



2018 IEEE INTERNATIONAL CONFERENCE ON ELECTRON DEVICES AND SOLID-STATE CIRCUITS

June 6-8, 2018 Marriott Hotel Golden Bay, Shenzhen, P.R.China

Technical Program

June 5, 2018 - Pre-Day1, Tuesday

Registration Time: 16:30PM-19:00PM

June 6, 2018 - Day 1, Wednesday

Registration Time: 8:00AM-12:15AM & 14:00PM - 17:15PM

9:30 AM	Opening Ceremony		
9:45 AM	Keynote Lecture 1: Opportunities and Challenges for Emerging IC Technology Based on High-Mobility-Channel Transistors - Prof. T.P. Ma		
10:30 AM	Coffee Break		
10:45 AM	Keynote Lecture 2 : New Opportunities and Potential of Advanced Physical Analysis Techniques to Study Nanoscale Semiconductor Devices - Prof. Kin-Leong Pey		
11:30 AM	Keynote Lecture 3: Magnetic Recording: Device and its Circuit considerations - Dr. Hao Fang		
12:15 PM	Lunch, 1F Golden Bay Kitchen		
	Session W1A - Carbon Technology - Shanghai Ballroom A Session Chairs: Min Zhang, Changjian Zhou	Session W1B - Energy Devices - Shanghai Ballroom B Session Chairs: Charles Surya, Tao Chen	Session W1C - Biomedical Circuits - Shanghai Ballroom C Session Chairs: Yongjune Park, Jun Li
2:00 PM	All-Carbon Interconnects (Invited) - Changjian Zhou and Cary Y. Yang	Solution Processed Antimony Sulfide-Selenide [Sb ₂ (S,Se) ₃] for High Efficiency Solar Cells (invited) - Tao Chen	Nanoelectrode Arrays Based on Vertically Aligned Carbon Nanofibers for Dielectrophoretic Capture and Detection of Pathogens (Invited) - Jun Li
2:30 PM	Carbon Nanotube Lateral Field Emission Device with Embedded Field Effect Transistor - Y. Yang, S. Huo, L. H. Jiang, Y. C. Kong, T. S. Chen	The Investigation of TiO ₂ Nanostructures on Performance of Perovskite Solar Cells - Zhiwei Ren, Changwen Liu, Annie Ng and Charles Surya	T-chip, Electrochemical biosensor platform based on the electron tunneling: effect and role of the back filling material (Invited) - Jun Yeon Yun, Kyoung Yeon Kim and Young June Park
2:45 PM	Synthesis of Carbon Nanotube in Sub-100nm Vias on Ni Silicide - Ying Xiao, Suwen Li, Clarissa Prawoto and Mansun Chan	Novel Cryo-controlled Nucleation Technique for High-efficiency Perovskite Solar Cells - Annie Ng, Zhiwei Ren, Sin Hang Cheung, Aleksandra B. Djurišić, Shu Kong Su, Gang Li, and Charles Surya	
3:00 PM	Impact of CNT Diameter Distribution on CNT filled Via Scaling - Clarissa Prawoto, Suwen Li and Mansun Cha	Large Area Perovskite Solar Cell via Two-step Ultrasonic Spray Deposition - Shizhen Wang, Hengda Qiu, Taron Makaryan, Pritesh Hiralal, Xinnan Lin, Hang Zhou	An interface pressure measurement system for medical compression stockings - Wen Jia, Hanjun Jiang, Zeliang Wu, Yanshu Guo, Chun Zhang, Zhihua Wang
