ICSICT 2022 Technical Sessions Overview

Date	Time	Overview			
Oct.25	9:00:12:15	Tutorial Session T1			
	13:30-18:15	Tutorial Session T2			
Oct.26	8: 30-10: 30	Opening & Keynote Session K1			
	10: 45-12: 15	Keynote Session K2			
	13: 30-15: 30	Session A1 Advanced Device I	Session B1 Packaging & Advanced Process I	Session C1 Digital Circuit & Processor I	Session D1 Analog Circuit
	15: 45-17: 45	Session A2 Advanced Device II	Session B2 Advanced Process II	Session C2 Digital Circuit & Processor II	Session D2 Mixed-Signal Circuit I
	19: 00-21: 00	Poster Session 1: Device & Processing			
Oct.27	8: 30-10: 00	Keynote Session K3			
	10: 15-12: 15	Special Session A3 75th Anniversary of Transistor Invention	Session B3 Advanced Processing III	Session C3 Efficient AI Circuit	Session D3 Mixed-Signal Circuit II
	13: 30-15: 30	Session A4 Power Device	Session B4 Advanced Processing IV	Session C4 EDA I	Session D4 RF Circuit I
	15: 45-17: 45	Session A5 Compound Semi - SiC I	Session B5 NVM I: PCRAM	Session C5 EDA II	Session D5 RF Circuit II
	19: 00-21: 00	Poster Session 2: Circuit Technology			
Oct.28	8:15-10: 00	Keynote Session K4		Panal Discussion (9:00-10: 30)	
	10: 15-12: 15	Session A6 Compound Semi - SiC II	Session B6 NVM II: MRAM, FERAM&RRAM	Session C6 Memory Circuit	Session D6 Clock & Optical Circuit
	13: 30-15: 30	Session A7 Compound Semi - GaN	Session B7 Reliability I	Session C7 Circuit for IoT and other applications	Session D7 Energy Management Circuit
	15: 45-17: 45	Session A8 Device Modeling	Session B8 Reliability II	Session C8 Photonics	Session D8 Biomedical Circuit
	19: 00-21: 00	Session A9 DTCO & Noise	Session B9 Chip Test and Reliability III	Session C9 MEMS & Sensors	

Tutorial Session

Tuesday

Tuesday, October 25, 9: 00 – 18: 15

Tuesday, October 25, 9: 00 – 12: 15
Tutorial Session T1

T1-1 **Energy/Data-Autonomous AIoT CMOS Integrated Platform Using Localized Energy/Data Generation and Consumption** *(9: 00-10: 30)*
Prof. Kiichi Niitsu, Kyoto University, Japan

T1-2 **Circuit and System-Level Considerations towards a scalable trapped ion quantum computer and quantum metrology applications** *(10: 45-12: 15)*
Prof. Vadim Issakov, Braunschweig University of Technology, Germany

Tuesday, October 25, 13: 30 – 18: 15
Tutorial Session T2

T2-1 **Impact and applications of device imperfectness in emerging computing technologies (***13:30-15: 00)*
Prof. Zheng Chai, Xi'an Jiaotong University, China

T2-2 **Photolithography, Process, Equipment, Material, Process Standards, and Future Outlook (***15: 00-16: 30)*
Prof. Qiang Wu, Fudan University, China

T2-3 **Monolithic 3D integration for future optoelectronics** *(16:45-18: 15)*
Prof. Sanghyeon Kim, KAIST, Korea

Technical Session

Wednesday

Wednesday, October 26, 9: 00 –10: 30

Wednesday, October 26, 9: 00 –10: 30
Opening & Keynote Session K1

K1-1 **What Are 2D Materials Good For?** *(9: 00-9: 45)*

Prof. Eric Pop, Stanford University, USA

K1-2 **The integration of Industry and Education Supports Interdisciplinary Achievements** *(9: 45-10: 30)*

Prof. Hanming Wu, Zhejiang University, China

Wednesday, October 26, 10: 45– 12: 15

Wednesday, October 26, 10: 45–12: 15
Keynote Session K2

K2-1 **Toward 6G: From New Hardware Design to Wireless Semantic and Goal-Oriented Communication Paradigms** *(10: 45-11: 30)*

Emilio Calvanese Strinati, CEA Leti, France

K2-2 **The Ecological Outcome of Pursuing Efficiency in ICT** *(11: 45-12: 15)*
Prof. David BOL, ECS group, ICTEAM Institute, UCLouvain, Belgium

Wednesday, October 26, 13: 30 – 15: 30

Wednesday, October 26, 13: 30 – 15: 30
Session A1: Advanced Device I

	Title
A1-1	**0505: Graphene and Bi_2O_2Se based Memristor, Neuromorphic Device and True Random Number Generator (invited)**
13:30 ~13:54	Bo Liu, Jing Ma, Chao-Sung Lai *(Beijing University of Technology, China; Chang Gung University, Taiwan, China)*
A1-2	**0507: Sub-10nm Nanomesh Patterned on Suspended Graphene for Nanoscale Thermal Engineering (invited)**
13:54 ~14:18	Hiroshi Mizuta *(Japan advanced institute of Science and Technology, Japan)*
A1-3	**0152: Parallel Dual-Gate Thin-File Transistors for Sensing and Neuromorphic Computing (invited)**
14:18 ~14:42	Yushen Hu, Man Wong *(The Hong Kong University of Science and Technology, Hong Kong, China)*
A1-4	**0229: Sharp-Switching Devices with Positive Feedback Mechanisms Based on Silicon-On-Insulator Substrate**
14:42 ~14:54	Yingxin Chen, Haihua Wang, Jing Wan *(Fudan University, China)*
A1-5	**0351: Impact of Nanosheet Pitch, Ambient Temperature, and Thermal Contact Resistance on Electrothermal Characteristics of Vertical Gate-All-Around Nanosheet FETs**
14:54 ~15:06	Siqi Yang, Xiaojin Li, Yabin Sun, Yanling Shi *(East China Normal University, China)*
A1-6	**0369: Bias Temperature Instability Analysis of Nanosheet Based SRAM**
15:06 ~15:18	Yun-Qi Wang, Gao-Peng Li, Cong Li, Feng-Yu Kuang, Ou-Wen Li, Hai-Long You *(Xidian University, China)*
A1-7	**0465: Lateral 2D TMDC Memristors – Experiment and Modeling**
15:18 ~15:30	Benjamin Spetzler, Zhansong Geng, Kai Rossnagel, Martin Ziegler, and Frank Schwierz *(Technische Universität Ilmenau, Germany; Kiel University, Germany; Ruprecht Haensel Laboratory, Germany)*

Wednesday, October 26, 13: 30 – 15: 30

Session B1: Packaging & Advanced Process I

	Title
B1-1	**0365: Surface Condition Optimization for Low Temperature Oxide Bonding in 3D Integration (invited)**
13:30 ~14:00	Tzu-Heng Hung, Kuan-Neng Chen *(Yang Ming Chiao Tung University, Taiwan, China)*
B1-2	**0398: Challenges and Opportunities of China's IC Industry in the Post-Moore Era：Role of the Integration between Industry and Education in Supporting the Interdisciplinary Technology Transformation (invited)**
14:00 ~14:30	Ran Cheng, Qiao Teng, Jinchao Xu, Yongyu Wu, Dawei Gao, Hanming Wu *(Zhejiang University, China; Zhejiang ICsprout Semiconductor, China)*
B1-3	**0501: A BEOL Layout Optimization Method for Advanced Logic Standard Library Cells (invited)**
14:30 ~15:00	Xianhe Liu, Yanli Li, Qiang Wu *(Fudan University, China)*
B1-4	**0216: Study of Chord Signaling for High-Bandwidth Inter-Chiplet Communication**
15:00 ~15:15	Haoran Shen, Yuan Zhuang, Jianfei Jiang, Guanghui He, Zhigang Mao *(Shanghai Jiao Tong University, China)*
B1-5	**0442: An Improved Darveaux Model to Predict Thermal Cycling Life of the Panel Level Package**
15:15 ~15:30	Shiqi Liang, Min Ren, Yuyu Peng, Chunying Zhou, Yong Chen, Zehong Li, Bo Zhang *(University of Electronic Science and Technology of China, China)*

Wednesday, October 26, 13: 30 – 15: 30

Session C1: Digital Circuit & Processor I

	Title
C1-1	**0095: Design of Programmable Parallel Vision Processor (invited)**
13:30 ~14:00	Shuangming Yu, Liyuan Liu, Nanjian Wu *(Institute of Semiconductors, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
C1-2	**0074: Residual Spiking Neural Network on a Programmable Neuromorphic Hardware for Speech Keyword Spotting**
14:00 ~14:13	Chenglong Zou, Xiaoxin Cui, Shuo Feng, Guang Chen, Xinan Wang, Yuan Wang *(Peking University, China)*
C1-3	**0246: SS-DGD: Scalable Short-Entry Dual-Grain Coherence Directoris**

14:13 ~14:25	Yuxin Tang, Yudi Qiu, Yanwei Liu, Jie Jiao, Peng Zhang, Yibo Fan *(Fudan University, China; Peking University, China)*
C1-4	**0429: RG_VIPS: A Simple Cache Coherence Protocol Based on Region-Grain Directories**
14:25 ~14:38	Yan-Wei Liu, Yu-Di Qiu, Yu-Xin Tang, Jie Jiao, Peng Zhang, Yi-Bo Fan *(Fudan University, China; Peking University, China)*
C1-5	**0221: An OSAA-CFAR Algorithm for 77GHz Millimeter-wave Radar**
14:38 ~14:50	Nuo Xu, Jiaxi Wu, Bin Wang, Junyan Ren, Shunli Ma *(Fudan University, China)*
C1-6	**0268: Research on Target Detection Algorithm For 77GHz Automotive Radar**
14:50 ~15:03	Jia-xi Wu, Nuo Xu, Bin Wang, Jun-Yan Ren, Shun-Li Ma *(Fudan University, China)*
C1-7	**0422: A Low-power and High-accuracy Accelerator with Voice Classification for Keyword Spotting**
15:03 ~15:15	Tianyu Shao, Jun Han *(Fudan University, China)*
C1-8	**0448: A Multiplication-Free FPGA Implementation of Multiple RLWE Encryption using Anti-Circulant Matrix**
15:15 ~15:30	Chen Yang, Fahong Zhang, Jianfei Wang, Yang Su *(Xi'an Jiaotong University, China; Engineering University of PAP, China)*

Wednesday, October 26, 13: 30 – 15: 30

Session D1: Analog Circuit

	Title
D1-1	**0045: A Reference Current Source with Cascaded Nagata Current Mirrors Insensitive to Supply Voltage and Temperature**
13:30 ~13:45	Tianrui Feng, Hiroshi Tanimoto, Takafumi Kamio, Souma Yamamoto, Takashi Hosono, Shogo Katayama, Kakeru Ootomo, Anna Kuwana, Haruo Kobayashi *(Gunma University, Japan; Kitami Institute of Technology, Japan)*
D1-2	**0067: Design of a 50MHz Bandwidth TIA Using Negative Capacitance**
13:45 ~14:00	Cong Tao, Liangbo Lei, Zhiliang Hong, Yumei Huang *(Fudan University, China)*
D1-3	**0376: Spatial and Temporal Dynamics of Non-Uniform Active Resistor Networks**
14:00 ~14:15	Masashi Chiba, Kakeru Otomo, Shogo Katayama, Kanji Yoshihiro, Anna Kuwana, Haruo Kobayashi, Hiroshi Tanimoto *(Gunma University, Japan; Kitami Institute of Technology, Japan)*

D1-4	**0194: A Sub-Nanosecond Delay Floating-voltage Level Shifter with Ultra-high dV/dt Immunity for GaN FETs Gate Driver Application**
14:15 ~14:30	Ke-yu Li, Shao-wei Zhen, Shen-hao Jiang, Hao Chen, Bo Zhang *(University of Electronic Science and Technology of China, China)*
D1-5	**0284: A High-Speed Low-Power Dynamic Level Shifter with High dV/dt Immunity**
14:30 ~14:45	Yue Shi, Lichen Peng, Zhijian Zhang, Zekun Zhou, Bo Zhang *(University of Electronic Science and Technology of China, China; Chengdu University of Information Technology, China)*
D1-6	**0453: A 2-4GHz Adjustable Multi-phase Clock Generation Architecture Based on Passive IQ Phase Shifter and CML Circuit**
14:45 ~15:00	Chenghao Zhang, Miaomiao Li, Maliang Liu, Jiangbo Wei *(Xidian University, China)*

Wednesday, October 26, 15: 45-17: 45

Wednesday, October 26, 15: 45-17: 45

Session A2: Advanced Device II

	Title
A2-1	**0514: 2D Van Der Waals Heterostructures for Neuromorphic Applications (invited)**
15:45 ~16:08	Feng Miao *(Nanjing University, China)*
A2-2	**0285: Parallel Dual-Gate Thin-Film Transistors for Sensing and Neuromorphic Computing (invited)**
16:08 ~16:31	Yushen Hu, Tengteng Lei, Man Wong *(The Hong Kong University of Science and Technology, Hong Kong, China)*
A2-3	**0512: The Road of 2D Semiconductors in Silicon Age (invited)**
16:31 ~16:54	Peng Zhou *(Fudan University, China)*
A2-4	**0322: Investigation of the Temperature Dependence of Bulk-Si TFET and MFSB-TFET by TCAD Simulation**
16:54 ~17:04	Fangxing Zhang, Shen Cong, Lining Zhang, Qianqian Huang *(Peking University, China)*
A2-5	**0189: A Micro Transfer-printer for High-accuracy Optoelectronic and Photonic Integration**

