

Tutorial Session

Tuesday, October 26, 9: 00 – 18: 15

Tuesday, October 26, 9: 00 – 12: 15

Tutorial Session T-1 & T-2

T-1 Ultra-Low-Power DTC-Based Fractional-N Digital PLL Techniques (9: 00-10: 30)

Prof. Kenichi Okada, Tokyo Institute of Technology, Japan

T-2 Highly-Programmable AI-Managed Sigma-Delta Converters – Application to Cognitive Radio (10: 45-12: 15)

Prof. José M. de la Rosa, Prof. Luis Camuñas-Mesa, Institute of Microelectronics of Seville, IMSE-CNM (CSIC/University of Seville), Spain

Tuesday, October 26, 13: 30 – 18: 15

Tutorial Session T-3 & T-4 & T-5

T-3 IoT Waveforms for LEO Satellite Communications (13:30-15: 00)

Prof. Guillaume Ferré University of Bordeaux, France

T-4 Fully-Integrated Voltage Regulators: From Single Point to 2-D Distribution
(15: 15-16: 45)

Prof. Yan Lu, University of Macau, Macau, China

T-5 GaN Devices and GaN-Si CMOS Integration (17: 00-18: 30)

Prof. Zhihong Liu, Xidian University, China

Technical Session

Wednesday

Wednesday, October 27, 9: 00 –10: 30

Wednesday, October 27, 9: 00 –10: 30

Opening & Keynote Session K1

K1-1 **Creating New Values in Nano-Electronics Other Than Scaling** (9: 00-9: 45)

Prof. Takayasu Sakurai, University of Tokyo, Japan

K1-2 **Closing the Virtuous Cycle of AI for IC and IC for AI** (9: 45-10: 30)

Prof. David Z. Pan, Silicon Labs Endowed Chair Professor, University of Texas at Austin, USA

Wednesday, October 27, 10: 45– 12: 15

Wednesday, October 27, 10: 45–12: 15

Keynote Session K2

K2-1 **Innovations at the One Planet Research Center - Technology at the Service of People and Planet** (10: 45-11: 30)

Prof. Chris Van Hoof, the One Planet Research Center in Gelderland, Netherlands

K2-2 **TFET Integrated Circuits: From Perspective Towards Reality** (11: 30-12: 15)

Dr. Amara, President of CAS Society, Terre des hommes Foundation, France

Wednesday, October 27, 13: 30 – 15: 30

Wednesday, October 27, 13: 30 – 15: 30
Session A1 : Digital Unit & Module

	Title
1	0053: Divide and Conquer: Floating-Point Exponential Calculation Based on Taylor-Series Expansion
13:30 ~13:45	Jianglin Wei, Anna Kuwana, Haruo Kobayashi and Kazuyoshi Kubo (<i>Gunma University, Japan; Oyama National College of Technology, Japan</i>)
2	0074: Design and Implementation of Full Adder in One-Transistor-One-Resistor RRAM Array
13:45 ~14:00	Xiangyu Zhang, Feng Wei, Xiaoyan Liu and Xiaole Cui (<i>Peking University Shenzhen Graduate School; Peking University</i>)
3	0133: Energy-Efficient Approximate Floating-Point Multiplier Based on Ra-dix-8 Booth Encoding
14:00 ~14:15	Rongyu Ding, Yi Guo, Heming Sun and Shinji Kimura (<i>Waseda University, Japan; Waseda Research Institute for Science and Engineering, Japan</i>)
4	0214: A fully asynchronous QDI mesh router based on 28nm standard cells
14:15 ~14:30	Qingyun Zou, Xiaoxin Cui, Yi Zhong, Zhenhui Dai and Yisong Kuang (<i>Peking University</i>)
5	0300: Mutual Error Compensation based Area and Power Efficient Approximate Multiplier
14:30 ~14:45	Renyuan Zhang, Xuetao Wang, Ziyu Wang, Anfeng Xue, Haichuan Yang, Yu Gong and Bo Liu (<i>Southeast University</i>)
6	0309: Low-Power Keyword Recognition Feature Extraction Circuit based on SRMFCC and Shared Multiplier for High Noise Background
14:45 ~15:00	Zilong Zhang, Haichuang Yang, Xuan Zhang, Xiaoling Ding, Xuetao Wang, Yu Gong and Bo Liu (<i>Southeast University</i>)
7	0345: Effects of using Multi Voltage Threshold Transistors in Asynchronous Circuits
15:00 ~15:15	Shahzad Haider, Song Chen (<i>University of Science and Technology of China</i>)

