrishailayya M Hiremath, Sarat Kumar Patra, Amit Kumar Mishra
- **Fabrication of High Dielectric Constant and Low Loss X Band Ceramic Waveguide Window for High Power Applications** - MMT-17-4387
 - S.Bashaiah, Pramod K. Sharma, K C James Raju
- **Four-Wave Mixing in Semiconductor Optical Amplifiers for High-Speed Communications** - OLT-37-7932
 - Narottam Das, Mohammad Razaghi, S. Rasoul Hosseini
- **Free Carrier Absorption in Sn based Group-IV Alloys** - OLT-15-2379
 - Vedatrayee Chakraborty, Bratati Mukhopadhyay, P.K.Basu
- **GaN/AlGaIn Based Complementary p⁺p⁻n⁺ATT-Device for Application in THz Imaging** - EDM-36-5708
 - Moumita Mukherjee, P.R.Tripathy, S P Pati
- **Generalized Mechanism of SOTDMA and Probability of Reception for Satellite-based AIS** - RSS-12-1941
 - Anindya Harchowdhury, Kalyan Bandyopadhyay, Binay Kumar Sarkar, Amitabha Bhattacharya
- **GeSn/SiGeSn RCE Photodetectors : A comparative study based on Franz-Keldysh Effect and Quantum Confined Stark Effect** - OLT-14-2199
 - Vedatrayee Chakraborty, Bratati Mukhopadhyay, P.K.Basu
- **Group Theory based Reversible Logic Synthesis** - TEA-10-1900
 - Kamalika Datta, Indranil Sengupta, Hafizur Rahaman
- **Half-Mode Substrate Integrated Waveguide Fed T-Shaped Slot Array Antenna** - APS-14-7428
 - Biswarup Rana, Susanta Kumar Parui, Arabinda Roy, Chandan Kumar Ghosh
- **Influence of Chalcogenide Glass on Surface Plasmon Resonance based Sensor Design in Near Infrared Region using Admittance Loci Method** - OLT-6-3941
 - Kaushik Brahmachari, Mina Ray
- **Influence Of Geometrical Shape Of Quantum Dot on Field Emission** - NEP-7-381
 - Shubhasree Biswas Sett, Chayanika Bose
- **Long-range and Short-range Surface Plasmon Resonance in Coupled Plasmonic Structure Using Bi-metallic Nanofilms** - OLT-7-9100
 - Mahua Bera, Mina Ray
- **Low loss and High Isolation Ka-band SPDT switch** - MMT-11-9437
 - G. A. Kumar, Arun Kumar
- **LPE Grown GaAs_{1-x}N_x (x ≤ 0.01) for Photoconductive Devices** - EDM-30-9604
 - S.K Das, S. Dhar, A. Bhattacharyya
- **Millimeter-Wave and Noise Properties of Si-Si_{1-x}Ge_x Heterojunction Double-Drift Region MITATT Devices at 94 GHz** - EDM-19-1864
 - Suranjana Banerjee, Aritra Acharyya, J. P. Banerjee
- **Modeling a IF Double Sampling Bandpass Switched Capacitor ΣΔ ADC with a Symmetric Noise Transfer Function for WiMAX/WLAN** - CRC-10-4443
 - Pankaj Kumar Jha, Ashudeb Dutta, Nithin Kumar Y.B., Shiv Govind Singh
- **Modeling Minority Charge Partitioning Factor in SiGe HBTs Using Full Regional Approach** -

EDM-L2

- *Noel Augustine, Anjan Chakravorty*
- [Modeling of IR-Drop Induced Delay Fault in CNT and GNR Power Distribution Networks](#) - TEA-15-8827
 - *Debaprasad Das, Hafizur Rahaman*
- [Modeling of Transport Behavior of the Ballistic Silicon Nanowire Gate-All-Around Field-Effect-Transistors \(Si NWFETs\) with Si/SiO₂ Interface Roughness](#) - EDM-27-9486
 - *Basudev Nag Chowdhury, Sanatan Chattopadhyay*
- [Modelling of An Optical Threshold Element Based On SOAs](#) - OLT-27-3356
 - *Nikolaos P. Diamantopoulos, Valeria Vercesi, Mirco Scaffardi, Antonella Bogoni*
