

2018 4th International Conference on Devices, Circuits and Systems (ICDCS 2018)

**Coimbatore, India
16 – 17 March 2018**



**IEEE Catalog Number: CFP1803R-POD
ISBN: 978-1-5386-3477-6**

**Copyright © 2018 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 is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1803R-POD
ISBN (Print-On-Demand):	978-1-5386-3477-6
ISBN (Online):	978-1-5386-3476-9

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	Design of CPW E - Shaped Antenna for Network Applications <i>S. Ashok Kumar, T. Shanmuganantham, Venu Adepu.</i>	1
2	A 3-Port Y-Junction Power Splitter for 60GHz Applications <i>Mr. K. Bharath Kumar, Dr.T.Shanmuganantham</i>	4
3	Analysis of DC Characteristics of AlGaIn/GaN HEMTs: Simulation <i>Ajay, Subhash Chander, Mridula Gupta</i>	8
4	A Phase-shift Single Full-bridge (PSSB) Converter with Three Shared Leading-legs <i>Junjie Zhu, Qinsong Qian, Shengli Lu, Weifeng Sun</i>	12
5	Radio Frequency Identification and Sensor Networks based Bin Level Monitoring Systems-A Review <i>Jino Ramson, Deepthi Bhavanam, Srirupa Draksharam, Jackuline Moni, Alfred Kirubaraj, Ranjeet Kumar.</i>	17
6	Nonlinear Electron Transport Mobility in GaAs/Al_xGa_{1-x}As Square - Parabolic Double Quantum Well MODFET Structure <i>Narayan Sahoo, Trinath Sahu, Ajit K Panda.</i>	21
7	1x4 and 1x8 Photonic crystal ring resonator based Optical Splitters <i>Rakshitha Murthy and Indira Gandhi S.</i>	25
8	MLR Model Based Sensor Reduction For Remote Cr6 Detector <i>Sri Dhivya Krishnan K, Bhuvaneswari P.T.V.</i>	28
9	Choice Of Gate Insulator For Tunnelling Current Minimization And Effective Gate Electrostatics In Double Gate Nanoscale MOSFET <i>Gokuraju Thriveni, Kaustab Ghosh.</i>	34
10	A Comparitive Study of Pulse Triggered Flipflops <i>Naman Gupta, Prince Goyal, Kavindra Kandpal, Babu Ravi Teja Karri</i>	37
11	Pulsed Laser Deposited Molybdenum Oxides (MoO₃ & MoO₂)Thin Films For Nanoelectronics Device Application <i>Cyril Robinson Azariah John Chelliah, Ponmudi Selvan,Thiruchelvan, Samuel Rajasekar Mariadass Vedhamuthu, Sheebha Immanuel, Vidhya Bhojan, Rajesh Swaminathan.</i>	42
12	Comparison of Braun Multiplier and Wallace Multiplier Techniques in VLSI <i>Sangeetha Paulraj, Aijaz Ali Khan.</i>	48
13	Sensor Networks based Water Quality Monitoring Systems for Intensive Fish Culture -A Review <i>Jino Ramson, Deepthi Bhavanam, Srirupa Draksharam, Jackuline Moni, Alfred Kirubaraj, Ranjeet Kumar.</i>	54
14	Effects of Interface Charge (Q_{it}) and Interface Trap Density (D_{it}) on Al₂O₃, ZrO₂ and HfO₂ based Nano Regime Multi-Gate Devices <i>Rajiv Ranjan Thakur, Pragati Singh.</i>	58
15	Stability Analysis of 6t CNTFET SRAM Cell For Single And Multiple CNTs <i>Elangovan Mani, Gunavathi K.</i>	63