3:15 PM	Facile Fabrication of Porous Carbon Materials Derived from Pleurotus Eryngii for Supercapacitor Electrodes - Yudan Yuan, Ruwei Yi, Yi Sun, Jianqiao Zeng, Jiaqi Li, Jiahao Hu, Yinchao Zhao, Wei Sun, Chun Zhao, Li Yang, Cezhou Zhao	Performance enhancement of perovskite solar cell on AZO substrate via atomic layer deposited TiO ₂ layer - Rong Liu, Lizhi Yan, Renzheng Qiu, Hang Zhou	A Wireless Power-Efficient Charger Chip with Closed-Loop Controlling Mechanism for Implantable Biomedical System - Xingyu Fu, Songping Mai, and Zhihua Wang
3:30 PM	Coffee Break		
	Session W2A - Memory and Memristor technology - Shanghai Ballroom A Session Chairs: Yang Chai, Guanzhang Zhang	Session W2B - Modeling Special Session - Shanghai Ballroom B Session Chairs: Linning Zhang, Hongyu He	Session W2C - MEMS and Sensors - Shanghai Ballroom C Session Chairs: Tian-Ling Ren, Changjian Zhou
3:45 PM	Resistive Switching Memory towards Embedded Application in 28 nm Node and Beyond (Invited) - Hangbing Lv, Xiaoxin Xu, Danian Dong, Peng Yuan, Jing Liu, Zhaoan Yu, Ming Liu	MEOL Gate-around Parasitic Capacitance Extraction Verification for Design Enablers in Advanced FinFET Technology - Lijie Sun, Zan Li, Waisum Wong, Yu Xia	Piezoelectric Micromachined Ultrasonic Transducers for Ultrasonic Imaging (invited) - Jiang Ling, Yu-Hong Wei, Guang-Ya Jiang, Yuan-Quan Chen, He Tian, Yi Yang and Tian-Ling Ren
4:00 PM		Analysis of 1/f Noise for Organic TFTs Considering Mobility Power-Law Parameter - Hongyu He, Yuan Liu, Hao Wang, Xinnan Lin, Xueren Zheng, and Shengdong Zhang	
4:15 PM	Optically-Controlled Multifunctional Organic-Inorganic Perovskite Based Electronic Devices - Feichi Zhou and Yang Chai	Strain Effect on Electronic Properties of Arsenene/Graphene Heterostructure - Zhen Luo, Dedong Han, Junchen Dong, Huijin Li, Wen Yu, Yi Liang, Shengdong Zhang, Xing Zhang and Yi Wang	Investigation of the Liquid Loading Effect on the Flexible Acoustic Wave Devices for in-liquid Sensing Applications - Changjian Zhou, Jiali Li, Bin Li, Tian-Ling Ren
4:30 PM	Design of CMOS-memristor Circuits for LSTM architecture - Kamiliya Smagulova, Kazybek Adam, Olga Krestinskaya and Alex Pappachen James	A simple analytical model of threshold voltage for p-channel double gate junctionless transistor - Md. Mohsinur Rahman Adnan, Quazi Deen Mohd Khosru	An Ultra-Low Power Temperature Sensor Based on Relaxation Oscillator in Standard CMOS - Wendi Yang, Hanjun Jiang, Zhihua Wang, Wen Jia
4:45 PM	Back-Propagation Neural Network based on Analog Memristive Synapse - Ruohua Zhu, Peng Lin, Yawei Lv, Sheng Chang, Hao Wang, Qijun Huang and Jin He	A Co-simulation Method of Power Amplifier for Reliability Optimization - Yuanbo Ma, Bin Li, Zhaohui Wu, Haigang Wu, Zhijian Chen	Novel Structure of Beam Enhances the Performance of the Shunt Capacitive RF MEMS Switch - Wentao Xiong, Mei Jiang
5:00 PM			Simulation of the Rotated Square Holes Effect on the Shunt Capacitive RF MEMS Switch
5:30 PM	Dinner, 1F Golden Bay Kitchen		