- [Monitoring Threshold Cryptography based Wireless Sensor Networks with Projective Plane](#) - CRC-17-2591
 - *Haimabati Dey, Raja Datta*
- [Neural Network Based TEC Model Using Multistation GPS-TEC Around The Northern Crest Of Equatorial Ionization Anomaly](#) - RSS-8-5527
 - *Dibyendu Sur, Aditi Das and Ashik Paul*
- [New First Order Multifunction Filter Employing Operational Transresistance Amplifier](#) - CIS-6-9999
 - *Khushi Banerjee, Ashish Ranjan, Sajal K. Paul*
- [Novel Design of Ultra Wideband Vertical Slotted Triangular \(VST\) Sheet Antenna](#) - APS-28-5941
 - *Anuj Y. Modi, Aarti Gehani*
- [Nowcasting of Tropical Rain using Dual Frequency Atmosphere Brightness Temperatures at Kolkata](#) - RSS-L2
 - *Sourabh Das, Rohit Chakraborty, Shamitaksha Talukdar, Animesh Maitra*
- [Numerical Computation of Eigenenergy and Intersubband Transition Energy of GaAs Triangular Nanowire Embedded in Al_xGa_{1-x}As Rectangular Wire](#) - EDM-L3
 - *Arpan Deyasi, S. Bhattacharyya, N. R. Das*
- [Omni-Directional Printed Antenna Array for MIMO Application](#) - APS-3-3669
 - *Chandan Kumar Ghosh, Bappaditya Mandal, Susanta Kumar Parui*
- [On the Impact of Node Failure on Network Coverage in Wireless Sensor Network](#) - TEA-2-2529
 - *Ashraf Hossain*
- [On the Implementation of a Intellectual Property Protection based on Information Hiding](#) - ADC-3-7200
 - *Abhishek Basu, Susmita Sur, Rabiul Mallick, Subir Kumar Sarkar*
- [Optical Demux Using Silicon-Silica Based 2D Photonic Crystal](#) - OLT-26-2866
 - *Arkaprava Praharaaj, Chayanika Bose, Shounak Dasgupta*
- [Optically Controlled Rat-race Coupler on Silicon Substrate](#) - OLT-31-3478
 - *Avanish Bhadauria, Anil K Saini, J. Akhtar*
- [Optimized Delay and Power Performances for Multi-walled CNT in Global VLSI Interconnects](#) - TEA-24-9359
 - *Manoj Kumar Majumder, Pankaj Kumar Das, B. K. Kaushik, S. K. Manhas*
- [Performance Analysis and Simulation of IIR Anti-Notch Filter with Various Structures for Gene Prediction Application](#) - TEA-3-7018

- *S.Barman (Mandal), S.Biswas, S.Das, M.Roy*
- [Performance Analysis of Adaptive Power Control Algorithm for Varying Target SIR- RSS-L1](#)
 - *C. R. Dutta, Abhirup Datta, Dola Gupta, S. K. Chakraborty*
- [Performance Analysis of DE-optimized Multiplier-less Finite Impulse Response Data Transmission Filter](#) - CIS-4-5827
 - *Abhijit Chandra, Sudipta Chattopadhyay*
- [Performance Analysis of Doppler Shift Induced Optical Filtering and Inband Crosstalk Penalties in Intersatellite Link Optical Switching Nodes](#) - OLT-18-5161
 - *Abhirup Das Barman, Alak Halder*
- [Performance Analysis of OFDM Transmission Over 800 kms Using Mid-Link Optical Phase Conjugation and All Raman Amplification](#) - OLT-L1
 - *Upma Rai, Ranjan Gangopadhyay, Sumanta Gupta*
- [Performance Comparison of Different Adaptive Beamforming Algorithms in Smart Antennas](#) - APS-11-7497
 - *SK Intiaj, Iti Saha Misra, Rathindranath Biswas*
- [Performance Evaluation of a New Semi-Orthogonal Spreading Code in an AWGN Channel](#) - CRC-6-4094