17:04 ~17:14	Yuxuan Wang, Guanyu Li, Yuchang Kong, Youdou Zheng, Yi Shi *(Nanjing University, China; Science and Technology on Monolithic Integrated Circuits and Modules Laboratory, China)*
A2-6	**0296: Silicon Nanowire Transistor Integrated with Phase Change Gate**
17:14 ~17:24	Yan-Dong Ge, Wei-Hua Han, Chong Yang, Jun-Dong Chen and Xiao-Di Zhang *(Institute of Semiconductors, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
A2-7	**0537: Computing-in-Memory with Memristor: From Material and Deivece Explorations to STCO (Invited)**
17:24 ~17:45	Huaqiang Wu *(Tsinghua University, China)*

Wednesday, October 26, 15: 45-17: 45

Session B2: Advanced Process II

	Title
B2-1	**0212: Low-Temperature Recrystallization and Contact Process Technology for 3D Sequential Integration (invited)**
15:45 ~16:15	Bao Tong Zhang, Shuang Sun, Yuan Cheng Yang, Ran Bi, Hai Xia Li, Hong Xu Liao, Ming Min Shi, Zong Wei Shang, Xiao Yan Xu and Ming Ling *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*
B2-2	**0323: Hollow Airgap Technology for CMOS Maximum Interconnect Capacitance Reduction (invited)**
16:15 ~16:45	Clarissa Prawoto, Zichao Ma, Ying Xiao, Salahuddin Raju, and Mansun Chan *(The Hong Kong University of Science and Technology, Hong Kong, China)*
B2-3	**0374: Demonstration of HfO_2-Based Gate Stacks with Ultralow Interface State Density and Leakage Current on Ge pMOSFET by Adding Hafnium into GeO_x Interfacial Layer (invited)**
16:45 ~17:15	Hui-Hsuan Li, Shang-Chiun Chen, Yu-Hsien Lin and Chao-Hsin Chien *(Yang Ming Chiao Tung University, Taiwan, China; United University, Taiwan, China)*
B2-4	**0197: Fabrication of Slanted Grating Utilizing Reaction Ion Beam Etching: The Role of CHF_3 and O_2 Etching Atmosphere**
17:15 ~17:30	Na Liu, Guojian Ding, Guankong Mo, Jia Shi, Qi Feng, Ping Yu, Xiaohui Wang, Wenjun Xu, Yikai Zhang, Pingjuan Niu, Yang Wang, Haiqiang Jia, Hong Chen *(Tiangong University, China; Songshan Lake Materials Laboratory, China; Chinese Academy of Sciences, China)*
B2-5	**0204: Impact of Sputtering Atmosphere on Residual Stress in RF Magnetron Sputtering PZT Thin Films**
17:30 ~17:45	Yikai Zhang, Wenjun Xu, Guojian Ding, Pingfan Ning, Qi Feng, Ping Yu, Xiaohui Wang, Na Liu, Pingjuan Niu, Yang Wang, Haiqiang Jia, Hong Chen *(Tiangong*

	University, China; Songshan Lake Materials Laboratory, China; Institute of Physics, Chinese Academy of Sciences, China)

Wednesday, October 26, 15: 45-17: 45

Session C2: Digital Circuit & Processor II

	Title
C2-1	**0228：A Survey of Approximation based Hardware Acceleration Techniques for Deep Neural Networks (invited)**
15:45 ~16:15	Siyuan Liang, Ke Chen, Bi Wu, Weiqiang Liu *(Nanjing University of Aeronautics and Astronautics, China)*
C2-2	**0159: Cache-Major: A Hardware Architecture and Scheduling Policy for Improving DRAM Access Efficiency in GEMV**
16:15 ~16:30	Jinhui Cheng, Xuanzhi Liu, Yue Cao, Wenjun Zhang, Zhongze Han, Bo Peng, Yixuan Liu, Donglin Zhang, Yongkang Han, Xiaoxin Xu, Jianguo Yang *(University of Science and Technology of China, China; Zhejiang Lab, China; Institute of Microelectronics of the Chinese Academy of Science, China)*
C2-3	**0379: Efficient Crest Factor Reduction Scheme for OFDM Systems**
16:30 ~16:45	Congying Zhou, Minghao Jiang, Weibo Li, Yongzhen Chen, Jiangfeng Wu *(Tongji University, China)*
C2-4	**0343: FPGA Logic Cell Improvements for Popcount Computation in BNN**
16:45 ~17:00	Zhengjie Li, Weilin Cong, Jinmei Lai *(Fudan University, China; Chengdu Sino Microelectronic Technology Co., Ltd, China)*
C2-5	**0132: A High Throughput Fully Parallel FFT with CSD Constant Multiplier**
17:00 ~17:15	Siqi He, Hongyi Zhang, Liyu Lin, Yun Chen, Xiaoyang Zeng *(Fudan University, China)*
C2-6	**0215: A Four-Phase Self-Timed Ring Based True Random Number Generator on FPGA**
17:15 ~17:30	Haoang Gu, Fangyu Deng, Qin Wang, Naifeng Jing, Jianfei Jiang *(Shanghai Jiao Tong University, China)*
C2-7	**0078: An Arbitrary Orders Dynamic Reconfigurable FIR Digital Filter with Symmetric Circuit Structure**
17:30 ~17:45	Guang-Hao Guo, Run-Jiang Dou, Nan-Jian Wu, Li-Yuan Liu *(Institute of Semiconductors, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*

Wednesday, October 26, 15: 45-17: 45

Session D2: Mixed-Signal Circuit I

	Title
D2-1	**0218: Challenges for Waveform Sampling and Related Technologies (invited)**
15:45 ~16:15	Haruo Kobayashi, Kentaroh Katoh, Shuhei Yamamoto, Yujie Zhao, Shogo Katayama, Jianglin Wei, Yonglun Yan, Dan Yao, Xueyan Bai, Anna Kuwana *(Gunma University, Japan)*
D2-2	**0065: A 1GS/s Highly Linear Voltage-to-Time Converter with Rail-to-Rail Input Range for Time Domain ADCs**
16:15 ~16:30	Yutong Zhao, Fan Ye, Junyan Ren *(Fudan University, China)*
D2-3	**0185: A 12 Bit 250 MS/s Voltage-Time Domain Hybrid ADC**
16:30 ~16:45	Yutong Zhao, Fan Ye, Junyan Ren *(Fudan University, China)*
D2-4	**0478: A 12bit 39ps two-step Time-to-Digital Converter in 40nm CMOS**
16:45 ~17:00	Xuxi Liu, Zhao Zhang, Tao Yin, Rui Wu *(Aerospace Information Research Institute, Chinese Academy of Sciences, China; Institute of Semiconductors, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
D2-5	**0455: A 49.5μW Multichannel Time-to-Digital Converter with 2D/3D Imaging Fusion for APD LiDAR Sensors**
17:00 ~17:15	Ruipeng Yang, Bing Zhang, Youze Xin, Yiyun Xie, Yaoxin Li, Fuwei Chen, Zirui Wang, Li Geng *(Xi'an Jiaotong University, China)*
D2-6	**0117: A 9.1μW Capacitance-to-Digital Converter for Pressure Sensor Systems**
17:15 ~17:30	Qing-Jiang Xia, Ya-Cong Zhang, You, Fei Zhou, Wen-gao Lu *(Peking University, China)*
D2-7	**0348: A Self-Heating-Followed Non-Uniformity Calibration Circuit for Silicon Diode Uncooled IRFPA**
17:30 ~17:45	Ye Zhou, Siyuan Ye, Wengao Lu, Dunshan Yu, Yacong Zhang, Zhongjian Chen *(Peking University, China)*

Wednesday, October 26, 19: 00 – 21: 00

Wednesday, October 26, 19: 00 – 21: 00

Poster Session I

	Title
P1-1	**0025: Block Copolymer-assisted Carbon Nanotube Gas Sensor on SOI Substrate**
	Bao-Lin Zhang, Zi-Li Li, Ling-Kuan Meng, Jing-Wan and Shi-Sheng Xiong *(Fudan University, China; Beijing Institute of Carbon-based Integrated Circuit, China)*
P1-2	**0033: Overcome the IBIS Model Overclocking Issue for SDRAM Interface**
	Jianbin Liu, Maosong Ma, Jingwei Cheng *(Changxin Memory Technologies, China)*
P1-3	**0076: The Electrical-thermal Coupling Modeling about Large Periphery RF GaN HEMT on Si employing by Through Wafer Via Structure**
	Zhen-Tao Wei, Yi-Zhou Jiang, Ying-Sheng Wang, Wei Huang, Zhi-Qiang Xiao, Wei Zhang *(Fudan University, China; Nanjing Electronic Device Institute, China; Wuxi Microelectronics Scientific and Research Center, China)*
P1-4	**0080: An Ultralow Loss Insulated Gate Bipolar Transistor with a Punch-Through NPN Transistor**
	Ping Li, Rongyao Ma, Zhiyu Yang, Jingwei Guo, Zhi Lin, Shengdong Hu *(Chongqing University, China; China Resources Microelectronics (Chongqing) Limited, China)*
P1-5	**0115: A Novel SiC Trench MOSFET with Improved Short-circuit Capability through an Integrated JFET Region**
	Zhengxiang Liao, Xiaochuan Deng, Tao Zhu, Xu Li, Hao Wu, Yi Wen and Xuan Li *(University of Electronic Science and Technology of China, China; Beijing Institute of Smart Energy, China)*
P1-7	**0137: Impact of Ge Profiles on Base Current Degradation Induced by Neutron-Induced Displacement Damage in SiGe HBT**
	Jia-Nan Wei, Xiao-Jun Fu, Xiang Du, Pei-Jian Zhang, Ting Luo, Jin-Xin Zhang *(Science and Technology on Analog Integrated Circuit Laboratory, China; Southwest China Research Institute of Electronic Equipment, China; Xidian University, China)*
P1-8	**0146: Silicon-on-Insulator MOSFET for Nucleic Acid Detection: Different Performance between N-Channel and P-Channel**
	Haihua Wang, Yingxin Chen, Zekun Zhao, Yu-Long Jiang, Jing Wan *(Fudan University, China)*
P1-10	**0157: Novel Organometal Halide Perovskites for Room Temperature NO_2 Gas Sensor**
	Weiwei Li, Shazrah Shahzad, Huaipeng Wang, Yilin Sun, Xingwen Suo, Guotong Geng, Dan Xie *(Academy of Military Sciences, China; Tsinghua University, China; Beijing Institute of Technology, China)*
P1-12	**0186: A Monolithic GaN LDO Based on 12 V/0.5 μm GaN-on-Si Power Technology Achieving 20 ns Settling Time and 22 MHz UGF**
	Peng Wang, Yi-Zhou Jiang, Dong-Sheng Liu, You Zhang, Wen-Hong Li, Wei Huang,

	Zhi-Qiang Xiao, Yi-Wu Qiu, Xin-Jie Zhou, Hong-Qiang Yang, Wei Zhang *(Fudan University, China; Wuxi Microelectronics Scientific and Research Center, China; University of Electronic Science and Technology of China, China)*
P1-13	**0192: All-GaN Two-stage Turn-off Circuits for Over-current Protection in GaN Monolithic Power ICs**
	Chao Liu, Zheng Cheng, Ruize Sun, Wanjun Chen, Bo Zhang *(University of Electronic Science and Technology of China, China; Institute of Electronic and Information Engineering of UESTC in Guangdong, China)*
P1-14	**0193: Low Loss Trench IGBT with Variable Doping Layer in P-base for Improving Turn-off Capability**
	Pengcheng Xing, Yuxiao Yang, Xiaorui Xu, Chao Liu, Ruize Sun, and Wanjun Chen *(University of Electronic Science and Technology of China, China)*
P1-15	**0238: Using Compact Model to Verify IGZO RO Performance for Engineering Application**
	Yu Yong, Jing Liang, Nan Yang, De-Yuan Xiao, Jian-Peng Jiang, Jing-Rui Guo, Ling-Fei Wang, Di Geng, Lan-Song Ba, Hong-Gang Liang, Ya-Nan Lu, Dan Wang, Yu-Ke Li, Xiao-Ming Yin, Long Huang, Jiang-Liu Shi, Gui-Lei Wang, Yan-Zhe Tang, Hong-Wen Li, Bryan Kang, Abraham Yoo, Kan-Yu Cao, Ling Li, Chao Zhao *(Beijing Superstring Academy of Memory Technology, China; ChangXin Memory Technologies, Inc., China; Institute of Microelectronics of the Chinese Academy of Sciences, China)*
P1-16	**0242: Dual Active Layer Mg-Doped InZnO Thin-Film Transistors with Ultra-Low Indium Doping**
	Chun-Feng Hu**,** Zhongfei Zou**,** Mingxiang Wang and Xin-Ping Qu *(Info Vision Optoelectronics (Kunshan) Co., Ltd, China; Soochow University, China; Fudan University, China)*
P1-17	**0243: High-performance 4H-SiC Schottky UV Photodiodes by 1000 ℃ RTP for High-temperature Ultraviolet Detection**
	Feng-Yu Du, Qing-Wen Song, Xiao-Yan Tang, Hao Yuan, Yan-Cong Liu, Yu Zhou, Ze-Yu-Lin Zhang, and Yu-Ming Zhang *(Xidian University, China; Xidian-Wuhu Research Institute, China)*
P1-18	**0247: Sensitivity Enhancement in MEMS Resonators based on Exceptional Points**
	Man-Na Zhang, Li-Feng Wang, Lei Dong and Qing-An Huang *(Southeast University, China)*
P1-19	**0273: An Automatic Parameter Extraction Method Based on Autoencoder for PIN Diode Model**
	YuLi, Wu Dai, Kexing Geng, Lining Zhang, Runsheng Wang, Ru Huang *(Peking University, China)*

