

2016 3rd International Conference on Devices, Circuits and Systems (ICDCS 2016)

**Coimbatore, India
3-5 March 2016**



**IEEE Catalog Number: CFP1603R-POD
ISBN: 978-1-5090-2310-3**

**Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1603R-POD
ISBN (Print-On-Demand):	978-1-5090-2310-3
ISBN (Online):	978-1-5090-2309-7

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Sl.No	Title	Page. No
1	A Pattern Recognition Approach for Identification of Transducer-Structure Debonding using Lamb Waves. <i>Durai Arun P, C.N. Sathyanarayana, S. Raja, and VPS Naidu</i>	1
2	Analysis of Network Infrastructure Threats Using Sonicwall Analyser. <i>P.K.Bhakthavatsalam, B.Malarkodi</i>	6
3	Simulation & Development of High Power CLASS-D, 2 MHz, 4 kW RF SOURCE for RF Based H- ION Source. <i>D. V. Ghodke, Priya Khachane, V. K. Senecha, Vaishali Kulkarni, S. C. Joshi</i>	10
4	Drift and Diffusion Bipolar Transistors: A Review. <i>Sarthak Mohapatra, M.R.Jena ,A.K.Panda.</i>	14
5	Evaluation of Face Recognition Using Vector Features In Local Pattern Descriptors. <i>Valarmathy.S, Arun Kumar.M, Sangeetha.R</i>	18
6	A Compact Multiband Partially Reflective Surface Antenna for XBAND and WLAN Applications. <i>R.Srividhya , S.Saravanan.</i>	23
7	Silicon Neuron-Analog CMOS VLSI Implementation and Analysis at 180nm. <i>Sushma Srivastava, Dr. S. S. Rathod.</i>	28
8	Sine Linear-Phase-Offset Difference Method: A Novel approach for Sine ROM Compression. <i>Parameshwara M. C., Srinivasaiah H. C.</i>	33
9	A Verilog-A Based Semiclassical Model For Dual Gated Graphene Field-Effect Transistor. <i>Sudipta Bardhan, Manodipan Sahoo and Hafizur Rahaman.</i>	37
10	Design and Implementation of Configurable Logic Block of an FPGA Using Quantum Dot Cellular Automata. <i>D.Gracia Nirmala Rani,C.Mathumitha, R.Priyadharshini and S.Rajaram</i>	43
11	A channel modelling considering varied environmental model for DSRC based V2V application services. <i>Usha Rani B., Dr. Suraiya Tarannum.</i>	48

12	An optimized beamforming technique to improve the sumrate for multicell MIMO. <i>Swetha Rani . Dr. Suraiya Tarannum.</i>	54
13	Programmable and Electronically Tunable Voltage-Mode Universal Biquadratic Filter Based on Simple CMOS OTA. <i>Nishtha rani, Rajeev kumar Ranjan, Ratnadeep Pal, Sajal K. Paul.</i>	58
14	Temperature Coefficient of Resistance Related to Amorphous Silicon/Metal Contact Design of Microbolometers. <i>Jyun-Hao Su, Wen-Kuan Yeh, , Wen-Teng Chang, Ban-Li Wu1, Ju-Mei Lu, Jin-Hung Wang, Yean-Kuen Fang, Po-Ying Chen.</i>	63
15	Flash Light Sintering of Silver Ink for Inkjet Printed Organic Thin Film Transistor on Flexible Substrate. <i>S. K. Sarkar, H. Gupta, D. Gupta.</i>	68
16	Design and Simulation of Low Leakage SRAM CELL. <i>Praveen Kumar Sahu, Sunny, Yogesh Kumar, and V. N. Mishra</i>	73
17	MEMS based Spin Sensor displacement analysis in Nanometer precision using COMSOL for S&A devices. <i>Swati Rastogi, Suryaprakash, S.P. Dutttagupta, H. Mutthurajan</i>	78
18	Application of Memristors in Active Filters. <i>Vishnu S, Sincy Ann Saji, Rohit R, Ramakrishnan V.N.</i>	84
19	Performance Analysis of Gate material Engineering in Enhancement mode n++GaN/InAlN/AlN/GaN HEMTs. <i>Sarosij Adak, Sanjit Kumar Swain, Godwin Raj, Hafizur Rahaman, Chandan Kumar Sarkar.</i>	89
20	A secure and energy efficient cluster optimization by using hierarchial clustering technique. <i>ChaitraH.V, Dr. Ravikumar G.K.</i>	93
21	Impact of High K layer material on Analog/RF Performance of forward and reversed Graded channel Gate Stack DG- MOSFETs. <i>Sanjit Kumar Swain, Sarosij Adak, Arka Dutta , Godwin Raj, Chandan Kumar Sarkar.</i>	98
22	Solar Panel Cleaning Bot For Enhancement of Efficiency- An Innovative Approach. <i>Prof. J. B. Jawale, Prof. V. K. Karra, Dr. B. P. Patil, Puneet Singh, Shailender Singh,Saloni Atre.</i>	103