 - *Arnab Shashi Hazari, Simita Kundu, Abhijit Chandra*
- [Performance Improvement of La₂O₃/ p-GaAs MOS Capacitor by using Si Passivation Layer](#) - EDM-29-5230
 - *Anindita Das, Sanatan Chattopadhyay, Goutam Kumar Dalapati*
- [Performance of Cooperative Spectrum Sensing in Hoyt Fading Channel under Hard Decision Fusion Rules](#) - CRC-1-3851
 - *Srinivas Nallagonda, Aniruddha Chandra, Sanjay Dhar Roy, Sumit Kundu*
- [Performance of Cooperative Spectrum Sensing Using an Improved Energy Detector in Fading Channels](#) - CRC-2-1376
 - *Srinivas Nallagonda, Sanjay Dhar Roy, Sumit Kundu*
- [Placing the ‘Third’ Node: An Energy Efficiency Perspective](#) - CRC-16-5107
 - *Biswajit Ghosh, Anirban Ghosh, Nilanjan Biswas, Aniruddha Chandra*
- [Planarization of Metal Layers in a Chip based on Voronoi Diagram](#) - MEV-8-2194
 - *Debasri Saha, Susmita Sur-Kolay*
- [Propagation Characteristics of Single Mode Step Index Linear and Non-Linear Optical Fiber Involving Improved Lorentzian Approximation for The Fundamental Mode](#) - OLT-21-4051
 - *Pratap Kumar Bandyopadhyay, S.N.Sarkar*
- [Reduction of Cross-polarization Radiation of E-shaped Microstrip Antenna Array using Spiral-Ring Resonator](#) - APS-2-8546
 - *Chandan Kumar Ghosh, Biswarup Rana, Bappaditya Mandal, Susanta Kumar Parui*
- [Retrieval of Hidden Infected Region using Biomedical Image Watermarking for Tele-diagnosis to Ensure Better Treatment](#) - TEA-L2
 - *Kaushik Pal, Gautam Ghosh, Mahua Bhattacharya*
- [Reversible Circuit Synthesis using Evolutionary Algorithm](#) - TEA-17-9476
 - *Kamalika Datta, Indranil Sengupta, Hafizur Rahaman*
- [SAR Analysis Using SFDTD and Hybrid FDTD](#) - MMT-9-2772
 - *Md. Faruk Ali, Sudhabindu Ray*
- [Selection of Optimal Transmission Time in Cognitive Radio Network for Efficient VoIP](#)

Performance - CRC-18-8710

- *Tamal Chakraborty, Iti Saha Misra and Salil Kumar Sanyal*
- **Sierpinski Fractal Binomial Trapped Planar Monopole Antenna for UWB Communication** - APS-5-5833
 - *Abhik Gorai, Anirban Karmakar, Shashank Verma, Rowdra Ghatak*
- **Simulation of the Encryption of NetFlow Packet Capturing System using IPsec** - TEA-4-5857
 - *Amzari Jihadi Ghazali, Waleed Al-Nuaimy, Asoke K Nandi*
- **Simulation to Study the Effect of Variation of Oxide Thickness and Substrate Doping on DIBL in MOSFET** - EDM-35-6127
 - *Subhradip Das, Sudakshina Kundu*
- **Simultaneous Perturbation Observed on VLF and Atmospheric Vertical Electric Field for Sumatra Earthquake on 11th April 2012** - RSS-11-3310
 - *Abhijit Choudhury, Anirban Guha, Barin Kumar De, Rakesh Roy*
- **Spectral Agility of NC-OFDM Transmission for Dynamic Spectrum Access** - CRC-25-8792
 - *Rajan Kapoor, Preetam Kumar*
- **Studies on Compact, Multiple Resonant Frequency Selective Surface (FSS) by Cutting Different Novel Shaped Slits Within Rectangular Shaped Patch** - APS-34-5032
 - *Surajit Mondal, Sourav Nandi, Tanumay Mondol, Shwetanki Singh, Partha Pratim Sarkar*
- **Studies on the effect of Mutual Coupling on Network and Resonance Properties of Broad-Wall Longitudinal Slot Antenna** - APS-20-1820