P1-20	**0288: High Sensitivity of Parity Time Symmetric Piezoelectric Resonator Systems at Exceptional Point**
	Zhenyu Wei, Jianqiu Huang, and Qing-an Huang *(Southeast University, China)*
P1-21	**0324: TCAD Simulation Performance of VGAA for 4F2 High Density DRAM Cell**
	Wen-Qi Wang, Xiang Liu, Yong Yu, De-Yuan Xiao, Lan-Song Ba, Hong-Gang Liang, Jing Liang, Jong-Sung Jeon, Xing-SongSu, Qing-Hua Han, Jing-Fei Zhu, Jing-Heng Meng, JinDai, Hong-Bo Sun, Gui-Lei Wang, Yan-Zhe Tang, Hong-Wen Li, Wei-Feng Xu, Bryan Kang, Abraham Yoo, Kan-Yu Cao, Chao Zhao *(Beijing Superstring Academy of Memory Technology, China; ChangXin Memory Technologies, Inc., China)*
P1-22	**0297: High-Voltage Amorphous IGZO TFTs with a Drift Region Implemented by an Ultrathin ITO Capping Layer**
	Zuoxu Yu, Guangan Yang, Hao Tian, Tingrui Huang, Siyang Liu, Weifeng Sun, Wangran Wu *(Southeast University, China)*
P1-23	**0299: A Comparative Study of Self-Heating Effects in 3nm Node GAAFETs and FinFETs**
	Pan Zhao, Song-Han Zhao, Yan-Dong He, Gang Du *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*
P1-24	**0301: Empirical Analytical Inductance Calculation and Inductance to DC Resistance Ratio Optimization of On-Chip Solenoid Magnetic-Core Inductors**
	Linfeng Chen, Rongxiang Wu *(University of Electronic Science and technology of China, China)*
P1-25	**0304: 650V Planar Anode Gate Super-junction IGBT with Superior V_{on}-E_{off} Trade-off**
	Luping Li, Zehong Li, Peng Chen, Qiansheng Rao, Yuanzhen Yang, Jiali Wan, Tongyang Wang, Yishang Zhao, and Min Ren *(University of Electronic Science and technology of China, China)*
P1-26	**0312: A SPAD Readout Circuit Based on Column-Level Event-Driven Time-to-Digital Converter**
	Yun-Hao Fu, Zhong-Yuan Zhao, Zhuang Zhao, Jie-Chen Li, Yu-Chun Chang *(Jilin University, China)*
P1-27	**0317: 200-V ITO Thin-Film Transistors with the Stair-ITO Drift Region**
	Tingrui Huang, Zuoxu Yu, Guangan Yang, Hao Tian, Weifeng Sun, Wangran Wu *(Southeast University, China)*
P1-28	**0320: LTRNet: A Lightweight Topography Recognition Network**
	Yixuan Liu, Tianhui Song, Yun Chen *(Fudan University, China)*
P1-29	**0336: An Applied Model for HCI and Lifetime Prediction of LDMOSFET**

	Tao Chen, Yabin Sun, Yanling Shi, Xiaojin Li, Yun Liu *(East China Normal University, China)*
P1-30	**0337: The Performance Enhancement of Polysilicon Microbolometer in Standard CMOS Technology with Si_3N_4 Film**
	Yao-Zu Guo, Hao-Lan Ma, Sheng Xu, Wei Zhu, Xiao-Li Ji *(Nanjing University, China)*
P1-31	**0339: Responsivity Enhancement of CMOS Microbolometer with Two-Dimensional Al Grating**
	Hao-Lan Ma, Yao-Zu Guo, Sheng Xu, Wei Zhu, and Xiao-Li Ji *(Nanjing University, China)*
P1-32	**0368: Piezoelectric Micromachined Ultrasonic Transducers with Center Support Membrane**
	Yan Wang, Weijiang Xu, Leming He, Junyan Ren *(Université Polytechnique Hauts-de-France, France; INSA Hauts-de-France, France; Fudan University, China)*
P1-33	**0401: A Novel Gate-Controlled Lateral Thyristor based Pixel for Low-Light Image Sensors**
	Ke-Yang Sun, Li-Yang Pan, Zhe-yao Wang *(Tsinghua University, China)*
P1-34	**0405: Design of a Novel MEMS Implantable Blood Pressure Sensor and Stress Distribution of Parylene-based Coatings**
	Zhi-Wei You, Lei Wei, Ming-Liang Zhang, Fu-Hua Yang, Xiao-Dong Wang *(Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
P1-35	**0406: A Novel High-Performance Tunneling Field-Effect Transistor Ternary Inverter**
	Yi Zhu, Hongliang Lu, Yuming Zhang, Jiale Sun, Zhijun Lyu, Bin Lu *(Xidian University, China; Institute of Microelectronics Technology, China; Shanxi Normal University, China)*
P1-36	**0407: Impact of RDF and WFV in Vertically Stacked Nanosheet-FET**
	Ou-Wen Li, Cong Li, Yun-Qi Wang, Feng-Yu Kuang, Shan-Lin Cheng *(Xidian University, China)*
P1-37	**0408: Thermoelectromechanical Coupling of MEMS Graphene Resonators**
	Lei Wei, Zhi-Wei You, Ming-Liang Zhang, Fu-Hua Yang, Xiao-Dong Wang *(Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
P1-38	**0424: Study on Single Event Burnout Effect for 700V Double-RESURF SOI LDMOS**
	Cong Gao, Xin Zhou, Langtao Chen, Ming Qiao, Bo Zhang *(University of Electronic Science and Technology of China, China)*

P1-39	**0438: Research on TeraFET Detector Based on Controllable Drain Current Enhancement**
	Dan Zhang, Kang Li *(Xidian University, China)*
P1-40	**0443: Novel Ultralow-On-Resistance SOI LDMOS with Strain-Induced Mobility Enhancement and Electric Field Modulation**
	Mingzhe Li, Baoxing Duan, Yintang Yang *(Xidian University, China)*
P1-41	**0450: A Comparative Study on of Single Event Irradiation Effects between Trench MOSFET and Split-gate-trench MOSFET**
	Min Ren, Yining Wu, Shiheng Yu, Xinzhang Lai, Ningze Zhuo, Zehong Li, Bo Zhang *(University of Electronic Science and Technology of China, China; Jiangsu Changjing Electronics Technology Co.LTD, China)*
P1-42	**0451: Modulating Thermally Activated Hole Transport in a Multi-Channel Silicon Nanowire Transistor by Single Acceptor-Induced Traps**
	Jun-Dong Chen, Wei-Hua Han, Yan-Dong Ge, Xiao-Di Zhang and Fu-Hua Yang *(Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*

Thursday

Thursday, October 27, 8: 30 – 10: 00

Thursday, October 27, 8: 30 – 10: 00
Keynote Session K3

K3-2 **In-Sensor and In-Memory Computing for TinyML** *(9: 15-10: 00)*
Prof. Kea-Tiong (Samuel) Tang, Tsing Hua Univ., Taiwan, China

Thursday, October 27, 10: 15 – 12: 15

Thursday, October 27, 10: 15 – 12: 15

Special Session A3: 75th Anniversary of Transistor Invention

	Title
A3-1	**0519: History of Transistor Invention: 75th Anniversary (invited)**
10:15 ~10:42	Hiroshi Iwai *(Yang Ming Chiao Tung University, Taiwan, China; Tokyo Institute of Technology, Japan)*
A3-2	**0483: Emerging Ultra-low Power Devices Based on Mechanism Engineering for Diverse Applications (invited)**
10:42 ~11:09	Qianqian Huang *(Peking University, China)*
A3-3	**0258: Challenges and Possible Solutions for High Performance Sustainable Nanoelectronics (invited)**
11:09 ~11:36	Francis Balestra *(IMEP-LAHC, France)*
A3-4	**0250: Perfecting High-κ/Ge and /InGaAs Interfaces - Push for Ultimate CMOS and Emerging Cryogenic Electronic Devices (invited)**
11:36 ~12:03	L. B. Young, Y. H. G. Lin, H. W. Wan, Y. T. Cheng, C. K. Cheng, C. H. Hsu, T. W. Pi, J. Kwo, and M. Hong *(Taiwan Univ., Taiwan, China; Synchrotron Radiation Research Center, Taiwan, China; Tsing Hua University, Taiwan, China)*
A3-5	**0174: Carrier Transport Characteristics in Ultra-Thin-Body InGaAs-On-Insulator nMOSFETs**
12:03 ~12:15	Xiao-Yu Tang, Yi Zhao *(Nanjing Institute of Technology, China; Zhejiang University, China; East China Normal University, China)*

Thursday, October 27, 10: 15 – 12: 15

Session B3: Advanced Processing III

	Title
B3-2	**0490: Organic and Flexible Devices Based on Metal-Containing Organic Semiconductors (invited)**
10:45 ~11:15	Qiang Zhao *(Nanjing University of Posts & Telecommunications, China)*
B3-3	**0498: A MEOL Logic Layout Optimization Recommendation Under 3 nm CFET Architecture and Beyond (invited)**
11:15 ~11:45	Yanli Li, Qiang Wu, Xianhe Liu *(Fudan University, China)*

B3-4	**0207: Interfacial Engineering for High-Performance DPPT-TT Polymer □□□ and Mobility of 3 $cm^2V^{-1}s^{-1}$**
11:45 ~12:00	Xilin Lai, Chunyan Zhao, Ming He *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*
B3-5	**0222: New Variable Selective Etching Technology for Thick SOI Devices**
12:00 ~12:15	Teng Liu, Wen-Tong Zhang, Zhi-Li Zhang, Hua Song, Nai-Long He, Sen Zhang, Zhao-Ji Li and Bo Zhang *(University of Electronic Science and Technology of China, China; CSMC Technologies Corporation, China)*

Thursday, October 27, 10: 15 – 12: 15

Session C3: Efficient AI Circuit

	Title
C3-1	**0199: A Hardware-Aware Neural Architecture Search Pareto Front Exploration for In-Memory Computing (invited)**
10:15 ~10:45	Ziyi Guan, Wenyong Zhou, Yuan Ren, Rui Xie, Hao Yu, and Ngai Wong *(The University of Hong Kong, Hong Kong, China; Southern University of Science and Technology, China)*
C3-2	**0467: Hybrid IMC Architecture for Robust DNN Acceleration (invited)**
10:45 ~11:15	Gokul Krishnan, Zhenyu Wang, Li Yang, Injune Yeo, Jian Meng, Rajiv V. Joshi, Nathaniel C. Cady, Deliang Fan, Jae-sun Seo, Yu Cao *(Arizona State University, USA; IBM T. J. Watson Research Center, USA; State University of New York Polytechnic, USA)*
C3-3	**0171: An Underwater Image Enhancement Fusion Network**
11:15 ~11:30	Leiou Wang, Donghui Wang *(Institute of Acoustics, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
C3-4	**0402: A 8.5 fJ/Addition Dynamic Analog 8-3 Compressor for Energy Efficient Computing-in-Memory Macros**
11:30 ~11:45	Peizhe Li, Jinshan Zhang, Wenning Jiang, and Chixiao Chen *(Fudan University, China)*
C3-5	**0410: Multi-patch Localization Spiking Neural Network for Object Detection**
11:45 ~12:00	Shuo Feng, Jian Cao, Ling Zhang, Guang Chen, Juntong Yan, Feng Ling, Xiangcheng Liu, Jinming Che, Xiaoxin Cui, Yuan Wang *(Peking University, China)*
C3-6	**0413: A Low Power Speech Recognition Processor with Precision Recoverable CRNN**
12:00 ~12:15	AnFeng Xue, Han Yan, RenYuan Zhang, XueTao Wang, Hao Zhang, Hao Cai, Bo Liu *(Southeast University, China; Nanjing Research Institute of Electronics Technology,*

	China)