Wednesday, October 27, 13: 30 – 15: 30
Session B1 : Efficient AI Hardware

	Title
1	0357: Parallel Stochastic Computing based Neural Network Accelerators (invited paper)
13:30 ~14:00	Runsheng Wang (<i>Peking University</i>)
2	0370: System-Level Benchmarking of Chiplet-based IMC Architectures for Deep Neural Network Acceleration (invited paper)
14:00 ~14:30	Gokul Krishnan, Sumit K. Mandal, Chaitali Chakrabarti, Jae-sun Seo, Umit Y. Ogras and Yu Cao (<i>Arizona State University, USA; University of Wisconsin-Madison, USA</i>)
3	0083: CCASM: A Computation- and Communication-Aware Scheduling and Mapping Algorithm for NoC-Based DNN Accelerators
14:30 ~14:42	Xi Fan, Xuyan Wang, Yaoyao Ye, Xianglun Leng, Ningyi Xu and Guanghui He (<i>Shanghai Jiao Tong University; PowerTensors.AI</i>)
4	0157: Design of Multi-core Spiking Neural Network Chip Based on Butterfly Network
14:42 ~14:54	Hao Jiang, Jinsong Wei, Jikai Lu , Tuo Shi and Qi Liu (<i>University of Science and Technology of China; Zhejiang Lab; Institute of Microelectronics of the Chinese Academy of Sciences; Fudan University</i>)
5	0255: Combining Max Pooling and ReLU Activation Function in Stochastic Computing
14:54 ~15:06	Lixing Li, Deyang Chen, Xiaoyong Xue and Xiaoyang Zeng (<i>Fudan University</i>)
6	0277: A CNN Hardware Accelerator Designed for YOLO Algorithm Based on RISC-V SoC
15:06 ~15:18	Xinyu Qin, Xudong Liu and Jun Han (<i>Fudan University</i>)
7	0322: An Always-on Ultra-Low Power Speaker Verification Accelerator based on Binary Weighted Neural Network with System Co-optimization
15:18 ~15:30	Haige Wu, Xuan Zhang, Xiaoling Ding, Ziyu Wang, Anfeng Xue, Yu Gong and Bo Liu (<i>Southeast University</i>)

<p>Wednesday, October 27, 13: 30 – 15: 30</p> <p>Session C1 : Analog & Mixed-Signal</p>
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	Title
1	0091: Classical Mathematics and Analog/Mixed-Signal IC Design (invited paper)
13:30 ~14:00	Haruo Kobayashi, Xueyan Bai, Yujie Zhao, Shuhei Yamamoto, Dan Yao, Manato Hirai, Jianglin Wei, Shogo Katayama and Anna Kuwana (<i>Gunma University, Japan</i>)

2	0239: A Three-Stage Comparator with High Speed and Low Power
14:00 ~14:15	Jingqi Wang, Fan Ye and Junyan Ren (<i>Fudan University</i>)
3	0289: A High Linearity and Low Noise Anti-Aliasing Filter for ADCs
14:15 ~14:30	Hao Chi, Jun Xu, Fan Ye and Junyan Ren (<i>Fudan University</i>)
4	0305: Design of A Reference Buffer with Ultralow Output Resistance for High-speed ADCs
14:30 ~14:45	Bingbing Ma, Longbo Fan, Wei Li, Hongtao Xu (<i>Fudan University</i>)
5	0333: An 800MS/s, 6.7b ENOB Bootstrap Switching S/H IC for Wideband Direct RF Sub-Sampling Receiver in 45 nm CMOS
14:45 ~15:00	Shuai Liu, Hao Xu and Na Yan (<i>Fudan University</i>)

<p>Wednesday, October 27, 13: 30 – 15: 30 Session D1 : Device Simulation</p>
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	Title
1	0055: Status and Trends in Nanoelectronic Devices for the Ultimate Integration of ICs (invited paper)
13:30 ~14:00	Francis Balestra (<i>Univ. Grenoble Alpes; CNRS; Grenoble INP; IMEP-LAHC, France</i>)
2	0192: Revolutionary SOI Devices with Ultrathin Body (invited paper)
14:00 ~14:30	Sorin Cristoloveanu (<i>CNRS & UGA, France</i>)
3	0201: TCAD Simulation of Novel Semiconductor Devices (invited paper)
14:30 ~15:00	Tapas Dutta, Cristina Medina-Bailon, Ali Rezaei, Daniel Nagy, Fikru Adamu-Lema, Nikolas Xenii, Yassine Abourrig, Naveen Kumar, Vihar P. Georgiev and Asen Asenov (<i>University of Glasgow, United Kingdom</i>)
4	0279: A Novel Trench MOSFET with p-Pillar and RSO Accumulation Layer for Improved Performance (invited paper)
15:00 ~15:30	Moufu Kong, Ke Huang, Bin Wang, Cong Liu, Bo Yi and Hongqiang Yang (<i>University of Electronic Science and Technology of China</i>)

Wednesday, October 27, 15: 45-17: 45

Wednesday, October 27, 15: 45-17: 45
Session A2 : Processor & Signal Processing

	Title
1	0117: Energy-aware Retinaface: A Power Efficient Edge-Computing SOC for Face Detector in 40nm
15:45 ~16:00	Miao Sun, Yingjie Cao and Patrick Yin Chiang (<i>Fudan University; TiMESiNTELLi Inc.</i>)
2	0148: A Dual-rail Based Dynamic Voltage and Frequency Scaling for Wide-Voltage-Range Processor
16:00 ~16:15	Yongjie Lu, Weifeng He (<i>Shanghai Jiao Tong University</i>)
3	0203: A Hierarchical Fault Injection System for RISC-V Processors Targeting Single Event Upsets in Flip-Flops
16:15 ~16:30	Jiyuan Bai, Xiang Wang, Zikang Zhang, Chang Cai and Gengsheng Chen (<i>Fudan University</i>)
4	0248: Hardware Design of Gaussian Kernel Function for Non-Linear SVM Classification
16:30 ~16:45	Yuanfa Wang, Yu Pang, Huan Huang, Qianneng Zhou and Jiasai Luo (<i>Chongqing University of Posts and Telecommunications</i>)
5	0256: An Enhanced DSP Block Architecture for FPGA Supporting Multi-operands Addition Operation
16:45 ~17:00	Sanlin Chen, Gang Cai and Zhihong Huang (<i>Aerospace Information Research Institute, Chinese Academy of Sciences; University of Chinese Academy of Sciences</i>)
6	0259: Design and Implement of Median Filter toward Remote Sensing Images Based on FPGA
17:00 ~17:15	Yalong Pang, Shuai Jiang, Bowen Cheng, Weiwei Liu and Yuhang Wu (<i>Beijing Institute of Spacecraft System Engineering</i>)
7	0329: Design and Implementation of A High-speed Configurable 2D MI CFAR Detector
17:15 ~17:30	Xiangying Tao, Duoli Zhang, Min Wang, Yan Ma and Yukun Song (<i>Hefei University of Technology</i>)