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Technical Program

June 7, 2018 - Day 2, Thursday - Morning

Registration Time: 8:30AM-12:15AM

	Session T1A - Frontend Devices - Shanhai Ballroom A Session Chairs: Hiroshi Inokawa, Chen-Hsin Lien	Session T1B - OTFT and Flexible Electronics - Shanhai Ballroom B Session Chairs: Jeongwon Park, Zhaoyu Zhang	Session T1C - Analog Circuits - Shanhai Ballroom C Session Chairs: Yufei Zhang, Yao Wang
9:00 AM	Ultrahigh-Frequency Characteristics of Single-Electron Transistor (Invited) - Hiroshi Inokawa, Tomoki Nishimura, Alka Singh, Hiroaki Satoh and Yasuo Takahashi	Carbon-based Nanostructures for Flexible Electronics (Invited) - Jeongwon Park, Changjian Zhou, and Cary Y. Yang	Low-power High-speed Dynamic Comparator Using a New Regenerative Stage (Invited) - Yao Wang, Huiming Yang, Wenbing Fan, Jun J. Liou
9:30 AM	High Performance WSe ₂ Transistors with Multilayer Graphene-WSe ₂ Heterostructures (Invited) - Hao-Ling Tang, Ming-Hui Chiu, Kuan-Jih Hou, Shih-Hsien Yang, Jih-Fong Su, Yen-Fu Lin, Lain-Jong Li and Chen-Hsin Lien	Flexible Solid-state Supercapacitors Using Paper-based Electrodes for Energy Storage - Kun Yu, W.M. Tang and J.Y. Dai	A 2-Step Complementary-Based-Cross-Coupled Operational Transconductance Amplifier for LCD Column Driver - Yufei Zhang, Kuan Chuang Koay and Pak Kwong Chan
9:45 AM		Hydrogen Sensor Based on Pentacene Organic Thin-Film Transistor for Flexible Applications - Bochang Lia, P. T. Laia, and W. M. Tang	A Reconfigurable Analog Baseband for Ka Band Transmitter - Wei Wang, Jialiang Ye, Wankai Zheng, Zhiyuan Chen, YiXiu Liao and Baoyong Chi
10:00 AM	Local Modification of Defective Edge Hamiltonian for Graphene Nanoribbon Devices - Shizhuo Ye, Sheng Chang, Hao Wang, Qijun Huang, Jin He, Yawei Lv and Chun Wei	Improved Performance of Pentacene OTFT by using Hybrid Oxide of Nd and Hf as Gate Dielectric - Y. X. Ma, W. M. Tang, P. T. Lai	An On-Chip Oscillator with Comparator Offset Cancellation - Dewei Zhang, Ruijun Zhang, Hesheng Lin, Qinghua Wang and Min Zhang
10:15 AM	High Performance Double-Gate Graphene Radio-Frequency Transistors - Qingguo Gao, Xiong Xiong, Xuefei Li and Yanqing Wu		A Double Gain-Boosted Amplifier with Widened Output Swing Based on Signal- and Transient-Current Boosting Technique in CMOS 130-nm Technology - Ho Wai Hui, Yuet Ho Woo, Cheuk Ho Hung and Ka Nang Leung
10:30 AM	Coffee Break		
	Session T2A - Emerging Devices - Shanhai Ballroom A Session Chairs: Bo Wang, Steve Chung	Session T2B - Display and Image - Shanhai Ballroom B Session Chairs: Shengdong Zhang, Kai Wang	Session T2C - Data Conversion Circuits - Shanhai Ballroom C Session Chairs: Wei-Zen Chen, Xinzhu Peng
10:45 AM	The Design of High Performance Si/SiGe-Based Tunneling FET: Strategies and Solutions (Invited) - Steve S. Chung, E. R. Hsieh, Y. B. Zhao, J. -W. Lee, and M. H. Lee	Technology Issues for Self-aligned Top-Gate Amorphous Metal Oxide Thin-Film Transistors (Invited) - Shengdong Zhang, Yang Shao	High Speed Energy Efficient Optical Receiver (Invited) - Yuan-Sheng Lee and Wei-Zen Chen
11:15 AM	Low Temperature Fabrication of n ⁺ /Si/pGe Heterojunctions by Ribbon Bonding - Chi Liu, Akira Toriumi and Dongming Sun	A One-Transistor Active Pixel Sensor Formed by A Vertical Photodiode-Gated Low-Temperature Polysilicon Thin-Film Transistor - Kai Wang, Xianda Zhou, Meng Zhang, Yitong Xu, Man Wong, and Hoi Sing Kwok	A Novel Comparator Offset Calibration Technique for SAR ADCs (Invited) - Xizhu Peng, Ang Gao, Zheng Chen, Haosong Zhang, Yuefeng Li, Wenzhen Cao, Xiaoqiao Liu and He Tang
11:30 AM	The effect of frequency dispersion to the RF performance of dual source Tunneling FETs	High Performance Graphene/Silicon Photodetectors and Image Sensors - Yang Xu	
11:45 AM	The Performance Investigation of Junctionless Transistor By Considering Different Recessed Gates - Haijun Lou, Wentao Li, Yumei Yang, Xinnan Lin	Photoluminescence of QD-PVA Film for Displays - Miao Zhou, Dongze Li, Hsiao-Hsien Chen, Lixuan Chen, and Hang Zhou	Design Technology of High Linearity DAC for Large Array CMOS Image Sensor - Zhongjie Guo, Ningmei Yu
12:00 PM	Strain Consideration of Charge Plasma Structure on Junctionless Transistor With Line Edge Roughness - Wentao Li, Haijun Lou, Xinnan Lin	An a-IGZO TFT Pixel Circuit for AMOLED Display Systems With Compensation for Mobility and Threshold Voltage Variations - Shuiping Yi, Xinxin Huo, Congwei Liao, Ying Wang, Jixiang Wu, Hailong Jiao, Min Zhang, and Shengdong Zhang	
12:15 PM	Lunch, 1F Golden Bay Kitchen		