Thursday, October 27, 10: 15 – 12: 15

Session D3: Mixed-Signal Circuit II

	Title
D3-1	**0506: A Background Calibration Technology for Pipelined ADCs Using Sub-Range Code Bin Reshaping (invited)**
10:15 ~10:45	Yutao Peng, Lingfeng Bian, Hang Liu, Xizhu Peng and He Tang *(University of Electronic Science and Technology of China, China)*
D3-2	**0165: Digital Calibration Method of Timing Skew in Time-Interleaved ADC**
10:45 ~11:00	Xiyuan Du, Li Zhang, Yunchuan Wang, Fengyi Mei, Yongzhen Chen, Jiangfeng Wu *(Tongji University, China)*
D3-3	**0416: A 6b 800MS/s SAR ADC With Speed-Enhanced SAR Logic and Grouped DAC Capacitors**
11:00 ~11:15	Yuxuan Zhang, Yutong Zhao, Jingchao Lan, Fan ye, Yufeng Xie and Junyan Ren *(Fudan University, China)*
D3-4	**0209: A 2.44-microwatt 93.2-dB SNDR ΔΣ ADC based on Swing-Enhanced Floating Inverter Amplifier with 60× Power/Bandwidth Scalable Range**
11:15 ~11:30	Yuzhen Kou, Yibo Zhao, Yaopeng Hu, Menglian Zhao, Zhichao Tan *(Zhejiang University, China)*
D3-5	**0456: A 11-Bit Single-Slope ADC with A High-Speed PDH for Intensity Information Detection Applying in TOF Sensor**
11:30 ~11:45	Yaoxin Li, Bing Zhang, Zirui Wang, Ruipeng Yang, Yiyun Xie, Youze Xin *(Xi'an Jiaotong University, China)*
D3-6	**0213: A 40MSps Ping-Pong S&H Front-end for TI ADC with Variable Gain in 0.18μm CMOS Process**
11:45 ~12:00	Xinlei Song, Tianxiang Wu, Jiang Hou, Hao Su, Biao Hu, Shunli Ma *(Fudan University, China; The 24th Research Institute of China Electronics Technology Group Corporation, China)*
D3-7	**0434: A Column-parallel SAR/SS ADC with Multi-column Shared Capacitor DAC for CMOS Image Sensor**
12:00 ~12:15	Hejiu Zhang, Zhichao Fang, Ningmei Yu, Nan Lv, Zhongjie Guo *(Xi'an University of Technology, China)*

Thursday, October 27, 13: 30 – 15: 30

Thursday, October 27, 13: 30 – 15: 30

Session A4: Power Device

	Title
A4-1	**0298： A New Type of Homogenization Field Power Semiconductor Devices (invited)**
13:30 ~14:00	Wen-tong Zhang, Zhao-ji Li, Bo Zhang *(University of Electronic Science and Technology of China, China)*
A4-2	**0048: Ultralow Loss Lateral Insulated Gate Bipolar Transistor with U-shape Trench Anode**
14:00 ~14:15	Jie Wei, Pengchen Zhu, Kemeng Yang, Kaiwei Dai, Jie Li, and Xiaorong Luo *(University of Electronic Science and Technology of China, China)*
A4-3	**0081: A Novel Approach to Suppress the Inhomogeneous Reverse Recovery Behavior of the Body Diode in Superjunction MOSFET**
14:15 ~14:30	Ping Li, Rongyao Ma, Zhiyu Yang, Jingwei Guo, Zhi Lin, Shengdong Hu *(Chongqing University, China; China Resources Microelectronics (Chongqing) Limited, China)*
A4-4	**0180: A Novel Full Tun-on Reverse-Conducting IGBT with Enhanced Carrier Concentration Modulation in Collector Side**
14:30 ~14:45	Chao Liu, Guoyun Wu, Meng Wei, Xiaorui Xu, Pengcheng Xing, Ping Zhang, Ruize Sun, Wanjun Chen, Zhaoji Li, and Bo Zhang *(University of Electronic Science and Technology of China, China; Sichuan Aerospace Liaoyuan Science and Technology Co., LTD, China)*
A4-5	**0306: A Novel Use of the Shielded Gate in SGT MOSFETs as the Voltage Sensing Terminal**
14:45 ~15:00	Yang Yang, Yi-Shang Zhao, Ling-Xuan Huang, Yu-Jia Chen, Lu-Ping Li, Tong-Yang Wang, and Zi-Ming Xia *(University of Electronic Science and Technology of China, China)*
A4-6	**0474: A Novel Insulating-Pillar Superjunction with Vertical Insulators: Breakthrough of Specific ON-Resistance Limit**
15:00 ~15:15	Xinghao Tong, Hongji Pei, Wenxi Zhen, Haimeng Huang, Zimin Zhang , Junji Cheng , Bo Yi, and Hongqiang Yang *(University of Electronic Science and Technology of China, China; Institute of Electronic and Information Engineering of UESTC in Guangdong, China; Priosemi Technology Limited Company, China)*
A4-7	**0476: Optimization of Specific ON-Resistance of Superjunction Device with Two-Zones Variation Vertical Doping Profile**
15:15 ~15:30	Wenjun Li, Haimeng Huang, Zimin Zhang, Junji Cheng, Bo Yi , Hongqiang Yang, and Zhiming Wang *(University of Electronic Science and Technology of China, China; Institute of Electronic and Information Engineering of UESTC in Guangdong, China; Priosemi Technology Limited Company, China)*

Thursday, October 27, 13: 30 – 15: 30

Session B4: Advanced Processing IV

	Title
B4-1	**0504: A CDU Budget and Process Window Study with EUV Lithography for 3 nm CFET Logic Processes and an Outlook for Future Generations (invited)**
13:30 ~14:00	Qiang Wu, Yanli Li, Liu Xianhe, Xiaona Zhu, Shaofeng Yu *(Fudan University, China)*
B4-2	**0513: Moire Schottky Barriers for Lower Contact Resistances on layered MoS_2 (invited)**
14:00 ~14:30	J Robertson, Z Zhang *(Cambridge University, UK)*
B4-3	**0427: Correlation of Wake-up effect in $Hf_{1-x}Zr_xO_2$ Ferroelectrics with Antiferroelectric Properties**
14:30 ~14:45	Shuman Zhong, Danyang Chen, Yulong Dong, Tianning Cui, Liying Wu, Jingquan Liu, Mengwei Si, XiuYan Li *(Shanghai Jiao Tong University, China)*
B4-4	**0462: Investigation of Rs Sensitivity to Titlt Angle on 300mm High Current/ Ion Implanter**
14:45 ~15:00	Xiaoxu Kang, Zhenghui Chu, Jiwei Liu, Xiaolan Zhong, Min Zhang, Xiaoqiang Zhou, Kaiyan Zang, Duanxiang Yang, Guanyuan Zhao, Jin Li, Ran Nie, Tao Wu *(Shanghai IC R&D Center, Shanghai, China; Beijing Zhongkexin Electronics Equipment Co., Ltd, China; ShanghaiTech University, China)*
B4-5	**0110: Design and Formation of SiO_2/SiC interfaces with Low Interface State Via Phosphorus Ions Implantation in SiC Power MOSFETs**
15:00 ~15:15	Maojiu Luo, Cunhao Gong, Hang Chen, and Yourun Zhang *(University of Electronic Science and Technology of China, China)*
B4-6	**0131: Ultralow On-Resistance Integrated Vertical DMOS Embedded into 0.18μm BCD Process**
15:15 ~15:30	Feng Lin, Chaoqi Xu, Li Lu, Shuxian Chen, Zhihan Zhu, Siyang Liu, Weifeng Sun, Haisheng Miao, Wenwen Zhang, Hong Shao, Yixin Dai *(Southeast University, China; CSMC Technologies Corporation, China)*

Thursday, October 27, 13: 30 – 15: 30

Session C4: EDA I

	Title
C4-1	**0233: Efficient SPICE Modeling of Ta_2O_5-Based Bipolar RRAM Device Including Monte Carlo Simulation (invited)**
13:30	Wanlan Yang, Jiahao Li, Xing Zhou *(Nanyang Technological University, Singapore)*

~14:00	
C4-2	**0084: A Quantile-Based SUM/MAX Operating Method for Statistical Timing Analysis**
14:00 ~14:15	Leilei Jin, Jiajie Xu, Wenjie Fu, Xiao Shi *(Southeast University, China)*
C4-3	**0088: GNN-based TICER for RC Reduction on Large-scale Interconnect**
14:15 ~14:30	Leyun Tian, Yuyang Ye, Hao Yan *(Southeast University, China)*
C4-4	**0163: Automated Design Space Exploration of Coarse-Grained Reconfigurable Architecture via Bayesian Optimization**
14:30 ~14:45	Huizhen Kuang, Su Zheng, Lingli Wang *(Fudan University, China)*
C4-5	**0210: Virtual-Path-Based Timing Optimization for VLSI Global Placement**
14:45 ~15:00	Weijie Chen, Haishan Huang, Min Wei, Peng Zou, and Jianli Chen *(Fuzhou University, China; Fudan University, China)*

Thursday, October 27, 13: 30 – 15: 30

Session D4: RF Circuit I

	Title
D4-1	**0459: Microwave Transistors – The Backbone of 5G and Beyond Communication Systems (invited)**
13:30 ~13:54	Frank Schwierz, Martin Ziegler, and Juin J. Liou *(Technische Universität Ilmenau, Germany; Shenzhen University, China)*
D4-2	**0027: Low Pass Filter of the Sallen-Key Family with Main Parameters' Independent Adjustment**
13:54 ~14:06	Darya Denisenko, Nikolay Prokopenko, Anna Bugakova *(South Federal University, Russia; Don State Technical University, Russia; Institute for Design Problems in Microelectronics of RAS, Russia)*
D4-3	**0039: The THz Modeling with an Improved Small-Signal Circuit for InP HEMTs**
14:06 ~14:18	Wen-Jie Sun, Yang Chen, Heng Fang, Xian Lai, Jin-Xing Wei, Yong Zhang, Bo Yan *(University of Electronic Science and Technology of China, China)*
D4-4	**0073: A 300GHz On-chip Twin Dipoles Antenna Using Artificial Magnetic Conductor and Back Reflector with 52% Radiation Efficiency**
14:18 ~14:30	Mingfeng Cai, Lei Zhang, and Yan Wang *(Tsinghua University, China)*
D4-5	**0217: Active 4th-Order N-path Filter with Wide Tuning Bandwidth Range**

14:30 ~14:42	Jia-Hao Liang, Shuo-Xiong Yang, Qing-Yang Dong, Wei Huang, Wei-Jun Luo *(1 Institute of Microelectronics, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
D4-6	**0307: A High Efficiency S-band Power Amplifier Based on GaN-on-Si with Bandwidth of 1 GHz**
14:42 ~14:54	Shuoxiong Yang, Qingyang Dong, Wei Huang, Xing Jiang, Jiahao Liang, Weijun Luo *(University of Chinese Academy of Sciences, China; Institute of Microelectronics, Chinese Academy of Sciences, China)*
D4-7	**0397: A Nonlinear GaN HEMT Modeling with the gm2 and gm3 Validation**
14:54 ~15:06	Heng Fang, Yang Chen, Wen-Jie Sun, Xian Lai, Jin-Xing Wei, Bo Yan, Rui-Min Xu *(University of Electronic Science and Technology of China, China)*
D4-8	**0270: A 5-8 GHz Wideband and Low Phase Noise Cross-Coupled LC VCO Using 6-bit DCCA in 40nm CMOS Process**
15:06 ~15:18	Yang Jiang, Chao Shen, Tianxiang Wu, Hao Chen, Shunli Ma, Junyan Ren *(Fudan University, China; The 24th Research Institute of China Electronics Technology Group Corporation, China)*

Thursday, October 27, 15: 45 – 17: 45

Thursday, October 27, 15: 45 – 17: 45

Session A5: Compound Semi - SiC I

	Title
A5-1	**0471: A Novel Heterotype SiC Superjunction MOSFET with Improved Both Forward and Reverse Performance (invited)**
15:45 ~16:15	Moufu Kong, Shurui Li, Zeyu Cheng, Ning Yu, Bo Yi, Sen Gong *(University of Electronic Science and Technology of China, China)*
A5-2	**0079：Simulation Study of a Novel 4H-SiC Split Gate Double Trench MOSFET with Side Wall Gate**
16:15 ~16:30	Zixun Chen, Jinping Zhang, and Bo Zhang *(University of Electronic Science and Technology of China, China)*
A5-3	**0153: Half trigger operation mode of 4H-SiC Diode Avalanche Shaper**
16:30 ~16:45	Deng-Yao Guo, Yu Zhou, Xiao-Yan Tang, Qing-Wen Song, Yu-Ming Zhang *(Xidian University, China)*
A5-4	**0200: A 1400V SiC LDMOS with P-tops and P-buffer for Ultra-low Specific Resistance**
16:45	Yong Gu, Chengwu Pan, Xiaona Wang, Jie Ma, Siyang Liu, Long Zhang, Weifeng Sun

~17:00	*(Southeast University, China)*
A5-5	**0224: A Novel Double Trench 4H-SiC MOSFET with Integrated Schottky Barrier Diode**
17:00 ~17:15	Jinping Zhang, Qinglin Wu, Hua Zou, Bo Zhang *(University of Electronic Science and Technology of China, China)*
A5-6	**0230: Surge Current Failure Mechanism of 650V Double-Trench SiC MOSFETs**
17:15 ~17:30	Junhou Cao, Jiaxing Wei, Zhaoxiang Wei, Hangbo Zhao, Hao Fu, Siyang Liu, Weifeng Sun *(Southeast University, China)*
A5-7	**0237: 4H-SiC Trench MOSFET with Integrated Heterojunction Diode for Optimizing Switching Performance**
17:30 ~17:45	Chun-Ying Zhou, Min Ren, Xi Li, Rong-Yao Ma, Xin Zhang, Fang Zheng, Shi-Qi Liang, e-Hong Li, Bo Zhang *(University of Electronic Science and Technology of China, China; China Resources Microelectronics Co. LTD, China)*