Wednesday, October 27, 15: 45-17: 45
Session B2 : Computing-in/near-Memory I

	Title
1	0099: Challenge and Trend of SRAM Based Computation-in-Memory Circuits for AI Edge Devices (invited paper)
15:45 ~16:15	Xin Si, Yongliang Zhou, Jun Yang and Meng-Fan Chang (<i>National Tsing Hua University, Taiwan, China; Southeast University</i>)
2	0366: Training, Programming, and Correction Techniques of Memristor Crossbar Neural Networks with Non-Ideal Effects such as Defects, Variation, and Parasitic Resistance (invited paper)
16:15 ~16:45	Tien Van Nguyen, Jiyong An, Seokjin Oh, and Kyeong-Sik Min (<i>Kookmin University, Korea</i>)
3	0375: Current Research Status and Future Prospect of the In-Memory Computing (invited paper)
16:45 ~17:15	Shifan Gao, Fan Yang, Liang Zhao, and Yi Zhao (<i>China Nanhu Academy of Electronics and Information Technology; Zhejiang University</i>)
4	0358: Intra-array Non-Idealities Modeling and Algorithm Optimization for RRAM-based Computing-in-Memory Applications
17:15 ~17:30	Chenyang Zhao, Jinbei Fang, Jingwen Jiang, Zhiwang Guo, Xiaoyong Xue and Xiaoyang Zeng (<i>Fudan University</i>)

<p>Wednesday, October 27, 15: 45-17: 45</p> <p>Session C2 : Data Converter</p>

	Title
1	0369: A Timing Mismatch Background Calibration Technique with High-Precision Skew Estimation(invited paper)
15:45 ~16:15	Zhifei Lu, Xizhu Peng, Zhaofeng Ren, He tang and Bin Guo (<i>University of Electronic Science and Technology of China; Konka Group Co., Ltd</i>)
2	0173: A 10bit 1.6GS/s Current-steering DAC in 40nm CMOS
16:15 ~16:30	Yukun Zhang, Xinpeng Xing (<i>Tsinghua University</i>)
3	0207: Low Power Readout Integrated Circuit with PFM-based ADCs Employing Residue Quantization for Uncooled Infrared Imagers
16:30 ~16:45	Ye Zhou, Shanzhe Yu, Wengao Lu, Dunshan Yu, Yacong Zhang and Zhongjian Chen (<i>Peking University; Peking University Information Technology Institute (Tianjin Binhai)</i>)
4	0236: Testing and trimming methods of high-resolution and large swing for ADC based on ATE
16:45	Liran Li, Pengcheng Xiao, YuBo Wang, Yi Hu, Yuan Guan, Kun Wang, Dameng Li and

~17:00	Shaojie Luo (<i>Fudan University; Beijing Zhixin Microelectronics Co., Ltd; National Grid Zhejiang Electric Power Corporation</i>)
5	0310: Advances in Continuous-time MASH $\Delta\Sigma$ Modulators
17:00 ~17:15	Liang Qi, Xinyu Qin, Sai-Weng Sin, Chixiao Chen, Fan Ye, Guoyong Shi and Guoxing Wang (<i>Shanghai Jiao Tong University; University of Macau, Macao, China; Fudan University</i>)
6	0323: A 5.75nA_{RMS} Resolution Sigma Delta based Sinusoidal Current Generator for in situ Calibration of Electrochemical Bio sensors
17:15 ~17:30	Yizhou Jiang, Han Jin, Chenjie Dong and Yajie Qin (<i>Fudan University</i>)
7	0371: A 5 bit High Linearity, Binary Recombination Redundancy Sub SAR ADC in 300 MS/s , 14 bit Pipelined SAR ADC
17:30 ~17:45	Guoyao Wu, Ziwei Li, Yutong Zhao, Fan Ye and Junyan Ren (<i>Fudan University</i>)

<p>Wednesday, October 27, 15: 45-17: 45</p> <p>Session D2 : Novel Device I</p>

	Title
1	0150: Design Techniques of Gate Driver for SiC MOSFET's Applications (invited paper)
15:45 ~16:15	Zekun Zhou, Jianwen Cao and Bo Zhang (<i>University of Electronic Science and Technology of China; State key Laboratory of Electronic Thin Films and Integrated Devices</i>)
2	0169: TCAD simulation of trench-gate IGBTs for prediction of carrier lifetime requirements for future scaled devices (invited paper)
16:15 ~16:45	Masahiro Watanabe (<i>Tokyo Institute of Technology, Japan</i>)
3	0327: Recent Progress of Double/Dual-Gate Silicon IGBT Technologies (invited paper)
16:45 ~17:15	Toshiro Hiramoto, Takuya Saraya (<i>The University of Tokyo, Japan</i>)
4	0056: Semi-superjunction IGBT with Floating P-pillar and P-ring for Low Losses and High Breakdown Voltage
17:15 ~17:30	Min Hu, Weidan Li, Mingmin Huang, Chang Chen and Min Gong (<i>Sichuan University</i>)