23	Wireless RF Communication Based On DSP.	109
	<i>Anita L. Shelke, N. R. Kolhare, R. V. Sarvadnya, Vishal A. Kangane.</i>	
24	An adaptive cross-layer architecture to optimize QoS provisioning in MANET.	115
	<i>Asha, Dr. G . Mahadevan.</i>	
25	SCHOTTKY Barrier Based Compact Transmission Gate: A Simulation Study.	120
	<i>Abdulrahman M. Alamoud, Sunil Kumar, Sajad A Loan, Asim M. Murshid</i>	
26	A Compaction Based MT Filling Technique for Low-Power Test Set Generation.	124
	<i>G. Venu Madhavi, J. P. Anita.</i>	
27	Improved Two Dimensional Electron Mobility in Asymmetric Barrier Delta-Doped AlGaAs/GaAs Inverted MODFET Structures.	128
	<i>Sudhakar Das, Swati L. Satpathy, Rasmita K. Nayak, Ajit K. Panda, Trinath Sahu.</i>	
28	Performance Analysis of Symmetric High-k Spacer (SHS) Trigate SOI TFET.	133
	<i>Mallikarjuna Rao, Rajeev Ranjan, K P Pradhan, P K Sahu.</i>	
29	Investigation on Asymmetric Dual-k Spacer (ADS) Trigate Wavy FinFET: A Novel Device.	137
	<i>K P Pradhan, P K Sahu, Rajeev Ranjan.</i>	
30	Single-Walled Carbon Nanotube- Polyaniline/Poly Porphyrin Composite for Gas Sensing-A mini Review.	141
	<i>Chandra Kesh Dubey, V. R. Ratnaparkhe, Gajanan A. Bodkhe, Mahendra D. Shirsat.</i>	
31	Design and Analysis of Thin Film Nichrome Resistor for GaN MMICS.	145
	<i>Kirti Bansal,Subhash Chander,Samuder Gupta, Mridula Gupta.</i>	
32	A Comparative Study of Analog/RF Performance: Symmetric and Asymmetric Underlap Gate Stack DG-MOSFETs.	148
	<i>Arpan Dasgupta, Rahul Das, Arka Dutta, Atanu Kundu, Chandan K. Sarkar.</i>	
33	Analytical Model of Gate Underlap Double Gate Junctionless MOSFET as a Bio-Sensor.	152
	<i>Ajay, Rakhi Narang, Manoj Saxena, and Mridula Gupta.</i>	
34	A High Performance MEMS Piezoresistive Accelerometer for	157

	Pathological Tremor Diagnostic System.	
	<i>N.Chitra, J.GraceJency Gnanammal.</i>	
35	Design and Analysis of Low Noise Amplifier at 60 GHz Using Active Feedback and Current Re-use Topologies.	161
	<i>Becky Mary Ninan, Karthigha Balamurugan, Nirmala Devi M.</i>	
36	Influence on the Analog/RF Performance in Graded Channel Gate Stack DG-MOSFETs.	167
	<i>Ankush Chattopadhyay, Arka Dutta, Atanu Kundu, Chandan K. Sarkar.</i>	
37	An Adaptive localization error minimization approach for wireless sensor network.	170
	<i>Sudha H.Thimmaiah, Dr. Mahadevan.G.</i>	
38	Compressor Based 8x8 Bit Vedic Multiplier Using Reversible Logic.	174
	<i>G Sree Lakshmi, DrKaleem Fatima, Dr B K Madhavi.</i>	
39	Doping-Less Double Gate Impact Ionization MOSFET for High Switching Application.	179
	<i>Manash Chanda, Prithu Dey, Angsuman Sarkar, Chandan Kumar Sarkar.</i>	
40	Molecular Modeling of Biomolecular Hydrogen Gas Sensor using GaAs Nanopore Electrode.	184
	<i>Debarati Dey, Pradipta Roy, Debashis De I , Timam Ghosh.</i>	
41	A Novel Hybrid Doping Based SOI MOSFET.	190
	<i>Sunil Kumar, Asim M. Murshid, Sajad A Loan.</i>	
42	Sub-threshold Drain Current Modeling of Tri-Gate Dielectric Pocket InGaAs-On-Nothing MOSFET.	193
	<i>Vandana Kumari, ManojSaxena, Mridula Gupta.</i>	
43	Leakage Reduction Methodology of 1-bit Full Adder in 180nm CMOS Technology.	199
	<i>Prasenjit Deb, Alak Majumder.</i>	
44	Low-Power PTL-based Multiplexer Design in $\pm 0.9V$ 32nm Dual-Gate Si FinFET.	204
	<i>Amir Khan, Mohd. Samar Ansari, Syed Moeen Ashraf, Aquib Kamal Khan.</i>	
45	Performance assessment of Indium Arsenide (InAs) Single and Dual Quantum-Well Heterostructure FinFETs.	208
	<i>Kalyan Biswas, Angsuman Sarkar, Chandan Kumar Sarkar.</i>	
46	High Performance Recurrent Neural Network Implementations in	212

Technologies beyond CMOS.