Thursday, October 27, 15: 45 – 17: 45

Session B5: NVM I: PCRAM

	Title
B5-1	**0267: Melting-Free Phase-change Memory for Associative Learning (invited)**
15:45 ~16:15	Da-You Zhang, Si-Qi Wang, Zi-Jian Tang, Xiang-Shui Miao and Yu-Hui He *(Huazhong University of Science and Technology, China)*
B5-2	**0362: Relaxation in GeSe Ovonic Threshold Switching Device (invited)**
16:15 ~16:45	W. Zhang, Z. Chai, P. Freitas, J. F. Zhang, John Marsland *(Liverpool John Moores University, UK)*
B5-3	**0510: Recent Progress in Phase Change Materials and Devices (invited)**
16:45 ~17:00	You Yin *(Gunma University, Japan)*
B5-4	**0147: A Fully Parallel On-Die ECC Architecture with High Area Reduction and RAS Enhancement for HBM3**
17:00 ~17:15	Run-Jin Wu, Feng Chen, Cheng-Jer Yang, Feng Xu, OneGyun Na, Ying-Qi Yang *(University of Science and Technology of China, China; ChangXin Memory Technologies. Inc., China; Quantum Nebula Microelectronics Technology Co., China)*
B5-5	**0195: A 7T1R Nonvolatile SRAM with High Stability, Low Delay and Low Power Consumption Embedded with Transmission Gates (TGs)**
17:15 ~17:30	Yangyang Zhu, Yingjian Xia, Shenghua Cheng, Yue Sun, Xiaohu Wang *(Dalian University of Technology, China)*
B5-6	**0236: Impact of MOS Interface on Non-Volatile Mobile-Ionic Field-Effect**

	Transistor with Amorphous ZrO_2 Dielectric
17:30 ~17:45	Huan Liu, Qiyu Yang, Jing Li, Lulu Chou, Chengji Jin, Jiajia Chen, Xaio Yu, Yan Liu, Genquan Han, Yue Hao *(Zhejiang Lab, China; Xidian University, China)*

Thursday, October 27, 15: 45 – 17: 45

Session C5: EDA II

	Title
C5-1	**0487: Intelligent and Interactive Analog Layout Design Automation (invited)**
15:45 ~16:15	Yibo Lin, Xiaohan Gao, Haoyi Zhang, Runsheng Wang, Ru Huang *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*
C5-2	**0211: An Efficient Global Router for Large-scale Congestion-driven Routing**
16:15 ~16:30	Haishan Huang, Weijie Chen, Zhijie Cai, Jiarong Huang, and Jianli Chen *(Fuzhou University, China; Fudan University, China)*
C5-3	**0290: Convex Optimization-Based Inverse Reinforcement Learning in Design Space Exploring**
16:30 ~16:45	Yi-Fan Jin, Yin-Shui Xia, Xiao-Jing Zha *(Ningbo University, China)*
C5-4	**0305: Multi-Constant Multiplication Optimization Based on Common Sub-Expression Elimination**
16:45 ~17:00	Jiawen Cheng, Songlin Lyu, Yun Shao, Yong Xiao, Wenjian Yu *(Tsinghua University, China; Giga Design Automation Co., Ltd., China)*
C5-5	**0333: OrderMap: A CGRA Mapping Algorithm based on DFG Analysis and Graph Homomorphism**
17:00 ~17:15	Jiangnan Li, Su Zheng, Lingli Wang, Wenbo Yin *(Fudan University, China)*

Thursday, October 27, 15: 45 – 17: 45

Session D5: RF Circuit II

	Title
D5-1	**0082: Ultra-Low Power 2.4 GHz Receiver Design Techniques for IoT Applications (invited)**
15:45 ~16:15	Aasish Boora, Bharatha Kumar Thangarasu, and Yeo Kiat Seng *(Singapore University of Technology and Design, Singapore)*
D5-2	**0325: A 5.15-5.85 GHz GaN Doherty Power Amplifier MMIC for WLAN Applications (invited)**
16:15 ~16:45	Lina Liao, Jiafu Lin, Wanli Wang, Xiguang Chen, Chenkai Deng, Qing Wang, Hongyu Yu *(Southern University of Science and Technology, China; Hatchip Limited,*

	China)
D5-3	**0125: A 31.2dBm Pout, 40.7% Peak DE, 2.4GHz Quadrature Doherty Power Amplifier Based on Current Mode RFDAC Architecture**
16:45 ~16:57	Ling-Yun Shi, Tao Wang, Di Hua, Zhi-Liang Hong *(Fudan University, China)*
D5-4	**0262: A 23-33GHz Transmitter in 65-nm CMOS Achieving 22.8-dB Gain and 14.5dBm Psat for 5G Communication System**
16:57 ~17:09	Chaofan Zeng, Xu Chen, Nuo Xu, Xinlei Song, Chao Shen, Shunli Ma *(Fudan University, China)*
D5-5	**0271: A Broadband and High Speed CML Divider with Inductor Peaking in 40-nm SMIC**
17:09 ~17:21	Chao Shen, Yang Jiang, Tianxiang Wu, Huarui Cui, Shunli Ma, Junyan Ren *(Fudan University, China; The 24th Research Institute of China Electronics Technology Group Corporation, China)*
D5-6	**0315: A 38-48 GHz Power Amplifier with 23-dB Gain 18.5-dBm Psat and 28% PAE in 65-nm CMOS**
17:21 ~18:33	Ruolan Chen, Weiping Wu, Lei Zhang, and Yan Wang *(Tsinghua University, China)*
D5-7	**0358: A 26-39.5 GHz Two-Path Voltage-Combined Power Amplifier with Bandwidth Broadening Technique in 22nm FD-SOI**
18:33 ~18:45	Xun Cao, Shunli Ma *(Fudan University, China)*

Thursday, October 27, 19: 00 – 21: 00

Thursday, October 27, 19: 00 – 21: 00

Poster Session II

	Title
P2-1	**0031: A 1-5 GHz High Speed, Low Jitter, High Accuracy Duty-Cycle Corrector Circuit**
	Ting Sun, Qi Yu, Shubo Tao, Zhong Zhang, Kejun Wu, Jing Li, Ning *(University of Electronic Science and Technology of China, China)*
P2-2	**0043: A 13-bit Energy-Efficient SAR-Assisted Cyclic ADC for CMOS Image Sensor**
	Zheng Nie, Hao Li, Dong-Sheng Liu, Ang Hu, Jia-Hao Lu, Hai Li *(Huazhong University of Science and Technology, China; Tysin Technology (Kunshan) Co., Ltd, China)*

P2-3	**0046: An Artificial Case to Evaluate the Scalability Bottleneck of a Simulator *(undetermined)***
	Amy Rao, Kevin Kerns *(Synopsys Co., Ltd, USA)*
P2-4	**0054: A Low-cost and Configurable Hardware Architecture of Sparse 1-D CNN for ECG Classification**
	Jiahao Lu, Dongsheng Liu, Ang Hu, Cong Zhang, Changwen Mo, Runhua Guo, Hai Li *(Huazhong University of Science and Technology, China; Zhuhai Jusheng Technology CO., Ltd, China; Tysin Technology (Kunshan) Co., Ltd, China)*
P2-5	**0056: Design of Security Detection Digital Sensor System Based on FPGA**
	Dejian Li, Xu Zhao, Jiaming Zhang, Zonglin Li, Jiajie Hu, Yuanhui Yang, Dongsheng Liu, Hai Li *(Beijing Smart-chip Microelectronics Technology Co. Ltd., China; Huazhong University of Science and Technology, China; Tysin Technology (Kunshan) Co., Ltd, China)*
P2-6	**0059: Current Sensing Interface Based on Noise-Shaped Pulse Width Modulation**
	Hengzhuang Shi, Lin He, Yufeng Guo, Zhikuang Cai *(Nanjing University of Posts and Telecommunications, China)*
P2-7	**0064: Evaluation and Analysis of Domestic ATE based on IC Testing Application**
	Kun YU, Jianhua QI *(Peking University, China; SINO IC Technology Co., Ltd., China)*
P2-8	**0070: Analysis and Design of Continuous-Time Incremental Sigma-Delta Modulators with Extended Counting Technique**
	Tingting Wei, Qiong Wang, Zhu Yuan, Jiahui Lai, Xiaoyang Zeng, Zhiliang Hong *(Fudan University, China)*
P2-9	**0077: A Controllable Luminance Neural Camera**
	Fa xu, Yujie Huang, Xiaoyang Zeng, Ming'e Jing, Yibo Fan *(Fudan University, China)*
P2-10	**0091: A 10-bit 1MS/s SAR Quantizer with Differential Charge Compensation for 2Vp-p Signal Range**
	Zhu Yuan, Tingting Wei, Zhiliang Hong *(Fudan University, China)*
P2-11	**0135: BICMOS Residue Amplifier with Base Current Compensation Technique in High-speed Pipelined ADC**
	Junjie Jing, Lingxiao Shen, Fule Li, Chun Zhang, Zhihua Wang *(Tsinghua University, China)*
P2-12	**0138: Design of Adaptive Transmission NoC based on Packet and Circuit Switching Mechanism**
	Shu-Ming Zeng, Wei Ni, Ya-Xuan Zhang, Yu-Kun Song, Duo-Li Zhang *(Hefei*

	University of Technology, China)
P2-13	**0148: Implementation of Classic McEliece Key Generation Based on Goppa Binary Code**
	Jiaming Zhang, Dongsheng Liu, Jiahao Lu, Aobo Li, Changwen Mo, Jiye Tian, Hai Li *(Huazhong University of Science and Technology, China; Zhuhai Jusheng Technology CO., Ltd, China; Tysin Technology (Kunshan) Co., Ltd, China)*
P2-14	**0154: Modeling Attack Resistant Arbiter PUF based on Dynamic Finite Field Matrix Multiplication Scheme**
	Shanshan Shi, Zhengtai Chang, Benqing Guo, Yao Wang *(Zhengzhou University, China; Chengdu University of Information Technology, China)*
P2-15	**0155: A High-performance Hardware Accelerator Using a Fusion Approach of Convolution and Pooling**
	Chen Yang, Yishuo Meng, Kaibo Huo, Yuheng Xia, Kuizhi Mei *(Xi'an Jiaotong University, China)*
P2-16	**0170: Luminance Weighted Color Constancy**
	Yuxin Gao, XianKui Xiong, Dong Xu, XuanPen Zhu, Yibo Fan *(Fudan University, China)*
P2-17	**0176: Characterization of Reliabilities of 22 nm UTBB FDSOI Ring Oscillators**
	Chang Cai, Kai Zhao, Jian Yu, Gengsheng Chen, Mingjie Shen, Bingxu Ning, Jun Yu *(Fudan University, China)*
P2-18	**0181: An OTA Controlled Voltage Boost to Bias the Photodiode in OEICs**
	You-Run Zhang, Deng-Fu Zhang, Peng Ding, Jia-Ning Zhang, Yi Ou, Shao-Wei Zhen, Shi-Jie Kang, Yong-Ming Sun, Bo Zhang *(University of Electronic Science and Technology of China, China; Chongqing Optoelectronics Research Institute, China)*
P2-19	**0182: Design of a Highly Compact On-Chip Temperature Sensor with Ultra-Low Power based on 40nm CMOS**
	Shan Lu, Danyu Wu, Linzhen Wu *(Institute of microelectronics of the Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China)*
P2-20	**0184: Performance Evaluation of Algorithms for Optimizing Processor Simulator Parameters**
	Jianyu Ren, Yudi Qiu, Yibo Fan *(Fudan University, China)*
P2-21	**0208: IGBT Drive Optocoupler with Desaturation Detection and Active Miller Clamp**
	Shao-Wei Zhen, Shi-Jie Kang, Peng Ding, Jia-Ning Zhang, Yi Ou, You-Run Zhang, Deng-Fu Zhang, Yong-Ming Sun, Bo Zhang *(University of Electronic Science and Technology of China, China; Chongqing Optoelectronics Research Institute, China)*

P2-22	**0223: Low-Power Computing Unit based on Heterogeneous Approximate Structure for Binary Convolutional Neural Network**
	Ziyu Wang, Qingwen Wei, Anfeng Xue, Xuetao Wang, Hao Zhang, Hao Cai, Bo Liu *(Southeast University, China; Nanjing Research Institute of Electronics Technology, China)*
P2-23	**0239: HRPoseFormer: High-Resolution Transformer for Human Pose Estimation via Multi-Scale Token Aggregation**
	Xiao-Wei YU, Geng-Sheng Chen *(Fudan University, China)*
P2-24	**0245: Research on Inter-core Communication of Multicore Cryptoprocessor with Considering Memory Optimization**
	Jun-hao Lang, Wei Li, Long-mei Nan, Tao Chen *(Information Engineering University, China)*
P2-25	**0249: Reconfigurable KECCAK Hardware Design for Lattice-based Post-Quantum Cryptography on the RISCV Architecture**
	Hui-Qin Li, Tao Chen, Wei Li, Long-Mei Nan *(Information Engineering University, China)*
P2-26	**0253: A High-performance RISC-V Co-processor Architecture for Fast IP Processing**
	Xinjie Kong, Weiliang He, Jun Han *(Fudan University, China)*
P2-27	**0254: A Hardware Friendly Demosaicking Algorithm based on Edge Sensing**
	Jiarui Liu, Yuxin Gao, Xiankui Xiong, Dong Xu, Xuanpeng Zhu, Yibo Fan *(Fudan University, China; ZTE Corporation, China)*
P2-28	**0257: A Linearization Technique for Cryogenic Infrared Readout Circuit**
	Bin Wang, Zhong-jie Guo, Yang-le Wang, You-mei Guo, Rui-ming Xu, Xin-qi Cheng *(Xi'an University of Technologyy, China)*
P2-29	**0260: Hybrid Attention Spatial-Temporal Network for Video Saliency Prediction**
	Qi-Yun Dong, Geng-Sheng Chen *(Fudan University, China)*
P2-30	**0272: A 12-bit 20MS/s Asynchronous SAR ADC**
	Nanou Jiang, Lingxin Meng, Menglian Zhao, Zhichao Tan *(Zhejiang University, China)*
P2-31	**0276: A Design Space Exploration Method for Cryptographic Processors**
	Mengni Bie, Wei Li, Tao Chen *(Information Engineering University, China)*
P2-32	**0289: Design of Differential Amplifier with Cross-coupled Connection by Organic TFTs**
	Fanzhao Meng, Baohui Xu, Zhigan Wang, Jun Li, and Jie Liang *(Shanghai University,*