Wednesday, October 27, 17: 45 – 18: 45

Wednesday, October 27, 17: 45 – 18: 45

Poster Session I

	Title
P1-1	0069: A Single Photon Detector Readout Circuit Based on 0.18 μm CMOS Technology
	Yunhao Fu, Zhongyuan Zhao, Hongbo Zhang, Jiaqi Jiang and Yuchun Chang (<i>Jilin University</i>)
P1-2	0081: A Heterogeneous HEVC Video Encoder System Based on Two-Level CPU-FPGA Computing Architecture
	Yudi Qiu, Jie Jiao, Yuxin Tang, Yanwei Liu, Jianyu Ren, Xiaoyang Zeng and Yibo Fan (<i>Fudan University</i>)
P1-3	0084: A High Precision Positive Temperature Circuit Using DEM Technique
	Hang Liu, Yu Jin, XinHang Li, Duli Yu, Kedu Han and Heming Sun (<i>Beijing University of Chemical Technology; Beijing advanced Innovation Center for Soft Matter Science and Engineering; Chinese Academy of Sciences; Waseda University, Japan</i>)
P1-4	0087: A Fourth Order Chebyshev Complex Band-pass Filter Design with Filter Solution
	Ruijie Yan, Lihan Cui and Zhiliang Hong (<i>Fudan University</i>)
P1-5	0110: A Low Power Real-Time DC Removal Circuit for PPG Readout
	Tingting Wei, Qiong Wang, Zhu Yuan and Zhiliang Hong (<i>Fudan University</i>)
P1-6	0111: Design of a Bandgap Reference Circuit with Ultra-low Temperature Coefficient
	Xinsheng Wang and Chunyang Bai (<i>Harbin Institute of Technology</i>)
P1-7	0126: A Low Power 8-bit 2b/Cycle SAR ADC with Multiple Calibration Techniques
	Yushi Chen, Yuan Yuan, Hualian Tang and Yiqi Zhuang (<i>Xidian University; Science and Technology on Low-Light-Level Night Vision Laboratory</i>)
P1-8	0132: Adaptive Convergence Method of Notch Frequency in Noise Spread Spectrum for Pulse Coding Switching DC-DC Converter
	Gui-Yi Dong, Shogo Katayama, Yifei Sun, Yasunori Kobori, Anna Kuwana and Haruo Kobayashi (<i>Gunma University, Japan</i>)
P1-9	0134: A Multiplier-less Transform Architecture with the Diagonal Data Mapping Transpose Memory for The AVS3 Standard

	Zhijian Hao, Fa Xu, Guoqing Xiang, Peng Zhang, Xiaoyang Zeng and Yibo Fan (<i>Fudan University; Peking University</i>)
P1-10	0139: High Frame Rate High Linearity Low Power DROIC for 30μm-Pitch Cryogenic Infrared FPAs
	Yuze Niu, Yuting Gu, Fengqing Liu, Fei Zhou, Shanzhe Yu, Wengao Lu and Yacong Zhang (<i>Peking University</i>)
P1-11	0140: An Adaptive Equalization Algorithm for High Speed SerDes
	Miaomiao Wu, Zhengbin Pang, Fangxu Lv, Jianjun Shi, Heming Wang, Tao Liu, Dechao Lu and Zheng Wang (<i>Air Force Engineering University; National University of Defense Technology</i>)
P1-12	0141: A 16-bit Pixel-level ADC Based on Ring Oscillator for 30μm Pitch 320 \times256 LWIR FPAs
	Yuze Niu, Bingxin Liu, Jiaqi Kong, Fei Zhou, Shanzhe Yu, Wengao Lu, Yacong Zhang and Zhongjian Chen (<i>Peking University</i>)
P1-13	0142: A CMOS Time-of-Flight Image Sensor with High Dynamic Range Digital Pixel
	Shanzhe Yu, Yacong Zhang, Fei Zhou, Wengao Lu, Shuyu Lei and Zhongjian Chen (<i>Peking University; ABAX Sensing Electronic Technology</i>)
P1-14	0146: Design of Wideband Phase Modulator for 2.4~5.25 GHz Digital Polar Transmitter
	Haoliang Zhu, Zhiqun Li, Zhennan Li and Yan Yao (<i>Southeast University</i>)
P1-15	0161: A High Efficiency Re-configurable Step-down Switched Capacitor DC-DC Converter for Medical Implants Application
	Qianhui Fan, Wensi Wang, Xu Liu, Qiang Gao and Shuqi Geng (<i>Beijing University of Technology</i>)
P1-16	0171: An Efficient Module Arithmetic Logic Unit in Dual Field for Internet of Things Applications
	Han Zeng, Wei Li, Tao Chen and Longmei Nan (<i>PLA Information Engineering University</i>)
P1-17	0178: Ultra-low-voltage Low-power Self-adaptive Static Pulsed Latch
	Peiyi Zhao, Zisong Wang, Congyi Zhu, Tom Springer, Jacob Anabi, Yinshui Xia and Lingli Wang (<i>Chapman University, USA; University of California, USA; Nanjing University; Ningbo University; Fudan University</i>)
P1-18	0188: A low noise fully-integrated readout electronic with pile-up rejector for particle detector