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June 7, 2018 - Day 2, Thursday - Afternoon

Registration Time: 14:00PM - 17:15PM

	Session T3A - Power Devices - Shanhai Ballroom A Session Chairs: Jinping Zhang, Haijun Lou	Session T3B - Reliability - Shanhai Ballroom B Session Chairs: Zhiwei Liu, Zhaonian Yang	Session T3C - Analog Circuits - Shanhai Ballroom C Session Chairs: Weibo Hu, Zhao Zhang
2:00 PM	High performance bidirectional IGBT with sandwich super junction structure - Jinping Zhang, Qian Zhao, Junyi Luo, Zehong Li, Min Ren, Zhaoji Li and Bo Zhang	Thermal Characteristics of ESD Diode in FDSOI Technologies (Invited) - Zhaonian Yang, Ningmei Yu, Jun J. Liou	A 2-to-10 GHz 1.4-mW 50% Duty-Cycle Corrector in 40-nm CMOS Process (Invited) - Zhao Zhang, Guang Zhu, and C. Patrick Yue
2:30 PM	A new Integrated MOS-GCT Structure with Dual Gate - Cailin Wang, Kangni Cao, Jing Yang	Novel diode-triggered SCR with suppressed multiple triggering for ESD applications (Invited) - Long Chen, Feibo Du, Ruiibo Chen, Jizhi Liu, Zhiwei Liu, Juin J. Liou, and Lining Zhang	Simplified reconfigurable rectifier with consistent input capacitance for wireless power transfer - Guijie Zhu, Songping Mai, Xian Tang, and ZhihuaWang
2:45 PM	Substrate thinning and external stress effect on the output characteristics of AlGaIn/GaN HEMTs - Xiao Meng, Hui Zhu, Chen Wang, Ying Yang, Shiwei Feng, Yamin Zhang, Chunsheng Guo		Short Range LFM CW System for Automobile Reversing Radar - Yixiu Liao, Wei Wang, Jialiang Ye, Wangkai Zheng, Zhiyuan Chen, Baoyong Chi
3:00 PM	Characterization of Transient Threshold Voltage Shifts in Enhancement- and Depletion-mode AlGaIn/GaN Metal-Insulator-Semiconductor (MIS)-HEMTs - Miao Cui, Yutao Cai, Sang Lam, Wen Liu, Chun Zhao, Ivona Z. Mitrovic, Stephen Taylor, Paul R. Chalker and Cezhou Zhao	A Study about the Different Corrosion Behavior between Cu/Mo Bilayer and Mo/Cu/Mo Three-layer Metal Electrode - Yue Wu, Weina, Yong, Shu-Jih Chen, Chia-Yu Lee and Hang Zhou	A Low Power Signal Acquisition Channel with a Novel Systematic Power Minimization Scheme - Shangzheng Yang, Yu He, Guangshu Zhao, Longbo Fan, Yitao Xu, Bo Wang and Weibo Hu
3:15 PM	Experimentation and Simulation for Cap Gate AlGaIn/GaN HEMT Power Devices - Hui Sun, Wenteng Kuang, Xinnan Lin and Dongmin Chen		A Fully-on-Chip Low-Voltage Low-Dropout Regulator with Negative Charge Pump - Yi Tan, Chenchang Zhan and Guanhua Wang
3:30 PM	Coffee Break		
3:45 PM	Poster Session - Shanhai Ballroom		
	Design of High Performance XOR and XNOR Logic Gates without MOS Devices - Qiujun Lin, Xiaole Cui, Xiaoyan Xu	An Asynchronous Pipeline based Implementation of Membrane Potential of I&F model - Feiyang Yu, Guangbo Feng, Juxia Xiong, Jinzhao Wu, Jinlan Wang, Anping He	Study of Self-Heating Effects in Silicon Nano-Sheet Transistors - G. Chalia and R. S. Hegde
	A Normally-off P-Gate AlGaIn/GaN HEMT for High Power Application - Ninggang Dong, Meihua Liu, Limeng Shi and Xinnan Lin	An asynchronous and reconfigurable CNN accelerator - Weijia Chen, Dengjie Wang, Hong Chen, Shaojun Wei, Anping He, Zhihua Wang	A High-Efficient, Multi-Phase Charge Pump Scheme - Dewei Zhang, Binjie Liu, Hesheng Lin, Dedong Ding, Min Zhang
	Simulation of High-Gain Amplifier with Metal Oxide Thin-Film Transistors - Zheng Zhou, Feng Zhuang, Na Li, Wanling Deng	A Low Power Low Noise Front End Amplifier for ECG Monitoring - Yi Yang, Hanjun Jiang, Yanshu Guo and Zhihua Wang	Vertical Channel ITO-stabilized ZnO Thin-Film Transistors - Xuemei Yin, Sunbin Deng, Guoyuan Li, Wei Zhong, Rongsheng Chen, Man Wong, and Hoi Sing Kwok