	China)
P2-33	**0292: An Adoptive RX Equalizer based on Dual Reference DFE for Reflection & ISI Reduction under Multi-drop Channel**
	Siman Li, Chris Eom, Jake Jung, Brian Lee *(Design Center CXMT, China)*
P2-34	**0293: A Transmitter Equalizer Scheme with FFE and Internal Boost Scheme for Achieving over 6Gbps in DDR Interface**
	Elaine Tang, Chris Eom, Lynn Wang, Zhiqiang Zhang, Jake Jung, Brian Lee *(Design Center CXMT, China)*
P2-35	**0294: Study of Millimeter Wave Circulators based on the Methods of Circular Polarization Isolation**
	Yiming Liao, Jiabing Liu, Xiaoli JI *(Nanjing university of science and technology, China; Nanjing University, China)*
P2-36	**0318: A Novel Triple Patterning Lithography Layout Decomposition Algorithm with Clustering**
	Xue-Xiang Wang, Jiang-Wei Liang *(Southeast University, China)*
P2-37	**0330: Design of 2D DMA Controller for Crypto-engine in Video Stream Data Encryption Card**
	Yi-Fu Wang, Li Wei, Chen Tao, Long-Mei Nan *(Information Engineering University, China)*
P2-38	**0338: A Novel Millimeter-wave Reflector Antenna with Sum-difference Network**
	Di Zhou, Li Zhang, Xiao-Li Ji and Yi-Ming Liao *(Nanjing University, China; Nanjing university of science and technology, China)*
P2-39	**0341: Self-Calibration Readout Circuits for CMOS Microbolometers**
	Sheng Xu, Yao-Zu Guo, Xiang-Shun Kong, Hao-Yu Zhu, Hao-Lan Ma, Xiao-Li Ji *(Nanjing University, China)*
P2-40	**0345: High-Flatness and Broadband Comb Generator Chip**
	Wang Yang, Qian Qi, Guo Yufeng, Zhang Yi *(Nanjing Vocational University of Industry Technology, China; Nanjing University of Posts and Telecommunications, China)*
P2-41	**0349: Improved Complementary Bootstrap Switch Based on Negative Voltage Bootstrap Capacitance**
	Wei Zhao, Chao Cao, Jihui Fan, Zebiao Gan, Yuhao Duan, Haijun Guo, Hui Xu *(Shandong University, China; University of Jinan, China)*
P2-42	**0352: Research and Design of RISC-V Four-Stage Out-of-Order Execution Processor**
	Jie Gao, Jun Zhang *(Central South University, China)*

P2-43	**0361: Design of A Modulated Wideband Converter for Low-Speed Sampling of Sparse Analog Signals**
	Sujuan Liu, Zihao Wei, Xiaoyao Lyu *(Beijing University of Technology, China)*
P2-44	**0367: Neutron and Total Ionizing Dose Irradiation Hardened LDO**
	Yucao Wu, Ping Luo, Bo Zhang *(University of Electronic Science and Technology of China, China)*
P2-45	**0378: A Dynamic Range Control Generator Implemented with CHISEL**
	Jian Zhang, Jun Han *(Fudan University, China)*
P2-46	**0390: Design and Analysis of a 3.58-4.46 GHz High Linearity and Low Noise CMOS LC-tank VCO**
	Nan Lv, Chang Li, Ningmei Yu, Hejiu Zhang, Zhongjie Guo *(Xi'an University of Technology, China)*
P2-47	**0396: Compressors Evolution based High Speed and Energy Efficient Approximate Signed Multiplier**
	Na Xie, Renyuan Zhang, Han Yan, Chonghang Xie, Hao Zhang, Hao Cai, Bo Liu *(Southeast University, China; Nanjing Research Institute of Electronics Technology, China)*
P2-48	**0400: Approximate Logic Synthesis and its Application in Image Signal Processor**
	Yukun Li, Zhen Li, Yifan Wang, Wenbo Zhang, Botao Xiong, Yanhua Ma, Zhaohan Li *(Dalian University of Technology, China; Beijing Institute of Aerospace Control Devices, China)*
P2-49	**0409: Top-Down Design of 0.8~18GHz Wideband Reconfigurable Receiver Front End with Simulink**
	Lei Wang, Hao Xu, Tingting Han, Mi Tian, Weiqiang Zhu, Zhijian Li, Na Yan *(Fudan University, China; Nanjing Electronic Equipment Institute, China)*
P2-50	**0417: A 12nA Quiescent Current and 86.2% Light-Load Efficiency Buck Converter with Sleep Time Control for IoT Applications**
	Yiwei Liu, Yonghu Wu, Shaowei Zhen, Sunze Zhou *(University of Electronic Science and Technology, China)*
P2-51	**0418: Full-Chip Harmonic Balance Analysis in Parallel**
	Sen-Hua Dong, Xiao-Lue Lai, Zhen-Ya Zhou, Da-Ke Wu, Liu Yang, Jing Li, and Yan Wang *(Tsinghua University, China; Empyrean Technology Co., ltd, China)*
P2-52	**0420: An Op-amp for 12bit 1.25GS/s Pipelined ADC with Negative Impedance Compensation in 65nm CMOS**
	Yihang Cheng, Lingxiao Shen, Fule Li, Chun Zhang, Zhihua Wang *(Tsinghua*

	University, China)
P2-53	**0423: A Compressive Sensing Recovery Hardware Implementation Based on Half-Candidate Subspace Pursuit Algorithm**
	Sujuan Liu, Yuhao Liu, Jiajun Ma, Chengkai Cui, Xiaoyao Lyu *(Beijing University of Technology, China)*
P2-54	**0426: An All-Neuron Spiking 2-D Path Integration and Map Representation Model Implemented on Neuromorphic Chips**
	Kefei Liu, Xiaoxin Cui, Yisong Kuang, Chenglong Zou, Yi Zhong, Kanglin Xiao, Yuan Wang *(Peking University, China)*
P2-55	**0431: Autogenerating Training Set for Model Extraction of the Behavioral Model in RF Simulation Using Machine Learning Algorithm**
	Senhua Dong, Jinyu Zhang, Dake Wu, Zhenya Zhou, Liu Yang, Qiang Liu, Minghou Cheng, Xiaolue Lai, and Yan Wang *(Tsinghua University, China; Empyrean Technology Co., Ltd., China)*
P2-56	**0441: A Fast Transient Response Capacitorless LDO with Slew Rate Enhancement Design**
	Yu-Zi Wang, Xichen Duan, Liuyang Zhang, and Jie Liang *(Shanghai University, China; Peng Cheng Laboratory, China)*
P2-57	**0444: 0.1V Low Power Bandgap Reference For RRAM Storage Applications**
	Yongkang Han, Wenjun Zhang, Yue Cao, Haijun Jiang, Ruixi zhou, Xiaoxin Xu and Jianguo Yang *(Zhejiang Lab, China; Institute of Microelectronics of the Chinese Academy of Sciences, China)*
P2-58	**0454: A 35GHz Cascode Power Amplifier with Neutralization Capacitors in 65nm CMOS**
	Meng Yu, Jincai Wen, Junhao Jia *(Hangzhou Dianzi University, China)*
P2-59	**0458: Design of Computing Granularity Configurable Processor based on RISC-V Extended Instruction**
	Bin He, Ning-Mei Yu, Xing-Jia Wang, Meng Xu *(Xi'an University of Technology, China)*
P2-60	**0515: High Throughput and Low Latency Hardware of Contrast Limited Adaptive Histogram Equalization Algorithm**
	Chao Zhang, Zhihan Zhang, Jiarui Liu, Yuxin Gao, Leilei Huang, Yibo Fan *(Fudan University, China; East China Normal University, China)*
P2-61	**0517: Confidence Judgement Network: An Efficient Sample Filter for Lifelong Distillation**
	Zhenyin Zhang, Yue Xue, Gengsheng Chen *(Fudan University, China)*

P2-62	**0518: LEAN: Local-Enhanced Attention Network for Bad Weather Image Restoration**
	Han-Qian Ying, Xiao-Min Li, Wei Xu *(Fudan University, China; ZEKU Technology (Shanghai) Co., LTD, China)*

Friday

Friday, October 28, 8: 15 – 10: 00

Friday, October 28, 8: 15 – 9: 00
Keynote Session K4

K4-1 **Recent Progress in R&D Activities on SiC Power Devices and Its Social Implementation** *(8: 15-9: 00)*
Dr. Yasunori Tanaka, National Institute of Advanced Industrial Science and Technology (AIST), Japan

Friday, October 28, 9: 00 – 10: 30
Panal Discussion

Topic **Challenges and Opportunities in the Quest to Extend the Moore's Law**

Panlist
Kevin Cao, Arizona State University, ycao@asu.edu
Runsheng Wang, Peking University
Huaqiang Wu, Tsinghua University
Qiang Wu, Fudan University
Chuan Hu, Institute of Semiconductors, Guangdong Academy of Sciences

Moderator Shaofeng Yu, Fudan University

Friday, October 28, 10: 15– 12: 15

Friday, October 28, 10: 15 – 12: 15

Session A6: Compound Semi - SiC II

	Title
A6-1	**0477: Application of Machine Learning Method in the Modeling and Designing of Semiconductor Power Devices (invited)**
10:15 ~10:45	Yufeng Guo, Jing Chen, Jun Zhang, Qing Yao, Yuxuan Dai, Bin Guo, Renji Xia, Maolin Zhang, Man Li, Jiafei Yao *(Nanjing University of Posts and Telecommunications, China)*
A6-2	**0259: A Novel Asymmetric Trench SiC MOSFET Embedded Unipolar Electron Channel with Improved Reverse Conduction Performance**
10:45 ~11:00	Jingwei Guo, Ping Li, Rongyao Ma, Shengdong Hu *(Chongqing University, China; China Resources Microelectronics (Chongqing) Limited, China)*
A6-3	**0371: Electric-Magnetic-Thermal Co-simulation Method for SiC Gate Turn-off Thyristor Module**
11:00 ~11:15	Peng Yao, Yan Wang, Ruifeng Yue, Qiyu Zhong, Xianbing Li *(Tsinghua University, China)*
A6-4	**0440: A Double Trench SiC Power MOSFET with Integrated Freewheeling Heterojunction Diode for Improved Third Quadrant Performance**
11:15 ~11:30	Zeyu Cheng, Moufu Kong, Ning Yu, Shurui Li, Bo Yi, Hongqiang Yang *(University of Electronic Science and Technology of China, China)*
A6-5	**0475: A Rigorous Analysis of Specific ON-resistance for 4H-SiC Superjunction Devices**
11:30 ~11:45	Juncheng Xiong, Haimeng Huang, Zimin Zhang, Zhiming Wang, Guoyi Zhang *(University of Electronic Science and Technology of China, China; Shenzhen Winsemi Microelectronics Company Ltd., China; Peking University, China)*
A6-6	**0479: Superjunction SiC TCOX-MOSFET: Study and Comparison**
11:45 ~12:00	Juncheng Zhang, Yunteng Jiang, Haimeng Huang, Zimin Zhang, Junji Cheng, Bo Yi Hongqiang Yang, and Zhiming Wang *(University of Electronic Science and Technology of China, China; Shenzhen Winsemi Microelectronics Company Ltd., China)*
A6-7	**0069: Perhaps First Experimental Report of New 2D TCRFP Device**
12:00 ~12:15	Kaizhou Tan, Tian Xiao, Xiaoquan Li, Yunchen Wu and Xiaohui Yi *(Science and Technology on Analog Integrated Circuit Laboratory, China; Analog Foundries Co., Ltd, China)*

Friday, October 28, 10: 15 – 12: 15

Session B6: NVM II: MRAM, FERAM&RRAM

	Title
B6-1	**0281: Design Analysis of Ultra-Scaled MRAM Cells (invited)**
10:15 ~10:40	Simone Fiorentini, Wilton Laciel Loch, Mario Bendra, Nils Petter Jørstad, Johannes Ender, Roberto Lacerda de Orio, Tomáš Hadamek, Wolfgang Goes, Viktor Sverdlov, and Siegfried Selberherr *(TU Wien, Austria; Silvaco Europe Ltd., United Kingdom)*
B6-2	**0497: Multi-Level Storage of Ferroelectric Domain Wall Memory (invited)**
10:40 ~11:05	Anquan Jiang *(Fudan University, China)*
B6-3	**0508: Unified Insulator-Metal Transition and Resistive Switching Device for Memory, Computing and Sensing Applications (invited)**
11:05 ~11:30	Yimao Cai, Zongwei Wang, Lin Bao, Lindong Wu, Linbo Shan and Ru Huang *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*
B6-4	**0447: Investigation on High Resistance Variation of Bi-layer TaOx/HfO_2 RRAM Devices**
11:30 ~11:45	Nan Tang, Peng Huang, Yulin Feng, Xiaoyan Liu *(Peking University, China)*
B6-5	**0457: Impact of the Semiconductor Substrate on Ferroelectric-like Characteristic in Amorphous Dielectric**
11:45 ~12:00	Fei Yu, Jing Li, Huan Liu, Chengji Jin, Xiao Yu, Yan Liu, Genquan Han, and Yue Hao *(Xidian University, China; Zhejiang Lab, China)*
B6-6	**0302: A Novel Interface Trap 1T0C In-Ga-Zn Oxide DRAM Cell with Enhanced Data Retention**
12:00 ~12:15	Haisu Zhang, Lin Bao, Zongwei Wang, Yimao Cai, and Ru Huang *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*