	Kangwei Ma, Fei Zhou, Yacong Zhang, Wengao Lu and Zhongjian Chen (<i>Peking University</i>)
P1-19	0190: A High-Precision Delta Sigma ADC with Chopper in BMS
	Yongsheng Wang, Wentao Lu, Jin Wang, Kai Cheng, Fangfa Fu and Fengchang Lai (<i>Harbin Institute of Technology</i>)
P1-20	0199: A Digital to Time Converter Assisted TA-TDC with High Resolution for Low Power ADPLL in 22nm CMOS
	Liu Wang, Guojing Ye and Yumei Huang (<i>Fudan University; RealMega Microelectronics technology (Shanghai) Co. Ltd</i>)
P1-21	0208: A Review of PPG/NIRS Acquisition ASIC and System
	Zhen Lu, Ting Yi and Zhiliang Hong (<i>Fudan University</i>)
P1-22	0211: A Four Modes and Smooth Transition Non-inverting Buck-Boost Converter
	Chengzhi Xu and Lianxi Liu (<i>Xidian University</i>)
P1-23	0212: High Precision AFE Design Methodology for Wearable EEG Acquisition
	Chao Yuan, Ting Yi and Zhiliang Hong (<i>Fudan University</i>)
P1-24	0219: Small Object Detection in Aerial Images
	Ruoyu Zhang, Minge Jing, Yibo Fan and Xiaoyang Zeng (<i>Fudan University</i>)
P1-25	0221: A Hardware Efficient Approximate Shift Multiplier with High Accuracy
	Qiang Li, Xuemei Fan, Jian Chen, Hongwei Li and Hao Li (<i>Southeast University</i>)
P1-26	0226: Physical Coding Sublayer for 32Gbps SerDes Based on JESD204C
	Xiaozhe Wang, Lingzhi Su, Xiyuan Du, Yongzhen Chen and Jiangfeng Wu (<i>Tongji University</i>)
P1-27	0227: An Input Buffer for 4 GS/s 14-b Time-Interleaved ADC
	Li Zhang, Yunchuan Wang, Fengyi Mei, Yongzhen Chen and Jiangfeng Wu (<i>Tongji University</i>)
P1-28	0228: A 68.36 dB 12bit 100MS/s SAR ADC with a Low-noise Comparator in 14-nm CMOS FinFet
	Yan Zheng, Jingchao Lan, Fan Ye and Junyan Ren (<i>Fudan University</i>)
P1-29	0229: An Efficient Demultiplexer Design in Quantum-dot Cellular Automata
	Jianguo Ni and Zhufei Chu (<i>Ningbo University</i>)
P1-30	0233: Analysis of SAR ADC Quantization Error and Nonlinearity in PMCW Automotive Radar

	Tao Zhong, Yuekang Guo and Jing Jin (<i>Shanghai Jiao Tong University</i>)
P1-31	0241: A 4x Folding Voltage-to-Time Converter with Adjustable Conversion Gain and Offset for Time-based ADC
	Yucheng Bao, Zhijie Chen, Boyong Jin and Peiyuan Wan (<i>Beijing University of Technology</i>)
P1-32	0242: New Linearization Implementations Improving IIP3 of Wideband LNTA by More than 14dB
	Cong Tao, Liangbo Lei, Jiangli Huang, Zhipeng Chen, Yumei Huang and Zhiliang Hong (<i>Fudan University</i>)
P1-33	0250: Algorithm/Hardware Co-Design Configurable SAR ADC with Low Power for Computing-in-Memory in 28nm CMOS
	Zhiwang Guo, Deyang Chen and Xiaoyong Xue (<i>Fudan University</i>)
P1-34	0257: Digital Calibration of Capacitor Mismatch and Gain Error in Pipelined SAR ADCs
	Yunchuan Wang, Li Zhang, Fengyi Mei, Yongzhen Chen and Jiangfeng Wu (<i>Tongji University</i>)
P1-35	0272: A 12-bit 800MS/s Pipelined A/D Converter
	Haoran Wang and Fule Li (<i>Tsinghua University</i>)
P1-36	0281: Mutli-level Regression Anchor-free Object Detection
	Yi Zhou, Minge Jing, Fa Xu, Yibo Fan and Xiaoyang Zeng (<i>Fudan University</i>)
P1-37	0282: A 6-bit, 1GS/s Digital to Analog Converter for Automotive Ethernet PHY
	Xinyao Zhang, Zunkai Huang, Yingqi Feng, Junkai Zhang, Li Tian, Yongxin Zhu, Hui Wang and Songlin Feng (<i>Chinese Academy of Sciences; University of Chinese Academy of Sciences</i>)
P1-38	0288: A 6-bit Active Phase Shifter with Quadrature Outputs
	Yujie Wu, Gang Zhang, Yongzhen Chen and Jiangfeng Wu (<i>Tongji University</i>)
P1-39	0291: Modeling and Analysis of Injection Factor Based on Injection-locked LC Oscillator
	Xin Kewei, Li Bing, Ding Haiyang, Bao Lei and Li Haipeng (<i>National University of Defense Technology</i>)
P1-40	0299: A High-Efficiency Charge Pump for AMOLED Display Driver IC
	Junkai Zhang, Zunkai Huang, Quanze Li, Xinyao Zhang, Li Tian, Yongxin Zhu, Hui Wang and Songlin Feng (<i>Chinese Academy of Sciences; University of Chinese Academy of Sciences</i>)