	A Low Power High Frequency Quantizer Base on the Time-to-Digital Circuit - Hanyuan Zhang, Mei Jiang	Analysis on Transfer Efficiency of Five Different Antenna Configurations in Short-Distance Wireless Power Transfer - Wentao Xiong, Mei Jiang, Guanlong Huang, and Haoxin Chen	Low voltage low power full adder for baseband circuits in wireless systems - Shaoquan Gao, Hanjun Jiang, Zhihua Wang and Wen Jia
	Low Voltage Dual-Modulus Frequency Divider Based on Extended True Single-Phase Clock Logic - Wanlu Wang, Song Jia, Ziyi Wang, Tao Pan, Yuan Wang	Vertically-oriented Graphene for Field-Effect Transistor Photodetector - Jiawei Yang, Baolu Guan	An AMOLED LTPS-TFT Pixel Circuit Using Mirror Structure to Compensate Vth Variation and Voltage Drop - Jixiang Wu, Ying Wang, Xinxin Huo, Shuiping Yi, Congwei Liao, Min Zhang, Shengdong Zhang
	A High PSRR Low Drop-out Linear Regulator without Output Capacitor - Yijun Yang, Ye Yuan, Liji Wu, Xiangmin Zhang	Study of Work-Function Variation Effects in Multigate Tunneling Field Effect Transistors - Liming Gu, Renrong Liang, Jun Xu, Tian-Ling Ren, and Jing Wang	Research on Current Sharing Method of SiC MOSFET Parallel Modules - Chengwu Hui, Yuan Yang, Yafei Xue, Yang Wen
	Design of a Novel Ternary SRAM Cell - Song Jia, Tao Pan, Zizhao Liu, Wanlu Wang, Yuan Wang	A Novel 2b/cycle Time and Voltage Based Conversion Technique in SAR ADC - Jian Luo, Huasong Xia, Jing Li, Kejun Wu, Ning Ning, Yang Liu	Effects of High Temperature Treatment on SiO2 Patterned Mask on Si Substrate - Kaiwen Hou, Ying Yang
	An Improvement of BSIM for Fast Circuit Simulations - Debin Song, Lining Zhang, Dayong Liu, Hanyu Zhang, Xinnan Lin	A current-transient method for identifying the spatial positions of traps in GaN-based HEMTs - Xiang Zheng, Shiwei Feng, Yamin Zhang	Simulation and mechanism analysis of MOSFET threshold voltage drift induced by manufacturing process - Wei Gao, Pengfei Yin, Zehong Li, Min Ren, Jingping Zhang, Bo Zhang
	A High Performance Encryption System Based on AES Algorithm with Novel Hardware Implementation - Ye Yuan, Yijun Yang, Liji Wu, Xiangmin Zhang	Enhancement of Positive Bias Stress Stability for IGZO TFTs by a CAAC Gd-AZO Bulk Layer - Junchen Dong, Huijin Li, Zhen Luo, Xing Zhang, Dedong Han, and Yi Wang	High-Gain and Fast-Setting OTA for high Speed and high Resolution ADC - Yong Zhang, Ting Li, Zhengbo Huang, Yabo Ni, Dongbing Fu
	A Low Phase Noise and High Linearity Class-C VCO for FMCW Radar system - Zhiyuan Chen, Yixiu Liao, Wei Wang, Jialiang Ye, Wankai Zheng, Rongduo Liu, Baoyong Chi	Modified Deep Learning Approach for Layout Hotspot Detection - Yuanhang Zhang, Chun Zhang, Mao Li, Lutong Zhao, Chaoxiang Yang, Zhihua Wang	Gait Recognition Based on Graphene Porous Network Structure Pressure Sensors for Rehabilitation Therapy - Song Jiang, Yu Pang, Danyang Wang, Yifan Yang, Zhen Yang, Yi Yang and Tian-Ling Ren
	High-efficiency CMOS power amplifier with a folded proportional combining structure and adaptive power mode control - Haigang Wu, Bin Li, Zhaohui Wu, Yang Liu, Yuanbo Ma	The MOSFET performance degrading induced by electric heating coupling under electromagnetic pulse environment - Jinfu Lin, Hongxia Liu, and Shulong Wang	Failure Analysis of Multi-layer Ceramic Capacitors under Board Level Shock Environment - Jialu Li, Jiahao Zhao, Zheng You
5:30 PM	Beach Banquet, Eastern Lawn		