16	A Novel on Microstrip Low Pass Filter for Elliptic Response <i>S K Sriwas, Pramod Kumar.</i>	68
17	Design of Voltage Amplifiers with Optimization of Multiple Design Parameters <i>Siddhant Patil, Amartya Basak, Pravin Mane.</i>	72
18	Miniaturization of Monopole Antenna with Modified Ground for Wi-Fi application <i>Silpa P.S. Bhuvana Nair S and Sreedevi K Menon</i>	77
19	Permutated Symmetric Key for Perfect Lightweight Image Encryption <i>Siva Janakiraman, Roshini P, Sundararaman Rajagopalan, Thenmozhi K, Rengarajan Amirtharajan</i>	80
20	Review Of Full Adder Performance Analysis Using Kogge Stone Adder And Magnetic Tunnel Junction <i>Reshma James, Ajith Ravindran</i>	84
21	Synthesis of Broadband IF and RF Impedances under Multi-sine Stimuli <i>Muhammad Akmal Chaudhary</i>	91
22	Implementation of Efficient Mix Column Transformation for AES encryption <i>S.Sridevi Sathya Priya, Junias Mohandoss, Lavanya Ananda, Sarah Jenifer .S</i>	95
23	SEU sensitivity analysis of low power, precharge-free modified CAM Cell <i>M.Amarnath, Vijay H M, Satyanarayana S V V, Ramakrishnan V N, Sridevi Sriadibhatla</i>	101
24	Parametric Study of Stub Loaded Loop Resonator <i>Baby Sreeja.S.D, Betsy George, Sreedevi K. Menon</i>	106
25	BER Analysis of Spatial Multiplexing and STBC MIMO-OFDM System <i>T. Ravi Babu, C.Dharma Raj</i>	110
26	Comparative Study of CMOS Based Dosimeters for Gamma Radiation <i>Avashesh Dubey, Rakhi Narang, Manoj Saxena, Mridula Gupta</i>	117
27	Optimization of Gate Oxide of Dual-Gate MISHEMTs for Enhanced DC performance <i>Preeti Singh, Vandana Kumari, Manoj Saxena, Mridula Gupta</i>	121
28	Design of chopper stabilized preamplifier for ECG monitoring system <i>Uma vithy, C.Selvaganga</i>	126
29	Demonstration of Bias Dependence of Tunnel Magnetoresistance in Co-MgO-Co Magnetic Tunnel Junctions using First Principles Calculations <i>Mayank Chakraverty, Harisankar PS</i>	130
30	RF Performance comparison of Dual Material Gate (DMG) and Conventional AlGaIn/GaN High Electron Mobility Transistor <i>Nisha Chugh, Manoj Kumar Monika Bhattacharya, and R.S Gupta</i>	137
31	Design and Implementation of 64-bit Carry Lookahead Adders Using Fixed and Variable Stage Structure <i>Rasmita Barik, Soumyashree Mangaraj</i>	143

32	A Low-Power High Linear RF Mixer for 2.4GHz Low-Rate WPAN Applications <i>S. Chrisben Gladson ,K.Alekhya,M.Bhaskar</i>	148
33	TCAD Simulation study of single junction GaAs solar cell <i>Martin Johnson N, Victor Du John H, Jackuline Moni D</i>	154
34	Investigation of Gate All Around Junctionless Nanowire Transistor with Arbitrary Polygonal Cross Section <i>Monika Sharma, Mridula Gupta, Rakhi Narang, Manoj Saxena</i>	159
35	Impact of High-k spacer and Negative Capacitance on Double Gate Junctionless Transistor for Improved Short Channel Immunity and Reliability <i>Hema Mehta and Harsupreet Kaur</i>	164
36	Simulation Based Breakdown Voltage Analysis of 3 Step Field Plate HEMTs <i>Neha, Vandana Kumari, Mridula Gupta, Manoj Saxena</i>	169
37	GAA-CNTFET based Single/Dual-Channel and Single/Dual- Chirality digital gates for High Speed and Low Power Application <i>Singh Rohitkumar Shailendra, Dr.V.N. Ramakrishnan</i>	174
38	A CNTFET Based Quaternary Full Adder <i>Krishna Chaitanya Sankisa , Rasmita Sahoo Subhendu Sahoo</i>	181
39	Lattice Specific Heat of Graphene <i>Rasmita Sahoo, R. R. Mishra</i>	186
40	Comparative investigation of Si/Si_{0.6}Ge_{0.4}/InAs 3D-fin-TFET for its optimized performance <i>T. Narasimhulu Thoti, R Haritha, A Kishore Kumar, A Rajasekhar Yadav, V Narasimha Rao</i>	189
41	A Novel Approach to Analyze Current-Voltage Characteristics of Double Gated-Memristor <i>Vijay H M ,V N Ramakrishnan</i>	194
42	Comparative Analysis Of MOSFET and STBFET Based Amplifier For Analog Application <i>Barsha Jain, Kamal Kishor Jha, Manisha Pattanaik</i>	198
43	Design and Study of Memristor based Non-autonomous Chua's circuit <i>Tawfiq Basha, I Raja Mohamed and A Chithra</i>	203
44	Thickness Optimization for Intercalation doped Multilayer Graphene Nanoribbon Interconnects <i>Bhawana Kumari, Manodipan Sahoo</i>	207
45	Efficient Vedic Signed Digit Decimal Adder. <i>G.Sreelakshmi ,Mohammed Salman, Kaleem Fatima, B.K.Madhavi</i>	212
46	Performance Analysis Of Metalloid Source/ Drain Gaas-Finfet For Analog/Rf Applications <i>Yogesh Pratap, Reshma Sinha, Praveen Pal, Sachin Kumar, Sarul Malik and Sneha Kabra</i>	219