P1-41	0306: Design of Majority Logic Based 4-bit Approximate Subtractors and its Application in Divider
	Chuanhe Shang and Zhufei Chu (<i>Ningbo University</i>)
P1-42	0318: A Second-Order Passive Noise-Shaping SAR ADC Using the LMS-Based Mismatch Calibration
	Jing Li, Hang Xiao, Qihui Zhang, Zhong Zhang, Wenjie Huang, Ning Ning and Qi Yu (<i>University of Electronic Science and Technology of China</i>)
P1-43	0330: E/D Mode Logic Cells and Series-to-Parallel Interface with Less Transistors and Better Structure Consistence in GaAs Process
	Shijie Chen, Tao Yang, Xiang Li, Jian Yang, Liang Qi and Yong Wang (<i>University of Electronic Science and Technology of China; Nanhu Laboratory, Jiaxing, China; Northern Institute of Electronic Equipment of China</i>)
P1-44	0336: A String-in-string-out 256 Bits eFuse Using Full-custom Design in 55nm Process
	Yang Li, Yuejun Zhang, Steve Yang, Shimin Du and Ye Lin (<i>Ningbo University; Ningbo Semiconductor International Corporation</i>)
P1-45	0337: A Segmented and Linear Frequency Controller for Flyback Converters
	Yue Shi, Zuao Wang, Zekun Zhou, Zhuo Wang and Bo Zhang (<i>Chengdu University of Information Technology; University of Electronic Science and Technology of China</i>)
P1-46	0342: A 65nm Reliable Near-Subthreshold Standard Cells Design Using Schmitt Trigger
	Jinliang Han, Yongzhong Wen, Yuejun Zhang, Pengjun Wang and Huihong Zhang (<i>Ningbo University; Wenzhou University</i>)
P1-47	0372: A Wide-Range 12b 150MS/s P-SAR ADC with Open-Loop Residue Amplifier for Ultrasound AFE
	Ziwei Li, Yutong Zhao, Guoyao Wu, Fan Ye and Junyan Ren (<i>Fudan University</i>)

Thursday

Thursday, October 28, 8: 30 – 10: 00

Thursday, October 28, 8: 30 – 10: 00

Keynote Session K3

K3-1 Quantum Computing: a Journey of... 300°K (8: 30-9: 15)

Dr. Victor Grimblatt, Synopsys Chile R&D Center, Chile

K3-2 Quantum Computing in Nanoscale CMOS using Position-Based Charge Qubits

(9: 15-10: 00)

Dr. Bogdan Staszewski & Elena Blokhina, University College Dublin, Ireland

Thursday, October 28, 10: 15 – 12: 15

Thursday, October 28, 10: 15 – 12: 15

Session A3 : Image Processing

	Title
1	0073: A Streaming Feature Extraction Accelerator using DPCM Image Compression Technique for SLAM Applications
10:15 ~10:30	Zhiyuan Wang, Zhuo Zhang and Haowen Chen (<i>Zhejiang University</i>)
2	0120: Knowledge Distillation for U-Net Based Image Denoising
10:30 ~10:45	Wenshu Chen, Liyuan Peng, Yujie Huang, Minge Jing and Xiaoyang Zeng (<i>Fudan University</i>)
3	0194: Arbitrary Style Transfer via Learning to Paint in the Feature Domain
10:45 ~11:00	Yujie Huang, Yi xuan Liu, Minge Jing, Mingyu Wang, Xiaoyong Xue, Xiao yang Zeng and Yibo Fan (<i>Fudan University</i>)
4	0224: An Energy-Efficient Image Denoising Accelerator with Depth-wise Separable Convolution and Fused-Layer Architecture
11:00 ~11:15	Xuyang Duan, Ruiqi Xie and Jun Han (<i>Fudan University</i>)
5	0230: Mini-HOG: An Area-efficient and Low-power HOG Accelerator with SW/HW co-design for Real-time Pedestrian Detection
11:15 ~11:30	Ruiqi Xie, Jun Han (<i>Fudan University</i>)
6	0268: Research of Scale Recurrent Generative Network on Image Inpainting
11:30 ~11:45	Ziyi Zhang, Dong Lyu and Wei Xu (<i>Fudan University</i>)
7	0298: A Hardware Architecture for Adaptive Loop Filter in VVC Decoder
11:45 ~12:00	Xin Wang, Heming Sun, Jiro Katto and Yibo Fan (<i>Fudan University; Waseda University, Japan; 3JST, PRESTO, 4-1-8 Honcho, Kawaguchi, Saitama, Japan; Waseda University, Japan; State Key Laboratory of Mobile Network and Mobile Multimedia Technology</i>)
8	0363: EG-HRNet: An Efficient High-Resolution Network Using Ghost-Modules for Human Pose Estimation
12:00 ~12:15	Yiting Wang, Zhenyin Zhang and Gengsheng Chen (<i>Fudan University</i>)

Thursday, October 28, 10: 15 – 12: 15
Session B3 : Computing-in/near-Memory II

	Title
1	0359: BATMANN: A Binarized-All-Through Memory-Augmented Neural Network for Efficient In-Memory Computing (invited paper)
10:15 ~10:45	Yuan Ren, Rui Lin, Jie Ran, Chang Liu, Chaofan Tao, Zhongrui Wang, Can Li and Ngai Wong (<i>The University of Hong Kong, Hongkong, China</i>)
2	0061: Design of Analog CMOS-Memristive Neural Network Circuits for Pattern Recognition
10:45 ~11:00	Bo Li, Mingjie Yang and Guoyong Shi (<i>Shanghai Jiao Tong University</i>)
3	0168: RRAM-based Analog-Weight Spiking Neural Network Accelerator with in-situ Learning for IoT Applications
11:00 ~11:15	Jikai Lu, Jinsong wei, Junjie An, Chenggao Zhang, Tuo Shi and Qi Liu (<i>University of Science and Technology of China; Zhejiang Lab; Institute of Microelectronics of the Chinese Academy of Sciences; Fudan University</i>)
4	0295: A 40-nm 202.3nJ/Classification Neuromorphic Architecture Employing In-SRAM Charge-Domain Compute
11:15 ~11:30	Chang Liu, Zihao Xuan and Yi Kang (<i>University of Science and Technology of China</i>)
5	0304: Adaptive Weight Mapping Strategy to Address the Parasitic Effects for ReRAM-based Neural Networks
11:30 ~11:45	Xiaoqing Zhao, Longjun Liu, Liang Si, Keyang Pan, Hongbin Sun and Nanning Zheng (<i>Institute of Artificial Intelligence and Robotics; Xi'an Jiaotong University</i>)

