

2nd International Conference on Innovations in Electronics, Signal Processing and Communication



Technical Co-Sponsor



1st – 2nd March, 2019

Organized by

Department of Electronics & Communication Engineering

NATIONAL INSTITUTE OF TECHNOLOGY MEGHALAYA

Programme Schedule

Day-I: 01-03-2019, Friday

08:30 – 09:30	Registration					
09:30 – 10:15	Inauguration					
10:15 – 10:30	High Tea					
10:30 – 11:15	Keynote Speech :Intelligent Signal Processing by Prof. G. Panda, IIT Bhubaneswar					
11:15 – 12:15	Session : Electronic Devices, Circuits and Systems– I (Hall - 1)			Session : Signal Processing– I (Hall -2)		
	Chair : Dr Anup Dandapt, NIT Meghalaya			Chair : Dr B Pushpa Devi, NIT Meghalaya		
	Paper ID	Presenter	Title	Paper ID	Presenter	Title
	152	CHINNAIAH M C	REAL-TIME YOGA ACTIVITY WITH ASSISTANCE OF EMBEDDED BASED SMART YOGA MAT	7	CHINGMUANKI M NAULAK	SPEAKER INDEPENDENT SPEECH RECOGNITION SYSTEM FOR PAITE LANGUAGE USING C# AND SQL DATABASE IN VISUAL STUDIO
	144	CHITRAKANT SAHU	RF PARAMETER EXTRACTION AND S-PARAMETER ANALYSIS OF JUNCTIONLESS SILICON NANOWIRE TRANSISTOR	20	AMEYA MORBALE	HIERARCHICAL SEGMENTATION OF ENTITIES IN A HANDWRITTEN DOCUMENT
	41	CHAMPAK TALUKDAR	VOLTAGE CONTROLLED STIMULATOR FOR NERVE CONDUCTION STUDY	45	ANU SINGHA	MOVING OBJECT DETECTION IN NIGHT TIME: A SURVEY
	42	HIMADRI DUWARAH	AN APPROACH TO DESIGN MEMRISTIVE BIOSENSOR BY USING ZINC OXIDE NANOSAMPLE	57	RUPESH SUBHASH MAHAMUNE	A REVIEW ON ARTIFACTS REMOVAL TECHNIQUES FOR ELECTROENCEPHALOGRAM SIGNALS
	47	LANOSHA SARIANG	MATHEMATICAL MODELING OF CARRIER INJECTION BASED PIN JUNCTION OPTICAL PHASE SHIFTER USING EVOLUTIONARY ALGORITHM	60	VIKAS MITTAL	GLOTTAL SIGNAL ANALYSIS FOR VOICE PATHOLOGY
	8	SUCHANDRA BANERJEE	MINIMIZING VIAS AND WIRELENGTH IN 3-D IC FLOORPLANNING	76	SURAJIT DEKA	JOINT SOURCE CHANNEL CODING WITH MIMO MCCDMA FOR EFFICIENT COMMUNICATION
	12:15 – 12:30	Tea Break				

Paper Presentations

Session : Electronic Devices, Circuits and Systems – II (Hall - 1)
Chair : Dr Rakesh Roy, NIT Meghalaya

Session : Signal Processing – II (Hall -2)
Chair : Dr P Rangababu, NIT Meghalaya

Paper ID	Presenter	Title	Paper ID	Presenter	Title
67	MOUMITA DAS	A COMPARISON STUDY OF ON-CHIP AND OPTIMIZED GATE INDUCTOR OF AN LNA	65	KSH MILAN SINGH	HARMONIC EXTRACTION BASED ON MHDFT ALGORITHM IN PLL TECHNIQUE
68	CHANDAN KUMAR PANDEY	A NOVEL STRUCTURE OF DOUBLE-GATE TUNNEL FET WITH EXTENDED BACK GATE FOR IMPROVED DEVICE PERFORMANCES	96	RUPJYOTI HALOI	SELECTION OF AN APPROPRIATE DENOISING TECHNIQUE FOR EEG SIGNALS OF PARKINSON'S DISEASE PATIENTS
83	HIRANYA RANJAN THAKUR	PHYSICAL MODEL FOR DRIFT IN CARBON NANOTUBE BASED ZRO2 GATE DIELECTRIC ION SENSITIVE FIELD EFFECT TRANSISTOR	77	DIPEN NATH	A STUDY OF SPOKEN WORD RECOGNITION USING UNSUPERVISED LEARNING WITH REFERENCE TO ASSAMESE LANGUAGE
105	SWARUP DANDAPAT	LOW PHASE NOISE 2.45GHZ LC VCO BASED ON CURRENT REUSE TECHNIQUE IN 180NM CMOS TECHNOLOGY	94	HELAL UDDIN MULLAH	PARALLEL MULTISPECTRAL IMAGE SUPER-RESOLUTION BASED ON SPARSE REPRESENTATIONS