 - *Rintu Kumar Gayen, Sushrut Das*
- **Study of Substrate Induced Strained-Si/SiGe Channel for Optimizing CMOS Digital Circuit Characteristics** - MEV-20-9228
 - *Susanta Sen, Sanatan Chattopadhyay, Bratati Mukhopadhyay*
- **Study of Transient Response Characteristics of Electrons in GaN by Monte Carlo Method** - EDM-6-6045
 - *Aniruddha Ghosal, Arindam Biswas*
- **Suppression of stimulated Brillouin scattering using Optimization Techniques** - OLT-33-4471
 - *Himansu Shekhar Pradhan, Prasant Kumar Sahu*
- **Synchronous Overloaded System for the Uplink of cellular CDMA with Unequal chip Delay Spreading (UCDS)** - CRC-22-4173
 - *Amiya Singh, Poonam Singh*
- **Synthesis of Discrete Amplitude-only Linear Array Antenna With Minimum Side Lobe Level Using Iterative Fast Fourier Transform** - APS-17-7835
 - *Shishir Kumar Singh, Gautam Kumar Mahanti, Harikumar Pilli*
- **Temperature Transient Effect on the Large-Signal Properties and Frequency Chirping in Pulsed Silicon DDR IMPATTs at 94 GHz** - EDM-20-6189
 - *Aritra Acharyya, J. P. Banerjee, Suranjana Banerjee*
- **Threshold Base Current and Light Power Output of Symmetric and Asymmetric Multiple Quantum-Well Transistor Lasers** - OLT-12-338
 - *Rikmantra Basu, Bratati Mukhopadhyay, Prasanta Kumar Basu*
- **Threshold Triplet Incorporated Scheduling of Storage Based Pigeons in Homing-Pigeon-Based Delay Tolerant Networks** - TEA-13-2883
 - *Priyanka Das, Kavita Dubey, Tanmay De*

- [Transformer Coupled Novel Noise Cancellation Technique for Subthreshold UWB LNA](#) - CIS-13-4237
 - *A R Aravindh Kumar, Ashudeb Dutta, Shiv Govind Singh*
- [Two New Quasi-Orthogonal Space-Time Block Codes with 3-Time Slots for LTE-Advanced](#) - CRC-20-974
 - *Narendra Singh Thakur, Rinku Bhatia, Satendra Singh Thakur*
- [Two New Techniques to Reduce Gate Leakage at 65 nm Technology](#) - MEV-21-1519
 - *Angshuman Chakraborty, Sambhu Nath Pradhan*
- [Ultrawideband \(UWB\) Antenna Design for Cognitive Radio](#) - APS-32-959
 - *Peshal B. Nayak, Sudhanshu Verma, Preetam Kumar*
- [Ultra-wideband Coplanar Waveguide-fed Hexagonal Slot Antennas with WLAN Band Rejection](#) - APS-15-5840
 - *Tapan Mandal, Somdotta Roy Choudhury, Santanu Das*
- [Universal Filter Using Operational Transresistance Amplifier](#) - CIS-5-1503
 - *Mourina Ghosh, Sajal K. Paul, Rajeev Kumar Ranjam*
- [Voltage Controlled Current Starved Delay Cell for Positron Emission Tomography specific DLL based high precision TDC implementation](#) - MEV-16-8444
 - *Sabir Ali Mondal, Sourav Pal, Hafizur Rahaman, Pradip Mondal*
- [Voltage –Fed Trans Z.Source Inverter in PV Solar Panel](#) - CIS-9-9929
 - *Amin Mehdipour, Hossein Majdinasab, Hessam Khazraj, Adulapuram Vinay Kumar*
- [Voltage-Mode Third Order Band Pass Filter Employing Operational Transresistance Amplifier](#) - CIS-2-3491
 - *Ashish Ranjan, Mourina Ghosh, Sajal K. Paul*
- [Within-Clock Power Gating Architecture Implementation to Reduce Leakage](#) - MEV-14-1681
 - *Sambhu Nath Pradhan, Priyanka Choudhury, Debanjali Nath, Abhishek Nag*