Thursday, October 28, 10: 15 – 12: 15
Session C3 : RF Circuit I

	Title
1	0071: A New Degeneration Technique for 60 GHz Triple Cascode Wideband Low Noise Amplifier (invited paper)
10:15 ~10:45	Thurein Aung, Mahalingam Nagarajan and Kiat Seng Yeo (<i>Engineering Product Development Singapore University of Technology and Design, Singapore</i>)
2	0109: A 300GHz CMOS Transceiver Targeting 6G (invited paper)
10:45 ~11:15	Minoru Fujishima (<i>Hiroshima University, Japan</i>)
3	0266: A 79GHz 5-bit Phase Shifter With π-Network in 28-nm CMOS

11:15 ~11:30	Xu Chen, Junyan Ren and Shunli Ma (<i>Fudan University</i>)
4	0264: A 22-33 GHz Wideband CMOS LNA Using Low-k Non-inverting MCCRs for 5G mmW Communication Applications
11:30 ~11:45	Yangyun Zhang, Yuting Xiang, Xinjie Zhang, Chunqi Shi, Runxi Zhang and Jinghong Chen (<i>East China Normal University; University of Houston, USA</i>)
5	0136: An 4th-order N-path Bandpass Filter with a Tuning Range of 1-30 GHz and OOB Rejection > 30 dB in 28 nm CMOS
11:45 ~12:00	Xi Wang, Junyan Ren and Shunli Ma (<i>Fudan University</i>)

<p>Thursday, October 28, 10: 15 – 12: 15 Session D3 : Novel Device II</p>

	Title
1	0051: A split-gate SiC trench MOSFET with embedded unipolar diode for improved performances
10:15 ~10:30	Zheng Wu, Chao Xia, Bo Yi, Junji Cheng, HaiMeng Huang, MouFu Kong, HongQiang Yang and WenKun Shi (<i>University of Electronic Science and Technology of China</i>)
2	0106: Impact of Evaporated AuNP Thickness on Pseudo-MOS and Its Application in Direct MicroRNA-375 Detection
10:30 ~10:45	Haihua Wang, Song He, Kai Xiao, Yu-Long Jiang and Jing Wan (<i>Fudan University</i>)
3	0155: A Vertical Thin Layer pLDMOS with Linear doping realizing ultra-low Ron,sp
10:45 ~11:00	Bo Yi, Zheng Wu, Junji Cheng, HaiMeng Huang, MouFu Kong and HongQiang Yang (<i>University of Electronic Science and Technology of China</i>)
4	0175: The Impact of Incident Wavelength and Incident Intensity on Light-modulated Subthreshold Swing Effect
11:00 ~11:15	YX. Chen, K. Xiao, HH. Wang and J. Wan (<i>Fudan University</i>)
5	0246: Analysis of Switching Characteristics of Wide SOA and High Reliability 100 V N-LDMOS Transistor with Dual RESURF and Grounded Field Plate Structure
11:15 ~11:30	Anna Kuwana, Jun-ichi Matsuda and Haruo Kobayashi (<i>Gunma University, Japan</i>)
6	0269: A New Ga₂O₃Trench Schottky Barrier Diode with Improved Forward

	Conduction Characteristics
11:30 ~11:45	Moufu Kong, Zewei Hu, Jiacheng Gao, Zongqi Chen, Jiabin Guo, Sadaf Ali Nafees, Bo Yi and Hongqiang Yang (<i>University of Electronic Science and Technology of China</i>)

Thursday, October 28, 13: 30 – 15: 30

Thursday, October 28, 13: 30 – 15: 30

Session A4: Information Security

	Title
1	0030 : Electromagnetic Side Channel Analysis: Principles, Attacks, Countermeasures, and Security Opportunities(invited paper)
13:30 ~14:00	Cassi Chen, Gang Qu (<i>Winston Churchill Highschool, Maryland, USA; University of Maryland, UAS</i>)
2	0177: Hardware Acceleration of Elliptic-Curve based Crypto-Algorithm, ECDSA and Pairing Engines (invited paper)
14:00 ~14:30	Makoto Ikeda (<i>the University of Tokyo, Japan</i>)
3	0164: A Reliable Multi-information Entropy Glitch PUF Using Schmitt Trigger Sampling Method for IoT Security
14:30 ~14:45	Li Ni, Pengjun Wang, Yuejun Zhang, Jia Chen, Lewei Li and Huihong Zhang (<i>Ningbo University; Wenzhou University</i>)
4	0331: Matrix Encryption based Anti-Machine Learning Attack Algorithm for Strong PUF
14:45 ~15:00	Ziyu Zhou, Gang Li, Pengjun Wang and Ming Ye (<i>Wenzhou University</i>)

