

2017 IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia 2017)

**Bengaluru, India
5-7 October 2017**



**IEEE Catalog Number: CFP17D25-POD
ISBN: 978-1-5386-2788-4**

**Copyright © 2017 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:	CFP17D25-POD
ISBN (Print-On-Demand):	978-1-5386-2788-4
ISBN (Online):	978-1-5386-2787-7

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

TABLE OF CONTENTS

A REVIEW OF BIG DATA ANALYTICS OVER CLOUD	1
<i>Rayan Dasoriya</i>	
SECURING NETWORKED CONTROL SYSTEMS: MODELING ATTACKS AND DEFENSES	7
<i>J. Jithish ; Sriram Sankaran</i>	
A STUDY OF LOAD PREDICTION AND LOAD FLOW PATTERNS IN AN IOT ENABLED SMART GRID WITH A DYNAMIC ENERGY MARKET	12
<i>Kshama Dwarakanath</i>	
DETECTION OF TRANSFORMED MALWARES USING PERMISSION FLOW GRAPHS	17
<i>Ridhima Seth ; Rishabh Kaushal</i>	
EFFICIENT FREQUENCY DOMAIN CNN ALGORITHM	22
<i>Mihir Mody ; Chaitanya Ghone ; Manu Mathew ; Jason Jones</i>	
EVALUATION OF RELEVANCE VECTOR MACHINE CLASSIFIER FOR A REAL-TIME FACE RECOGNITION SYSTEM	26
<i>H S Karthik ; J. Manikandan</i>	
DESIGN OF A PHONEME BASED VOICE CONTROLLED HOME AUTOMATION SYSTEM	31
<i>G B Karan ; Dhananjay Kumar ; Kiran Pai ; J. Manikandan</i>	
ELECTROOCULOGRAPHY BASED ASSISTIVE TECHNOLOGY FOR ALS PATIENTS	36
<i>Dhanush Roopa Lingegowda ; Karan Amrutesh ; Srikanth Ramanujam</i>	
AUTO WHITE BALANCE USING DYNAMIC HISTOGRAM MATCHING FOR AMOLED PANELS	41
<i>Tejpratap Gollanapalli ; Venkat Ramana Peddigari ; Phani Shankar Madineni</i>	
SOLID STATE RELAY BASED INRUSH CURRENT LIMITER WITH SHORT CIRCUIT AND UNDER VOLTAGE PROTECTION FOR DC-DC CONVERTERS	47
<i>Rajeev Ranjan</i>	
BEHAVIOURAL STUDY OF MEMORY ALLOCATORS FOR ANDROID PLATFORM	52
<i>Satish Patel</i>	
DEPENDENCE OF HALL EFFECT FLOW SENSOR FREQUENCY ON THE ATTACHED INLET AND OUTLET PIPE SIZE	56
<i>J. Lalnumthari ; H. H. Thanga</i>	
CENTRALIZED SERVER BASED ATM SECURITY SYSTEM WITH STATISTICAL VULNERABILITY PREDICTION CAPABILITY	61
<i>T. Guru Sarath</i>	
FPGA IMPLEMENTATION OF BLIND SOURCE SEPARATION USING A NOVEL ICA ALGORITHM	67
<i>Vinita Singh ; Vaibhav Kumar Somani ; J. Manikandan</i>	
AN APPROACH TOWARDS NOVEL VIDEO STEGANOGRAPHY FOR CONSUMER ELECTRONICS	72
<i>M C Sushmitha ; H N Suresh ; J. Manikandan</i>	
NOVEL OPENVX IMPLEMENTATION FOR HETEROGENEOUS MULTI-CORE SYSTEMS	77
<i>Kedar Chitmis ; Jesse Villarreal ; Brijesh Jadav ; Mihir Mody ; Lucas Weaver ; Victor Cheng ; Kumar Desappan ; Anshu Jain ; Pramod Swami</i>	
AUGMENTED REALITY IN BROADCASTING	81
<i>Shivakumar Chandrasekaran ; Umesh Kesavan</i>	
LEAKAGE OPTIMIZATION OF THICK OXIDE IO/ESD TRANSISTORS IN 40NM GLOBAL FOUNDRY PROCESS	84
<i>Chinmayee Panigrahi ; Mansi Rastogi ; Kiran Gopal</i>	
SENSE AMPLIFIER BASED HIGH SPEED FLIP-FLOP DESIGN FOR ADVANCED SUB-MICRON FINFET STANDARD CELL LIBRARY	88
<i>Sajal Mittal ; Jaskaran Bhatia ; Rajeela Deshpande ; Abhishek Ghosh ; Parvinder Kumar Rana</i>	
ROBUST EVENT TRIGGER GENERATION FOR POST SILICON VALIDATION	92
<i>Sumit Diware ; Sharath B. Krishna</i>	
POWER MITIGATION IN HIGH-PERFORMANCE 32-BIT MIPS-BASED CPU ON XILINX FPGAS	96
<i>Neha Dwivedi ; Pradeep Chhawcharia</i>	
CURRENT CONTROLLED CAPACITOR LESS LOW DROPOUT VOLTAGE REGULATOR FOR FAST TRANSIENT RESPONSE	102
<i>Rajeev Ranjan</i>	

