

2018 IEEE 2nd International Conference on Circuits, System and Simulation (ICCSS 2018)

**Guangzhou, China
14-16 July 2018**



**IEEE Catalog Number: CFP18IAI-POD
ISBN: 978-1-5386-7820-6**

**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:	CFP18IAI-POD
ISBN (Print-On-Demand):	978-1-5386-7820-6
ISBN (Online):	978-1-5386-7819-0

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

2018 IEEE 2nd International Conference on Circuits, System and Simulation (ICCSS)

Table of Contents

Preface	v
Conference Committee	vi

Digital Circuits and Systems

Single-Event Effects in Power MOSFETs: Physical Mechanism and Hardening through 3D Simulations	1
<i>Zhu Ming, Wang Tong, Gu HanTian, Qu Ruoyuan, Zhu HengJing, Zhang Wei, Tang Min</i>	
Study of SEU of 28nm UTBB-FDSOI Device by Heavy Ions and TCAD Simulation	5
<i>Mei Bo, Ge Yong, Sun Yi, Zhang Hongwei, Zhao Xing, Li Bo, Liu Mengxin</i>	
A 1mW 20MHz Bandwidth 9.51-ENOB Dynamic-Amplifier-Based Noise-Shaping SAR ADC.....	9
<i>Hanie Ghaedrahmati, Jianfeng Xue, Jing Jin, Jianjun Zhou</i>	
Research on Neutral Point Potential Balance of Three-Level Inverter	13
<i>Jing Cui-ru, Li Qian, Wu Yi-fei, Shi Xu, Fu Qiang</i>	
Implementation of a Wireless Controlled Gate Driver	17
<i>Jau-Jr Lin, Jyun-Lin Lin, Wei-Ting Shen</i>	
A Novel 1.03 ppm/°C Wide-Temperature-Range Curvature-Compensated Bandgap Voltage Reference	22
<i>Jinlong Hu, Jie Sun, Yangbo Bai, Huachao Xu, Tao Du, Guofeng Li, Yao Chen</i>	
Miniaturized Bandpass Filter Using IPD Technology with a Novel Design Flow.....	27
<i>Jie Liu, Yu Ban</i>	
Non-ideality Analysis of Folding and Interpolating ADC.....	31
<i>Ruoyuan Qu, Zhuohong Du, Ming Zhu, Nan Li, Hengjing Zhu</i>	

Electronics and Electrical Engineering

A Comparative Study of MPCC and MPTC in PMSM Drive System	36
<i>Yifang Zhu, Jian Yin, Gang Xu</i>	
Fast Generalized Labeled Multi-Bernoulli Tracking Algorithm Based on Box Particle Filtering	41
<i>Luo-jia Chi, Xin-xi Feng</i>	
Design and Implementation of a Configurable and Aperiodic Pseudo Random Number Generator in FPGA	47
<i>Honghui Tang, Tao Qin, Zhijian Hui, Pengyu Cheng, Wensong Bai</i>	
A Novel Engineering Implementation of SVPWM Based on Line Voltage Information	52
<i>Weifeng Zhang, Yan Chen, Jian Wang</i>	

Dynamic Clustering Equivalence of Wind Farms Considering Impacts of Collection Lines	56
<i>Wenzhe Zheng, Jing Bu, Ningyu Zhang, Qian Zhou, Jiankun Liu</i>	

Electronics and Communication Engineering

A Front-End Amplifier for Neural Signal Acquisition.....	62
<i>Ruoyuan Qu, Wei Zhang, Qianqian Lv, Min Tang</i>	
Intra-pulse Intentional Modulation Recognition of Radar Signals at Low SNR.....	66
<i>Tian Xi, Liu Yishan, Pan Xianyue, Chen Wentao</i>	
Application of an Infinite Gain Multiple Feedback Filter in VLC Link Range Extension.....	71
<i>Aliyu Makama, Richard Binns, Majed Basha</i>	
A Design of Direct Memory Access Controller for Wireless Communication SoC in Power Grid.....	76
<i>Yingying Chi, Zhe Zheng</i>	
A Queue Manager Support Independent Management of Multicast Queues for CIOQ Switches.....	80
<i>Pengfei Qian, Lufeng Qiao, Qinghua Chen, Xu Huang</i>	
A Novel Multi-channel Statistical Predicted Strategy for Airborne Networks.....	85
<i>Weilun Liu, Hengyang Zhang, Bo Zheng, Weiting Gao, Zhikang Qin</i>	
A 14-bit 500-MS/s SHA-less Pipelined ADC in 65nm CMOS Technology for Wireless Receiver	91
<i>Yanhua Zhang, Lijie Yang, Ruirui Dang, Zhiwei Xu, Chunyi Song</i>	
A DAM Spectrum Sensing Algorithm of Cognitive Radio Network Based Random Matrix	95
<i>Weiting Gao, Fei Ma, Guobing Cheng, Weilun Liu</i>	
Compact RF MEMS Antenna with Silicon Substrate.....	101
<i>Zhu Xiaoming, Liu Baisen, Wang Xiaoguang</i>	

Digital Information Technology and Application

An Improved Algorithm for Tracking Multiple Extended Targets Based on Measurement Set Partitioning.....	105
<i>Lu Miao, Xin-xi Feng, Luo-jia Chi</i>	
Ticket Market Design Based on Permissionless Blockchain	111
<i>Nan Hao</i>	

Author Index