Mohd. Samar Ansari.

- 47 **Green InGaN/GaN LEDs with n-GAN Interlayer for Efficiency Droop Improvement.** 216
Anuja Menokey M., D.Nirmal, Prajoon P., Charles Pravin.
- 48 **A Novel Low Power Nanoscale Reversible Decoder Using Quantum-Dot Cellular Automata for Nano communication.** 220
Jadav Chandra Das, Debashis De and Tapatosh Sadhu.
- 49 **TCAD Simulation Study of GaN Based Junctionless GAA Nano Transistor for High Frequency Applications.** 226
S. K. Suresh Babu, D. Jackuline Moni, Paul John Padickala.
- 50 **Image Masking Using QUANTUM-DOT Cellular Automata.** 231
Bikash Debnath, Jadav Chandra Das, Debashis De and Timam Ghosh.
- 51 **High Performance Ternary Adder Using CNTFET.** 236
Manasi Muglikar, Dr. Rasmita Sahoo, Dr Subhendu Kumar Sahoo.
- 52 **Reputation Based Mesh-Tree-Mesh Cluster Hybrid Architecture for P2P Live Streaming.** 240
B Uma Maheswari, TSB Sudarshan.
- 53 **First Principle Study of Molecular Quantum dot Cellular Automata Using Mixed Valence Compounds.** 244
Tamoghna Purkayastha, Debashis De, Biplab Das and Tanay Chattapadhyay.
- 54 **Karhunen-Loeve Transform for Sleep Spindle Detection.** 249
Subin Kuriakose, Geevarghese Titus.
- 55 **Fuzzy Set Theory Applications for FACTS Devices in Grid Connected Renewable Power Systems.** 254
Ms.Yasmeena, Dr. G. Tulasi Ram Das.
- 56 **Performance Analysis of Junctionless Gate All Around Tunnel Field Effect Transistor.** 262
D. Jackuline Moni, T. Jaspar vinitha sundari.
- 57 **Dual Threshold HSCD Domino Adder Structures.** 267
Shelar Aniket Vasant, A.Anita Angeline, V.S.Kanchana Bhaaskaran.
- 58 **Performance Analysis of PowerPC 603 FF at Nano-scale CMOS** 271

Technologies for WSNs.

Catherine Cornelius, R.Vinoth, P.Jennifer and Dr.S.Ramasamy.

- 59 **Power Analysis of Bit interleaving 9T SRAM array.** 275
Karthika .S , Dr. N.M. SivaMangai.
- 60 **Design of 10T SRAM Cell for High SNM and Low Power.** 281
P. Shiny Grace, N. M. Sivamangai.
- 61 **Impact of Mutual Inductance on the Crosstalk Induced Effects in Single-Walled Carbon Nanotube Bundle Interconnects.** 286
Manodipan Sahoo and Hafizur Rahaman
- 62 **Impact of Gate Length on the Performance of a Junctionless Dual Metal Transistor with High-k dielectrics.** 291
Charles Pravin., D.Nirmal, Prajoon P., Altrin Sharma., Anuja Menokey M
- 63 **Design of Static Random Access Memory Using QCA Technology.** 295
D. Gracia Nirmala Rani,M.Saranya,T. Sivashankari,N.Meenakshi,R.Meena, S.Rajaram.
- 64 **Design of a 1V Subthreshold Comparator for Bio-Medical Over Sampled ADCs.** 300
Jose Joy, Kavindra Kandpal.
- 65 **Effect of Temperature Variability on RF Performance of Germanium p TFET.** 304
Sayani Ghosh , Kalyan Koley, and Chandan K. Sarkar
- 66 **A 10-bit 40MS/s low power SHA-less pipelined ADC for System-On-Chip Digital TV Application.** 309
D.S. Shylu, D. Jackuline Moni, T. Renita Pearlin.
- 67 **Compact Modeling of a Parabolic Cross Section Nano-FinFET** 314
Abhishek Kumar Roushan and V.K. Chaubey
- 68 **Optically Controlled Reflection Type RF Phase Shifter Using Rat-Race Coupler On Silicon Substrate.** 319
Avanish Bhadauria, Sonia Sharma.
- 69 **Quality Aware Protocol to Support Multimedia Data Delivery in Wireless Network.** 322
Vijayalakshmi.M, Linganagouda Kulkami