ADVERSE WEATHER SIMULATION FOR TRAINING NEURAL NETWORKS	107
<i>K. Praveen ; Jashojit Mukherjee ; Venugopala Madumbu</i>	
FLEXIBLE AND EFFICIENT PERSPECTIVE TRANSFORM ENGINE	111
<i>Mihir Mody ; Rajshekar Allu ; Niraj Nandan ; Gang Hua ; Hetul Sanghvi ; Shashank Dabral ; Brijesh Jadav ; Sujith Shivalingappa ; Jason Jones</i>	
PARALLEL IMAGE PRE-PROCESSING FOR IN-GAME OBJECT CLASSIFICATION	115
<i>Prabindh Sundareson</i>	
CONTINUOUS, ROBUST HAND GESTURE RECOGNITION FOR EMBEDDED DEVICES	117
<i>Ujwal Bachiraju Venkata Satya ; Venkat R Peddigari</i>	
DESIGN, ANALYSIS AND CONTROL OF AN AUTONOMOUS UNDERWATER SURVEILLANCE ROBOT	121
<i>Sumukha Udupa ; Nishant Joshi ; Shashank Raman</i>	
TOWARDS A SCALABLE HARDWARE/SOFTWARE CO-DESIGN PLATFORM FOR REAL- TIME PEDESTRIAN TRACKING BASED ON A ZYNQ-7000 DEVICE	127
<i>Zheqi Yu ; Shufan Yang ; Ian Sillitoe ; Kevan Buckley</i>	
INTELLIGENT MONITORING AND MAINTENANCE OF SOLAR PLANTS USING REAL-TIME DATA ANALYSIS	133
<i>Mayuri Ejgar ; Bashirahamad Momin ; Tanuja Ganu</i>	
SWARM HOME ROBOTS	139
<i>Praveen Kalla ; Ramji K Ramj ; P. Ravindranath</i>	
A NOVEL THERMOCOUPLE FOR ULTRA HIGH TEMPERATURE APPLICATIONS: DESIGN AND COMPUTATIONAL ANALYSIS	145
<i>Anupam Purwar ; Sneh Deep</i>	
NOVEL ARCHITECTURE FOR CLOUD BASED NEXT GEN VEHICLE PLATFORM — TRANSITION FROM TODAY TO 2025	151
<i>Pramod Kumar Gurudatt ; Varun Umesh</i>	
THROTTLE OVERRIDE SAFETY SYSTEM FOR ‘DESIGN INDUCED PILOT ERROR’ IN ELECTRIC VEHICLES	156
<i>Dheeraj Prasanna ; Karthik Sullia ; Shanmukha Nagaraj</i>	
TRANS-RECEIVER WITH DIGITAL MODULATOR & FREQUENCY UP CONVERTER FOR SECURED COMMUNICATION	160
<i>Nanda Kishora Holla ; Siva Yellampalli</i>	
BRAPTER: COMPACT BRAILLE TRANSPUT COMMUNICATOR	164
<i>V T Shubhom ; S. Keerthan ; S. Swathi ; G. Abhiram ; R. Shashidhar</i>	
Author Index	