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June 8, 2018 - Day 3, Friday

Registration Time: 8:30AM-9:00AM

	Session F1A - New Material Devices - Shanhai Ballroom A Session Chairs: Min Zhang, Xinnan Lin	Session F1B - AI and Neural Network - Shanhai Ballroom B Session Chairs: Xiaojin Zhao, Lining Zhang	Session F1C - Communication and RF Circuits - Shanhai Ballroom C Session Chairs: Hailong Jiao, Bo Wang
9:00 AM	Dynamic Threshold Voltage Modulation in Double-Gate Indium-Gallium-Zinc Oxide Thin-Film Transistors: Influence of the Active Layer Thickness - Yang Shao, Hongjuan Lu, Xiaoliang Zhou, Letao Zhang, Xiaodong Zhang, Shengdong Zhang	Semiconductor Industry Driven by Applications: Artificial Intelligence and Internet-of-Things (Invited) - Meikei leong	Visible Light Communication System-on-a-Chip (Invited) - Fei Lu, Zongyu Dong, Li Wang and Albert Wang
9:15 AM	Current Enhancement of Graphene-Inserted Tunneling Contact IGZO TFT - Xintong Zhang, Lining Zhang, Longyan Wang, Mansun Chan		
9:30 AM	Ti film thickness influences on the back channel etched amorphous InGaZnO4 thin film transistors - Letao Zhang, Xiaoliang Zhou, Hongyu He, Yang Shao, Shengdong Zhang	An Energy-Efficient FPGA-Based Embedded System for CNN Application - Wenaio Xie, Chun Zhang, Yuanhang Zhang, Chuanbo Hu, Hanjun Jiang, Zhihua Wang	A Novel Configurable Transceiver for a Hybrid Continuous Waveform Radar - Wei Ma, Huashu Wang, Guangshu Zhao, Dongyang Tan, Changzhi Li and Weibo Hu
9:45 AM	Degradation Behaviors of Driving Thin-Film Transistors in Active-Matrix Organic Light-Emitting Diode Displays - Meng Zhang, Yan Yan, Wei Zhou, Rongsheng Chen, Sunbin Deng, Man Wong, and Hoi-Sing Kwok	A Novel Convolutional Recurrent Neural Network Based Algorithm for Fast Gas Recognition in Electronic Nose System - Haien Zhang, Wenbin Ye, Xiaojin Zhao and Xiaofang Pan	A Novel Power Mixer for NB-IoT Transmitter in 65-nm CMOS - Xiaodong You, Haigang Feng, Xinpeng Xing, Zhihua Wang
10:00 AM	Current Conduction Mechanisms in h-BN as a Dielectric Material - Zichao Ma, Clarissa Cyrilla Prawoto, Suwen Li, Zubair Ahmed, Lining Zhang, Mansun Chan	A Flexible Artificial Synapse for Neuromorphic System - Kunlong Yang, Sijian Yuan, Yiqiang Zhan, Lirong Zheng, Fernando Seoane	A Novel Cascode Mixer for NB-IoT Transceiver System in 65nm CMOS - Pengyi Cao, Xinpeng Xing, Haigang Feng and Zhihua Wang
10:15 AM	Carrier Injection Mechanism of Metal-MoS2 Ohmic Contact in MoS2 FETs - Wei-Chih Cheng, Xiwen Liu, and Mansun Chan	Hardware Implementation of SM4 Based on Composite Filed S-box and Its Security against Machine Learning Attack - Wei Li, Guoqiang Bai, Xingjun Wu	