Friday, October 28, 10: 15 – 12: 15

Session C6: Memory Circuit

	Title
C6-1	**0094: Design Methodology and Trends of SRAM-Based Compute-in-Memory Circuits (invited)**
10:15 ~10:45	Fangyuan Dong, Xin Si and Meng-Fan Chang *(Tsing Hua University, Taiwan, China)*
C6-2	**0482: Circuit and Training Techniques Compensating for Non-Ideal Effects in Memristor Neural Networks (invited)**
10:45	Seokjin Oh, Jiyong An, and Kyeong-Sik Min, *(Kookmin University, Korea)*

~11:15	
C6-3	**0102: A Dual-Mode ReRAM CIM Macro for Low Power Memory-Augmented Neural Networks**
11:15 ~11:30	Deyang Chen, Zhiwang Guo, Jinbei Fang, Xiaoyong Xue *(Fudan University, China)*
C6-4	**0205: A ReRAM-Based Nonvolatile Flip-Flop with Low Store Energy and High Restore Rate**
11:30 ~11:45	Yingjian Xia, Yangyang Zhu, Yue Sun, Shenghua Cheng, Xiaohu Wang *(Dalian University of Technology, China)*
C6-5	**0329: Novel 2T DRAM by Storing Data in One Alternative Gate of a Double-Gate Transistor with a Low-leakage Oxide Transistor**
11:45 ~12:00	Zheng-Yong Zhu, Bok-Moon Kang, Wang Dan, Xie-Shuai Wu, Joohwan Son, Yong Yu, De-Yuan Xiao, Jin Dai, Gui-Lei Wang, Abraham Yoo, Kan-Yu Cao and Chao Zhao *(Beijing Superstring Academy of Memory Technology, China; ChangXin Memory Technologies, Inc., China)*

Friday, October 28, 10: 15 – 12: 15

Session D6: Clock & Optical Circuit

	Title
D6-1	**0034: A High Frequency Accuracy, High Stability and Tunable RC Oscillator**
10:15 ~10:28	Zhuang Zhao, Yan-Xue Gu, Yun-Hao Fu, Yu-Chun Chang *(Jilin University, China)*
D6-2	**0160: An Accurate Peak and Noise Model of CTLE Applied to the Front End of CLKRX**
10:28 ~10:41	Shubo Tao, Ting Sun, Kejun Wu, Jing Li, Ning, Qi Yu *(University of Electronic Science and Technology of China, China)*
D6-3	**0383: A 3GHz Phase-Locked Loop Design for SerDes Application**
10:41 ~10:54	Yuting Yang, Bingrong Lyu, Fan Ye, Junyan Ren *(Fudan University, China)*
D6-4	**0049: A Lock Time Improved Type-I PLL Using a Wide-Bandwidth PLL-Like Time Domain Digital-To-Analog Convertor**
10:54 ~11:07	Fanyang Li, Yanqing Zhang, Gaowen Huang *(Fuzhou University, China)*
D6-5	**0252: A 40nm CMOS Low-Power Multi-phase 4~8 GHz Frequency Divider with ＜0.1 °Phase Error**
11:07 ~11:20	Qiaoan Li, Wei Li, Yunyou Pu, Chuangguo Wang, Hongtao Xu, Jianhong Xiao *(Fudan University, China; XINYI Information Technology Ltd, China)*

D6-6	**0133: A Fast and Resource-efficient GSOP Implementation for Optical Coherent Receiver**
11:20 ~11:33	Hongyi Zhang, Siqi He, Yun Chen, Xiaoyang Zeng *(Fudan University, China)*
D6-7	**0173: A 44 Gbps PAM-4 Transmitter with Resistance Feedback 4:1 MUX in 65nm CMOS**
11:33 ~11:46	Ziqiang Wang, Dengjie Wang, Xin Wu, Jiawei Wang, Hao Xu, Chun Zhang, Hong Chen, Zhihua Wang *(Tsinghua University, China)*
D6-8	**0225: A 20Gbuad NRZ/PAM4 Receiver Frontend in 65nm CMOS**
11:46 ~11:59	Xin Wu, Ziqiang Wang, Zeliang Zhao, Chun Zhang, Zhihua Wang *(Tsinghua University, China)*
D6-9	**0421: A 40Gb/s PAM4 Baud-Rate CDR with Equal-Slope Algorithm**
11:59 ~12:12	Xiao Xiang, Wei-Xin Gai, Ai He, Bing-Yi Ye, Hao-Wei Niu, Hang Zhou *(Peking University, China)*

Friday, October 28, 13: 30 – 15: 30

Friday, October 28, 13: 30 – 15: 30

Session A7: Compound Semi - GaN

	Title
A7-1	**0311: Recent Progress in GaON for Performance Enhancement of GaN-based Devices (invited)**
13:30 ~14:00	Mengyuan Hua, Junting Chen, Chengcai Wang *(Southern University of Science and Technology, China)*
A7-2	**0106: Control Methodology and Experimental Demonstration of a 100-W 1-MHz GaN Buck Power Factor Correction (PFC) Converter**
14:00 ~14:12	Ruize Sun, Pengcheng Xing, Lidong Duan, Chao Liu, Wanjun Chen, Bo Zhang *(University of Electronic Science and Technology of China, China)*
A7-3	**0196: 960V Normally-off p-GaN Gate HEMT with High Threshold Voltage and Drain Current**
14:12 ~14:24	Junxian He, Wenjun Xu, Fangzhou Wang, Guojian Ding, Qi Feng, Ping Yu, Xiaohui Wang, Cheng Yu, Yujian Zhang, Ruize Sun, Miao He, Yang Wang, Wanjun Chen, Haiqiang Jia, Hong Chen *(Guangdong University of Technology, China; Songshan Lake Materials Laboratory, China; University of Electronic Science and Technology of China, China; Institute of Physics, Chinese Academy of Sciences, China)*
A7-4	**0316: Analysis of Unclamped-Inductive-Switching Failure for P-GaN Gate HEMT**

	and Protection Schemes
14:24 ~14:36	Chengwu Pan, Yong Gu, Peigang Liu, Jie Ma, Long Zhang, Siyang Liu, Weifeng Sun *(Southeast University, China)*
A7-5	**0491: Progress on Gallium Nitride-Based HEMT and Phototransistors (invited)**
14:36 ~15:06	Haochen Zhang, Haiding Sun *(University of Science and Technology of China, China)*
A7-6	**0124: Millimeter-Wave AlGaN/GaN HEMTs/Si Operated on 12V for 5G RF Handset Applications**
15:06 ~15:18	Dong-Sheng Liu, Peng Wang, Yi-Zhou Jiang, Wei Huang, Zhi-Qiang Xiao, Hong-Qiang Yang, Wei Zhang *(Fudan University, China; Wuxi Microelectronics Scientific and Research Center, China; University of Electronic Science and Technology of China, China)*
A7-7	**0201: On-chip AlGaN/GaN HEMTs with the Compatible Normally-off p-GaN Gate and Normally-on MIS Gate Fabrication Processes**
15:18 ~15:30	Yujian Zhang, Wenjun Xu, Fangzhou Wang, Guojian Ding, Qi Feng, Ping Yu, Xiaohui Wang, Cheng Yu, Junxian He, Ruize Sun, Miao He, Yang Wang, Wanjun Chen, Haiqiang Jia, Hong Chen *(Guangdong University of Technology, China; Songshan Lake Materials Laboratory, China; University of Electronic Science and Technology of China, China; Institute of Physics, Chinese Academy of Sciences, China)*

Friday, October 28, 13: 30 – 15: 30

Session B7: Reliability I

	Title
B7-1	**0055: Study on Single-event Effects of 28nm FDSOI Transistors (invited)**
13:30 ~13:54	Hongxia Liu, Shupeng Chen, Shulong Wang *(Xidian University, China)*
B7-2	**0053: Criteria for Selecting Statistical Distribution for the Amplitude of Random Telegraph Noise (invited)**
13:54 ~14:18	Kean Hong Tok, Mehzabeen Mehedi, Jian Fu Zhang, Zengliang Ye, Zhigang Ji, Weidong Zhang, and John Marsland *(Liverpool John Moores University, UK)*
B7-3	**0328: Modeling of Channel Hot Electron Degradation in n-MOSFETs (invited)**
14:18 ~14:42	Karansingh Thakor, Himanshu Diwakar and Souvik Mahapatra *(Indian Institute of Technology Bombay, India)*
B7-4	**0101: RC-Coupled SCR Devices for Advanced Nanoscale COMS Process**
14:42 ~14:54	Nanjin Li, Aoran Han, Xiaozong Huang, Le Chen, Yuxin Zhang, Jieling Li, Yi Liu, Jizhi Liu, Zhiwei Liu *(University of Electronic Science and Technology of China, China)*
B7-5	**0309: Enhanced Filed Limiting Rings for Improving Breakdown Voltage Stability**

14:54 ~15:06	Yi-Shang Zhao, Ze-Hong Li, Zi-Ming Xia, Yang, Jia-Li Wan, Lu-Ping Li, Tong-Yang Wang and Ji-Xian Zhu *(University of Electronic Science and Technology of China, China)*
B7-6	**0340: Comparative Study on Degradation of the TFET and MOSFET**
15:06 ~15:18	Jiale Sun, Yuming Zhang, Hongliang Lu, Zhijun Lyu, Yi Zhu, Yuche Pan *(Xidian University, China; Institute of Microelectronics Technology, China)*
B7-7	**0439: Phenomenon and Mechanism Investigation of the Cryogenic Random Telegraph Noise for 18 nm FDSOI CMOS**
15:18 ~15:30	Ying Sun, Xinze Li, Bing Chen, Ran Cheng *(Zhejiang University, China)*

Friday, October 28, 13: 30 – 15: 30

Session C7: Circuit for IoT and other applications

	Title
C7-1	**0227：A Current-Reuse DDA-Based Analog Front End for Multi-Biological Signal Acquisition**
13:30 ~13:45	Jiaxi Xu, Xufeng Liao, Yuxiang Zhang, Lianxi Liu *(Xidian University, China)*
C7-2	**0432：A Wide-Input High-Accuracy CMOS Peak Detector for WPT Systems**
13:45 ~14:00	Zhuoneng Li, Zhongming Xue, Yuhao Xiong, Shangzhou Zhao, Yongchao Zhang, Xihao Liu, Zhuoqi Guo, Li Geng *(Xi'an Jiaotong University, China)*
C7-3	**0435: High Accuracy Analog Circuit for Neural Networks Computation in Parallel CMOS Image Sensors**
14:00 ~14:15	Qiang Bian, Ningmei Yu, Nan Lv, Hejiu Zhang, Zhongjie Guo, Lu Yuan *(Xi'an University of Technology, China)*
C7-4	**0086: A CCO-Based Pixel-Level Readout Circuit for QWIP Focal Plane Array Imaging System**
14:15 ~14:30	Zi-Han Mu, Wen-Gao Lu, Yi Zhuo, Yu-Ze Niu, Zhong-Jian Chen, Ya-Cong Zhang *(Peking University, China)*
C7-5	**0265: A 1.5GHz Low-jitter LVDS Transmitter in 0.18μm CMOS Technology**
14:30 ~14:45	Biao Hu, Tianxiang Wu, Xue Chen, Xu Chen, Nuo Xu, Xinlei Song, Shunli Ma *(Fudan University, China; 24th Research Institute of China Electronics Technology Group Corporation, China)*
C7-6	**0516: A 60GHz Traveling-Wave SPDT Switch with HBM and CDM ESD Protection in 45nm SOI CMOS**
14:45 ~15:00	Weiquan Hao, Mengfu Di, Zijin Pan, Xunyu Li, Runyu Miao, Ned Cahoon and Albert Wang *(University of California, USA; Skyworks Solutions, USA; GlobalFoundries,*

	USA)

Friday, October 28, 13: 30 – 15: 30

Session D7: Energy Management Circuit

	Title
D7-1	**0286： Further Iot Market Expansion Owing to Innovative Thermal Energy Harvesting (invited)**
13:30 ~13:56	Maciej Haras, Naveed Ahmed and Thomas Skotnicki *(Institute of High-Pressure Physics, Polish Academy of Sciences, Poland; Warsaw University of Technology, Poland)*
D7-2	**0111：Boost Converter with a Start-Up Strategy of Sharing Main Power NMOS for Scalable Cotton-yarn-based Battery**
13:56 ~14:09	Hao Wang, Ping Luo, Jiahao Chen, Zhiyuan He, Hao Song *(University of Electronic Science and Technology of China, China)*
D7-3	**0354: Programmable PMIC with 3 DC-DC Converters for Mobile AMOLED Display**
14:09 ~14:22	Yadong Wang, Fan Ye, Junyan Ren *(Fudan University, China)*
D7-4	**0419: A Fully Integrated Fast Transient Dual-Loop Digital LDO Based on Adaptive Clock Frequency for Voltage Regulation Applications**
14:22 ~14:35	Xichen Duan, Yuzi Wang, Liuyang Zhang, and Jie Liang *(Shanghai University, China; Peng Cheng Laboratory, China)*
D7-5	**0112: A Low Power Zero Current Detector for Synchronous Buck Converter**
14:35 ~14:48	Ping Luo, Hao Wang *(University of Electronic Science and Technology of China, China)*
D7-6	**0241: A High Precision Voltage Reference Circuit for Battery Management System Chip of New Energy Electric Vehicle**
14:48 ~15:01	Byambajav Ragchaa, Xuhui He, Liji Wu, Xiangmin Zhang *(Tsinghua University, China)*
D7-7	**0385: Double-Loop Compensation Technique for LDO with a Wide Load Range**
15:01 ~15:14	Yue Shi, Shiyuan Wang, Lichen Peng, Zekun Zhou, Bo Zhang *(University of Electronic Science and Technology of China, China; Chengdu University of Information Technology, China)*
D7-8	**0232: A Dual-Mode Buck Converter with Mixed Analog and Digital Load Current Detector for IoT Application**
15:14 ~15:27	Chengzhi Xu, Xufeng Liao, Yongyuan Li, Lianxi Liu *(Xidian University, China)*