12:30-13:15

13:15 – 14:00

LUNCH

14:00 – 14:45

Keynote Speech: Innovations of Avionics Sensor Technologies for a Combat Aircraft by Dr. N.N.S.S.R.K. Prasad, Aeronautical Development Agency, DRDO

Paper Presentations

Session : Microwave and Communication Engineering – I (Hall - 1)

Session: Soft Computing and Machine Learning – I (Hall - 2)

Chair : Dr Vinay Kumr, VNIT Nagpur

Chair : Dr A K Maji, NEHU, Shilling

Paper ID	Presenter	Title	Paper ID	Presenter	Title
110	NEERAJ KUMAR SINGH	SMART GRID:CYBER ATTACK IDENTIFICATION AND RECOVERY APPROACH	13	HEMANTA KUMAR PAIKRAY	IMPROVED SHUFFLED FROG LEAPING ALGORITHM FOR PATH PLANNING OF MULTIPLE MOBILE-ROBOT
52	ISHAN S. DARWHEKAR	WIDEBAND TRIANGULAR PATCH ANTENNA FOR COGNITIVE RADIO IN TV WHITE SPACE	16	DEEPSHIKHA NANDI	MODELLING SIGNAL TRANSMISSION IN PASSIVE DENDRITIC FIBRE USING DISCRETIZED CABLE EQUATION
59	NIRMALA DEVI L	SECURE AND COMPOSITE ROUTING STRATEGY THOUGH CLUSTERING IN WSN	31	PREETAM CHAYAN CHATTERJEE	KEYWORD EXTRACTION USING GRAPH BASED SUPERVISED TERM WEIGHTING
64	BALBINDAR KAUR	A COMPARATIVE STUDY OF MULTICORE ERBIUM DOPED FIBER AMPLIFIER: MODE ANALYSIS	49	DEBASIS ACHARYA	PARTICLE SWARM OPTIMIZATION (PSO) BASED 2-DOF-PID POWER SYSTEM STABILIZER DESIGN FOR DAMPING OUT LOW FREQUENCY OSCILLATIONS IN POWER SYSTEMS
78	PARAG MONI PATANGIA	CHANNEL CAPACITY OF ADAPTIVE TRANSMISSION WITH MRC RECEIVER IN CORRELATED $\eta - \mu$ FADING CHANNELS	53	PANKAJ JYOTI DAS	A FRAMEWORK FOR HUMAN BEHAVIOUR DETECTION USING COMBINED ANALYSIS OF FACIAL EXPRESSION AND EYE GAZE

14:55 – 16:00

16:00 – 16:15

Tea Break

Paper Presentations

**Session : Microwave and Communication Engineering – II
(Hall - 1)**

Chair : Dr Pankaj Sarkar, NEHU, Shillong

Session : Soft Computing and Machine Learning – II (Hall - 2)

Chair : Dr Yogita, NIT Meghalaya

16:20 – 17:30

Paper ID	Presenter	Title	Paper ID	Presenter	Title
120	SUDESHNA SEN	DEVELOPMENT AND CHARACTERIZATION OF SOLID STATE RF AMPLIFIER FOR HEAVY ION BEAM BUNCHER	54	RAJDEEP GHOSH	EMOTION RECOGNITION FROM EEG SIGNALS USING BACK PROPAGATION NEURAL NETWORK
97	SOUMASHREE S PANDA	A REMOTE DEVICE AUTHENTICATION SCHEME FOR SECURE COMMUNICATION IN CLOUD BASED IOT	84	MANAMI BARTHAKUR	SEMANTIC SEGMENTATION USING K-MEANS CLUSTERING AND DEEP LEARNING IN SATELLITE IMAGE
98	RABINDRA KUMAR	A SINGLE FEED CIRCULARLY POLARIZED ARRAY ANTENNA FOR SATELLITE COMMUNICATION	122	SOURAV BASAK	INCORPORATION OF SOLAR-WIND ENERGY IN ELD WITH THERMAL UNITS BY ADAPTIVE JAYA ALGORITHM FOR MICROGRID
T103	PIYUSH PRATAP SINGH	NONIDENTICAL CHAOTIC SECURE COMMUNICATION USING PROPORTIONAL INTEGRAL SLIDING MODE CONTROL TECHNIQUE	136	SHUVAYANTI DAS	CRITICAL DIMENSION OF WORD2VEC
15	M. EDISON SINGH	A COMPACT 3RD ORDER SIW FILTER WITH IMPROVED UPPER BAND PERFORMANCE FOR KU-BAND APPLICATIONS			
112	DHIMAN KAKATI	A FULL-DUPLEX PILOT-ASSISTED DP-16-QAM CO-OFDM SYSTEM FOR HIGH-SPEED LONG-HAUL COMMUNICATION			