10:30 AM	Coffee Break		
	Session F2A - RF and Microwave Circuits - Shanhai Ballroom A Session Chairs: Hailong Jiao, Guo Yingying	Session F2B - Photonic Devices - Shanhai Ballroom B Session Chairs: Yang Xu, Hang Zhou	Session F2C - Power Management Circuits - Shanhai Ballroom A Session Chairs: Yan Lu, Min Zhang
10:45 AM	A Low-Power Single-Chip Internet of Things Transponder with Energy Harvesting (Invited) - Bing Li, Wei Wang, Jia Liu, Pi-Zhou Ye, Qian Yang and Jin-Fei Ding	Low Noise, High Gain-Bandwidth Photodetectors Using Cycling Exciting Process (CEP) as Amplification Mechanism (Invited) - Lujiang Yan, Yugang Yu, Zihan Xu, Iftikhar Niaz, Mohammad Abu Raihan Miah, Alex Ce Zhang, Jiayun Zhou, Yuhwa Lo	Bi-directional Battery-to-Battery Wireless Charging Enabled by Reconfigurable Wireless Power Transceivers (Invited) - Yan Lu, Fangyu Mao, Rui P. Martins
11:15 AM	A Novel Low Power Injection-Locked Frequency Divider Based on Current-Reuse Technique - Xiaoying Deng, Yingying Guo, Mingcheng Zhu	Large-area Visible-blind 4H-SiC Ultraviolet Avalanche Photodiode with High Gain and Low Bias Voltage - Xingye Zhou, Jia Li, Weili Lu, Xubo Song, Shunzheng Yin, Yuangang Wang, Xin Tan, Yuanjie Lv and Zhihong Feng	An Algorithm for Full-Coverage Voltage-Conversion-Ratio Fibonacci-Like Charge Pump - Binjie Liu, Hesheng Lin, Dedong Ding, Dewei Zhang, Min Zhang
11:30 AM	A novel fast-locking ADPLL based on Newton's Method - Xiaoying Deng, Huazhang Li, Mingcheng Zhu	Ambipolar solution-processed CH3NH3PbBr3 perovskite phototransistors with ultra-thin Al2O3 protective layer - Hao Yu, Lizhi Yan, Renzheng Qiu, Xiaote Xu, Wen Luo, Hang Zhou	Multi-model Fusion Harvested Energy Prediction Method for Energy Harvesting WSN node - Xiangyu Li, Nijie Xie
11:45 AM	Quadrature Injection Locked Frequency Tripler with Wide Tuning Range and Low Quadrature Error for MM-Wave Applications - Wankai Zheng, Zhiyuan Chen, Yixiu Liao, Wei Wang, Jialiang Ye, Baoyong Chi	Nonalloyed Cr/Au-based Ohmic contacts to n-GaAs of VCSELs - Yanling Guo, Dongyue Jin, Wanrong Zhang, Pengtao Li, Lifan Wang and Rui Chen	A Novel Zero Current Detector for Single-Inductor Double-Output DC-DC Converter - Miao Jie, Hu Jiajun, Chen Houpeng, Song Zhitang
12:00 PM	Design of low-power high-speed dual-modulus frequency divider with improved MOS current mode logic - Wanlu Wang, Song Jia, Tao Pan, Yuan Wang		A Transient-Improved Dynamic-Replica LDO Regulator with Bulk Modulation - Gangfeng Ma, Chengchang Zhan and Yi Zhang
12:15 PM	Lunch, 1F Golden Bay Kitchen		

Noted: All activities are held in/in front of Shanhai Ballroom Marriott Hotel Golden Bay, except the Lunch, Dinner and Beach banquet.