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Session A8: Device Modeling

	Title
A8-1	**0061: MEMRISTOR CHIPS AND SYSTEMS FOR ENERGY-EFFICIENT LEARNING (invited)**
15:45 ~16:10	Chang Liu, Rui Yuan, and Yuchao Yang *(Peking University, China; Chinese Institute for Brain Research (CIBR), China; Beijing Academy of Artificial Intelligence, China)*
A8-2	**0083: An Equivalent Channel Length Model for Junctionless Quadruple-Gate with Gate-Source/Drain Underlap MOSFET and Its Application for Subthreshold Current (invited)**
16:10 ~16:35	Yu-Ting Zhong, Yu-Yang Lin, Rong-Wei Ma, Fang-Yu Ye, and Te-Kuang Chiang *(University of Kaohsiung, Taiwan, China)*
A8-3	**0062: An Automatic Integration Network Approach for Generic Device Charge Modeling**
16:35 ~16:49	Wu Dai, Fangxing Zhang, Kaifeng Wang, Yu Li, Yukun Tang, Qianqian Huang, Lining Zhang, Ru Huang *(Peking University, China)*
A8-4	**0097: Study on Efficiency of Weight-Discretized BP Neural Network Algorithm Based on Memory Curves of Synaptic Transistor**
16:49 ~17:03	Yi-Ming Wang, Jia Song, Guo-Peng Li, Sheng Chen, Du-Li Yu, Yu-Tao Li *(Beijing University of Chemical Technology, China; Beijing Normal University, China)*
A8-5	**0107: Study of Synthetic Electric Field Effects and Quantum Confinement Effects in Extremely Scaled Gate-All-Around Tunnel FET**
17:03 ~17:17	Yumin Xu, Boqian Shen, Dawei Wang, Tao Liu, Jingwen Yang, Kun Chen, Zhecheng Pan, Chunlei Wu, Min Xu, David Wei Zhang *(Fudan University, China; Shanghai Integrated Manufacturing Innovation Center Co., Ltd, China)*
A8-6	**0202: An ANN-based Wide Temperature Range Electro-thermal Model for InP HBT with the Thermal Factor Consideration**
17:17 ~17:31	Junjun Qi, Hongliang Lu, Silu Yan, Ranran Zhao, Lin Cheng, Yuming Zhang *(Xidian University, China)*
A8-7	**0116: Analysis of the Electrothermal Coupling Performance with Buried Power Rail Structure Introduction**
17:31 ~17:45	Songhan Zhao, Pan Zhao, Yandong He, Gang Du *(Peking University, China; Beijing Advanced Innovation Center for Integrated Circuits, China)*

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Session B8: Reliability II

	Title
B8-1	**0486: Cross-Layer Design for Reliability in Advanced Technology Nodes: An EDA Perspective (invited)**
15:45 ~16:10	Runsheng Wang, Zuodong Zhang, Zixuan Sun, Zizheng Guo, Yibo Lin, Ru Huang *(Peking University, China)*
B8-2	**0485: Sub-ns Scale Mechanism Understanding on Self-heating and Hot Carrier Degradation in Scaled FinFETs (invited)**
16:10 ~16:35	Yiming Qu, Chu Yan, Yaru Ding, Xinwei Yu, Yi Zhao *(East China Normal University, China; Zhejiang University, China; China Nanhu Academy of Electronics and Information Technology)*
B8-3	**0496: Sub-3 Nanometer Technology Nodes-based Ultra-thin Gate Stack by in Situ Transmission Electron Microscopy (invited)**
16:35 ~17:00	Xing Wu, Zuoyuan Dong *(East China Normal University, China)*
B8-4	**0347: Total-Ionizing-Dose Effects in Nanotube Tunnel Field-Effect Transistor with Bias-Induced Electron-Hole Bilayer**
17:00 ~17:15	Xue-Ke Wang, Ya-Bin Sun, Zi-Yu Liu, Yun Liu, Xiao-Jin Li, Yan-Ling Shi *(East China Normal University, China; Fudan University, China)*
B8-5	**0463: Study of Drain-current Collapse in AlGaN/GaN MIS-HEMTs with Different Gate Lengths**
17:15 ~17:30	Ye Liang, Yuanlei Zhang, Xiuyuan He, Yinchao Zhao, Miao Cui, Huiqing Wen, Wen Liu *(Xi'an Jiaotong-Liverpool University, China; University of Liverpool, UK)*
B8-6	**0468: A Dielectric Breakdown Simulator Based on Monte Carlo Method**
17:30 ~17:45	Qing Tian, Dong Liu, Haoran Yu, Wentai Xia, Ran Cheng, Dawei Gao, Bing Chen *(Zhejiang University, China; Zhejiang Laboratory, China)*

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Session C8: Photonics

	Title
C8-1	**0373: Heterostructure-Based Two-Dimensional Wse_2 Photodetectors: Devices and Applications (invited)**
15:45 ~16:10	Changjian Zhou, Cary Yang *(South China University of Technology, China; Santa Clara University, USA)*
C8-2	**0509: Multifunctional Sensors Capable of In-Sensor Data Processing (invited)**
16:10	Ming He *(Peking University, China)*

~16:35	
C8-3	**0511: Silicon Photonics Integrating Quantum Dot Lasers (invited)**
16:35 ~17:00	Yasuhiko Arakawa *(The University of Tokyo, Japan)*
C8-4	**0220: Histogram-based Defogging Techniques for LiDAR (invited)**
17:00 ~17:30	Tzu-Hsien Sang and Chia-Ming Tsai *(Yang Ming Chiao Tung University, Taiwan, China)*
C8-5	**0520: Addressing and Two-dimensional Driving of Droplets on Single-sided Continuous Optoelectrowetting Chip**
17:30 ~17:45	Enqing Liu, Cui Wang, Antoine Riaud, Jia Zhou *(Fudan University, China)*

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Session D8: Biomedical Circuit

	Title
D8-1	**0489: A Low-Power Low-Pass Filter for Noise Suppression in Chopped Bioamplifiers (invited)**
15:45 ~16:15	Hui Wu, Jinbo Chen, Jie Yang, and Mohamad Sawan *(Westlake University, China; Fudan University, China)*
D8-2	**0412: A Review on Direct Digital Conversion for Biomedical Signal Acquisition ICs (invited)**
16:15 ~16:45	Yalong Wan, Shuang Song, Menglian Zhao, Mengyu Li, Shiwei Wang, Zhichao Tan *(Zhejiang University, China; University of Edinburgh, UK)*
D8-3	**0500: An Integrated System Design of Blood Pressure and Electrocardiograph Recordings for Home Healthcare Application (invited)**
16:45 ~17:15	Feng Zou, Hai Huang, Song Ma, Yuhua Cheng *(Peking University, China; Hangzhou Mixchips Microelectronics Co., Ltd., China)*
D8-4	**0437: A 300kHz Bandwidth 1.66nV/Hz$^{1/2}$ Chopper Instrumentation Amplifier with Ripple Reduction Loop Using Multi-Rate Duty-Cycled Resistors**
17:15 ~17:30	Mingshi Han, Lei Zhang, and Yan Wang *(Tsinghua University, China)*

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Session A9: DTCO & Noise

	Title
A9-1	**0499: A CFET Unit Cell based MUX21 design strategy (invited)**
19:00 ~19:30	Xiao-Na Zhu, Chen-Cheng Wei, Rong-Zheng Ding, Shao-Feng Yu *(Fudan University, China; Jiashan Fudan Institute, China)*
A9-2	**0071: 3D Electromigration Modelling for VLSI (invited)**
19:30 ~20:00	Cher Ming Tan, Abdul Shabir, Debraj Banerjee *(Chang Gung University, Taiwan, China; Ming Chi University of Technology, Taiwan, China)*
A9-3	**0214: Investigation of Parasitic Capacitance Effects in V-GAA Transistor via 3D PEX Methodology**
20:00 ~20:15	Hong-Gang Liang, Yong Yu, De-Yuan Xiao, Jing-Fei Zhu, Jing Liang, Lan-Song Ba, Ji-Bin Leng, Zheng-Yong Zhu, Yong-Jie Li, Xing-Song Su, Kobe Weng, Li Bai, Yan-Zhe Tang, Hong-Bo Sun, Gui-Lei Wang, Hong-Wen Li, Wei-Feng Xu, Bryan Kang, Abraham Yoo, Kan-Yu Cao, Chao Zhao *(Beijing Superstring Academy of Memory Technology, China; ChangXin Memory Technologies, Inc., China)*
A9-4	**0370: Investigate on DC Characteristics and NBTI of SiGe Core-Shell Nanosheet FET**
20:15 ~20:30	Shan-Lin Cheng, Song-Song Lv, Cong Li, Xiao-Yu Dong, Hai-Long You *(Xidian University, China)*
A9-5	**0099: A CMOS Compatible In-sensor Computing Neural Network with Gate/Body-Tied PMOSFET Array**
20:30 ~20:45	An-Nan Xiong, Yi-Fei Fan, Shun-Qi Dai, Chen Xu, Jie George Yuan, Mansun Chan *(The Hong Kong University of Science and Technology, Hong Kong, China; InnoHK Centers, Hong Kong, China; SmartSens Technology, USA)*
A9-6	**0381: Analysis and Modeling of a Novel Drift Field Implementation Method for Large-Area Photodiodes**
20:45 ~21:00	Quanze Li, Junkai Zhang, Zunkai Huang, Li Tian, Yongxin Zhu, Hui Wang, Songlin Feng, Changzhi Shi *(Shanghai Advanced Research Institute, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China; Shanghai United Imaging Microelectronics Technology Co, China)*

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Session B9: Chip Test and Reliability III

	Title
B9-1	**0098: Power-Aware Testing in the Era of IoT (invited)**
19:00 ~19:30	Xiaoqing Wen *(Kyushu Institute of Technology, Japan)*

B9-2	**0372: CDM Measurement for Bare Dies and Wafers (invited)**
19:30 ~20:00	Teruo Suzuki *(Socionext Inc., Japan)*
B9-3	**0063: An Analog Wafer Map Clustering Model with Deep-Learning Based Data Augmentation and Feature Extraction**
20:00 ~20:15	Zijie Liu, Zheng Shi *(Zhejiang University, China)*
B9-4	**0134: Multi-objective Optimization Hardening Design for Multiplier Circuit**
20:15 ~20:30	Chao Chen, Yan Li, Xu Cheng, Jun Han, Xiaoyang Zeng *(Fudan University, China)*
B9-5	**0461: Radiation-Hardened High Current Low-Dropout Voltage Regulator for Space Applications**
20:30 ~20:45	Ruxue Yao, Hongliang Lu, Yuming Zhang, Yutao Zhang, Xu Chen, Zhichao Wei, Qingzhou Ji *(Xidian University, China; China Academy of Space Technology, China; Xi'an Microelectronic Technology Institute, China)*

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Session C9: MEMS & Sensors

	Title
C9-1	**0093: Parity-Time Symmetric MEMS (invited)**
19:00 ~19:25	Qing-An Huang *(Southeast University, China)*
C9-2	**0183: Atomically Thin Nanoporous Graphene Based Artificial Ion-Selective MEMS Fluidic Devices (invited)**
19:25 ~19:50	Luda Wang *(Peking University, China)*
C9-3	**0255: Ultra-Flexible Organic Photonic System for Detecting the Bio Signals (invited)**
19:50 ~20:15	Tomoyuki Yokota, Takao Someya *(University of Tokyo, Japan)*
C9-4	**0264: Surrogate Model-based Multi-Object Worst Case Analysis for Shunt Capacitive RF MEMS Switch**
20:15 ~20:30	Chuangyuan Zeng, Xiao Shi, Xiaoping Liao, Hao Yan *(Southeast University, China)*
C9-5	**0492: Integration of Droplet Transport and Mixing on EWOD**
20:30 ~20:45	Shang Gao, Xichuan Rui, Jia Zhou *(Fudan University, China)*

C9-6	**0521: Selective Manipulation with Spiraling Transducer Acoustical Tweezers**
20:45 ~21:00	Siying Lin, Jia Zhou, Antoine Riaud, Michael Baudoin, Zhixiong Gong, Nicolars Berthet *(Fudan University, China; Universite de Lille, France; Centrale Lille, France; Universite Polytechnique des Hauts-de-France, France; Institut Pasteur of Shanghai, Chinese Academy of Sciences, China)*