17:30 – 18:00

Industry Interaction

18:00 – 19:30

Cultural Programs

19:30 – 21:00

Banquet

Day-II: 02-03-2019, Saturday

09:15 –10:15 **Keynote Speech: Massive MIMO and Phased Array Antenna Configurations for Indigenous End to End to 5G Test Bed by Dr. P.H. Rao, SAMEER-Centre for Electromagnetics, Chennai**

10:15 –10:30 **High Tea**

Paper Presentations

Session : Electronic Devices, Circuits and Systems– III (Hall - 1)

Chair : Dr Shubhankar Majumdar, NIT Meghalaya

Paper ID	Presenter	Title
113	VINOD KUMAR JOSHI	DRV EVALUATION OF 6T SRAM CELL USING 45NM TECHNOLOGY
116	SHASHI KUMAR	AN IDEA OF IMPLEMENTING CMOS OPERATIONAL AMPLIFIER IN SUMMER CONFIGURATION FOR THE DESIGNING OF HIGHLY SENSITIVE PRESSURE TRANSDUCER
121	SAROJINI MANDAL	DESIGN OF MEMRISTOR – CMOS BASED LOGIC GATES AND LOGIC CIRCUITS
124	ABHISHEK TOMAR	DESIGN OF LOW POWER AND HIGH SPEED XOR/XNOR CIRCUIT USING 90 NM CMOS TECHNOLOGY
142	PLABITA GOGOI	MODELING A H-H NEURON BASED SPIKING NEURALNETWORK INCORPORATING MULTIPLE PRE-SYNAPTIC INPUTS.

Session : Signal Processing – III (Hall - 2)

Chair : Dr Juwesh Binong, NEHU, Shillong

Paper ID	Presenter	Title
66	KSH MILAN SINGH	ULTRASONIC VIBRATION MEASUREMENT BASED ON FM DEMODULATION IN PLL TECHNIQUE
106	JAYA NAMEIRAKP AM	SINGER IDENTIFICATION USING WAVELET TRANSFORM
115	PRANABJYOTI HALOI	UNSUPERVISED BROADCAST NEWS VIDEO SHOT SEGMENTATION AND CLASSIFICATION
119	TAMAL DATTA	REAL TIME DETECTION AND TRACKING OF A MODEL CAR USING KALMAN FILTER
126	AMIT KUMAR ROY	PERFORMANCE DEGRADATION IN WIRELESS MESH NETWORKS VIA EXTERNAL AND INTERNAL ATTACKS .

12:00 –12:15 **Tea Break**

Paper Presentations

Session : Electronic Devices, Circuits and Systems – IV (Hall - 1)

Chair : Prof Gayadhar Panda, NIT Meghalaya

Paper ID	Presenter	Title
55	SUBRAT KUMAR PRADHAN	H_{∞} PERFORMANCE BASED ROBUST STATE FEEDBACK CONTROLLER DESIGN FOR INTERCONNECTED POWER SYSTEM WITH DELAY.
148	NITYANANDA HAZARIKA	A NON-INTRUSIVE OPTO-MECHANICAL TECHNIQUE FOR THE MEASUREMENT OF LIQUID LEVEL.
12	MEENAKSHI AGARWALLA	IMPLEMENTATION OF A MODIFIED GLOBAL ROUTING ALGORITHM ON HIGH-THROUGHPUT PARALLER ENVIRONMENT.
74	POSIBA MOSTAFA	A DITHERLESS 2.4GHZ HIGH LC DCO.

13:00 –14:00 **LUNCH**

14:00 –14:45 **Keynote Speech: Growth and fabrication of Different III-Nitride Semiconductor Material and their Applications by Dr. Manish Mathew, CSIR-CEERI, Pilani**

Paper Presentations

Session: Microwave and Communication Engineering – III (Hall - 2)

Chair : Dr Rupaban Subadar, NEHU, Shillong

Paper ID	Presenter	Title
79	PARAG MONI PATANGIA	ENERGY DETECTION OVER DUAL CORRELATED NAKAGAMI-M FADING CHANNELS USING SELECTION DIVERSITY TECHNIQUE.
137	SUNDEEP KUMAR	DESIGN OF CIRCULAR PATCH ANTENNAS FOR 5GAPPLICATIONS.
138	SWARNALI NATH	DESIGN OF A DUAL BAND ANTENNA USING SQUARE CLOSED RING (SCR) SUPERSTRATE.
139	SMRITI REKHA DAS	NANO-SIZED SLOTTED MICROSTRIP PATCH ANTENNA FOR X BAND OPERATION.
156	ANANTA KANT RAI	A NARROW BAND CASCODE SOURCE DEGENERATION LOW NOISE AMPLIFIER WITH II- INPUT MATCHING AT 5 GHZ FREQUENCY.
100	RIDAHUN MALANGIANG	MATHEMATICAL MODELING OF CARRIER DEPLETION BASED P-N JUNCTION OPTICAL PHASE SHIFTER USING EVOLUTIONARY ALGORITHM.

16:00 –16:15 **Tea Break**

16:15 –17:00 **Valedictory**