47	Decision support system for heart disease diagnosis using interval vague set and fuzzy association rule mining <i>Umashankar P, Thiagarasu V</i>	223
48	A Smart Healthcare Monitoring System Using Smartphone Interface <i>Akshat, Gaurav, Zahid, Bhupendra, Aditi, Sachin Kumar, Maneesha, Praveen Pandey</i>	228
49	Performance Study of Short Channel Symmetric Double Gate Gaussian Doped Ferroelectric FET for Analog and Digital Electronics <i>Harsupreet Kaur, Hema Mehta</i>	232
50	Transmitter Output Power Control of PCMC Radar for Short Range Tracking Bypassing Cross-field Amplifier <i>Arun Ray, Alok Lenka</i>	237
51	Two Dimensional Analytical Potential Model for Double Gate TFETs <i>Nithin Kumar N.R. P. Vimala.</i>	241
52	A Design of low power Adders <i>Sridevi Sathya Priya.S, Karnatakam Dharani, Benita Poulraju and Benita B</i>	245
53	A Fam 2d-Rls Based Smart Massive MIMO System <i>Arun Joy, Athira Jess, Irin Sajan, Priscilla Grace</i>	250
54	A Study on Transparent and Flexible Capacitor using Hybrid Zinc Oxide: Indium Tin Oxide and Silver as electrodes. <i>S Angen Franklin and J Grace Jency</i>	254
55	Analysis of dynamic models of a STT-MRAM <i>Betty Rachel Mathew, N.M. Siva Mangai</i>	259
56	Design of 12 Bit 200MS/s Low Power Delta Sigma ADC Using Telescopic Amplifier <i>D.S.Shylu Sam, Arolin Monica Helen</i>	263
57	Designed & Comparison of Reliability Analysis in 6T & 5T SRAM Cell <i>Seelam Vasavi Sai Viswanada Prabhu Deva Kumar</i>	266
58	Design of Cascadable S-band Amplifier using Tunable Equalizer <i>Ayisha B.S, Sherly Joy, Apren T. J</i>	278
59	Compressed sensing aided estimation of channel in downlink TDD large scale MIMO system <i>V.Adinarayana , K. Murali Krishna, P. Rajesh Kumar</i>	284
60	Overview of Current Compliance Effect on Reliability of Nano Scaled Metal Oxide Resistive Random Access Memory Device <i>Napolean Antony and Siva Mangai N.M.</i>	290
61	Feature Extraction and Matching using Gabor wavelets and Hessian detector <i>Chandaka Shravani, Narayanam Balaji</i>	297
62	Fabrication and Characterization of PLD Crystalline Zno as Channel and Amorphous Zno as Gate Dielectric of the Thin Film FET <i>Suresh Babu S K, Cyril Robinson Azariah J, Jackuline Moni D, Paul John Padickala and Rajesh S</i>	301

63	Interfacial Layer Dependence of high-K Gate Stack based Conventional FinFET Concerning Analog/RF Performance <i>Ashutosh Nandi, Shubham Tayal</i>	305
64	Feature Extraction and Classification of CT lung Images using Binary Patterns and SVM Classifiers <i>Narain Ponraj, Esther Christy, Aneesa G, Sushmita G and Monica Sharu</i>	309
65	DC Performance analysis of AlGaIn/GaN HEMT for future High power applications <i>Pratik Pandit, L. Arivazhagan, P Prajoon, J S Rajkumar and J Ajayan</i>	313
66	Application Of Selective Region Growing Algorithm In Lung Nodule Segmentation <i>P. Malin Bruntha, Jaisil Rose.D, Shruthi A.T, Glory Juliet.K, Kanimozhi M</i>	319
67	Slotted Antenna Design For Gps Applications Using Feko Software <i>Anita Jones T, Vidhya Priyadarshni, Angelin Esther, Lingala Sowjanya and Ranso T</i>	323
68	On The Design Of Miniaturized Implantable Serpentine Radiating Structures Using Strip Loading Method <i>Sarumathi C, Mary Neebha T and Nesasudha M</i>	326
69	A Hybrid Microstrip Antenna For Wide Band Lte Infrastructure <i>Iruthaya Mary A, Merlin Gilbert Raj S and Suriavel Rao R S</i>	331
70	Performance Analysis of GaSb/InAs Tunnel FET for Low Power Applications <i>Jackuline Moni D, Josephine Anucia A, Gracia D and Nirmal D</i>	335
71	A Low Power Dynamic Comparator for a 12-bit Pipelined Successive Approximation Register (SAR) ADC <i>D.S.Shylu,S.Jasmine,D.Jackuline Moni</i>	339
72	Prototypes of Body Worn Microstrip Patch Antennas for Biomedical Applications Operations in the ISM Frequency Band <i>Nesa Sudha,J.Weyler</i>	343