Thursday, October 28, 13: 30 – 15: 30

Session B4 : Memory Device & Circuit I

	Title
1	0260: Chalcogenides for Their Application to Phase-Change-Memory-Based Synaptic Devices (invited paper)
13:30 ~14:00	You Yin (<i>Gunma University, Japan</i>)
2	0033: Research on Transparent Resistive Random Memory Based on Lanthanum-based High-k Medium (invited paper)
14:00 ~14:30	Hongxia Liu, Guodu Han and Dong Wang (<i>Xidian University</i>)

3	0079: A Novel Hybrid Nonvolatile SRAM for Suppressing Leakage Power Using Tunnel FET
14:30 ~14:45	Xiaofeng Hong and Hao Cai (<i>Southeast University</i>)
4	0130: Ultra-low Power Access Strategy for Process-Voltage-Temperature Aware STT-MRAM
14:45 ~15:00	You-You Zhang, Lirida Naviner and Hao Cai (<i>Southeast University; 19 place Marguerite Perey Palaiseau, France</i>)
5	0159: A Self-regulating Dynamic Reference Sensing Scheme with Balanced Trade-Off between Read Disturbance and Sensing Margin
15:00 ~15:15	Jia-le Cui, Hai-bin Wang and Hao Cai (<i>Southeast University; Hohai University</i>)
6	0222: An 8Kb 40-nm 2T2MTJ STT-MRAM Design with 2.6ns Access Time and Time-Adjustable Writing Process
15:15 ~15:30	Xianwu Hu, Dongyang Li, Yu Wang, Jiayun Feng, Zizhao Ma, Shaohao Wang, Tai Min and Yufeng Xie (<i>Fudan University; Fuzhou University; Xi'an Jiaotong University</i>)

<p>Thursday, October 28, 13: 30 – 15: 30</p> <p>Session C4 : RF Circuit II</p>

	Title
1	0195: An Efficient Optimization Method of RF Passive Components Using RBF Model (invited paper)
13:30 ~14:00	Sen Yin, Wenfei Hu, Wenyan Zhang, Ruitao Wang, Jian Zhang and Yan Wang (<i>Tsinghua University</i>)
2	0355: Latest Development on Non-Contact Vital Signs (NCVS) Sensor Systems Using Software Defined Radio (SDR) (invited paper)
14:00 ~14:30	D.Y.C. Lie, Y. Liu, Y. Tchatchoua, C. Sweeney, P.E. Lie and T.Q. Nguyen (<i>Texas Tech University, USA; Texas Tech University Health Sciences Center (TTUHSC), USA</i>)
3	0067: Integrated Homodyne Receiver Chip Design with Dual-Band Antenna
14:30 ~14:45	Wen-Cheng Lai (<i>National Yunlin University of Science and Technology, Taiwan, China</i>)
4	0283: A Novel RFID Architecture Supporting Accurate Clock Transfer for Backscatter Communication
14:45 ~15:00	Yichao Zhang, Wenjie Xu, Na Yan and Hao Min (<i>Fudan University</i>)
5	0316: A 60 GHz Broadband Wearable Antenna for Body-to-Body

	Communications
15:00 ~15:15	Yutong Zhang, Na Yan, Ghazanfar Ali Safdar and Masood Ur-Rehman (<i>Fudan University; University of Bedfordshire, United Kingdom; University of Glasgow, United Kingdom</i>)

<p>Thursday, October 28, 13: 30 – 15: 30</p> <p>Session D4 : Novel Device III</p>
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	Title
1	0046: E-mode p-FET-bridge HEMT: Toward High V_{TH}, Low Reverse-conduction Loss and Enhanced Stability (invited paper)
13:30 ~13:55	Mengyuan Hua, Junting Chen, Chengcai Wang, Lingling Li, Ling Liu, Zheyang Zheng, and Kevin J. Chen (<i>Southern University of Science and Technology; The Hong Kong University of Science and Technology, Hong Kong, China</i>)
2	0060: Effects of Charge Generation and Trapping on the X-ray Response of Strained AlGaIn/GaN HEMTs (invited paper)
13:55 ~14:20	Peng Wang, En Xia Zhang, Daniel M. Fleetwood, Peng Fei Wang, Michael W. McCurdy, Ji-Tzouh Lin, Michael L. Alles, Jim L. Davidson, Bruce W. Alphenaar and Ronald D. Schrimpf (<i>Vanderbilt University, USA; University of Louisville, USA</i>)
3	0149: Fin-Nanochannel devices of GaN-based Metal-Oxide-Semiconductor High-Electron Mobility Transistors (invited paper)
14:20 ~14:45	Ching-Ting Lee, Jhang-Jie Jia, and Hsin-Ying Lee (<i>Yuan Ze University, Taiwan, China; National Cheng Kung University, Taiwan, China; National Cheng Kung University, Taiwan, China</i>)
4	0249: InAlN/GaN HEMTs on Si with 0.18-Ω·mm Contact Resistance and 2.1-A/mm Drain Current Density (invited paper)
14:45 ~15:10	Yang Jiang, Fangzhou Du, Zepeng Qiao, Wei-Chih Cheng, Jiaqi He, Xinyi Tang, Feifei Liu, Lei Wen, Qing Wang and Hongyu Yu (<i>Southern University of Science and Technology, Shenzhen Institute of Wide-bandgap Semiconductors, Shenzhen Smartchip Microelectronics Technology Co. Ltd.</i>)
5	0042: Stability Analysis of Monolithic GaN MIS-HEMT Comparator with Device PBTI and Circuit Stress Tests
15:10 ~15:25	Ang Li, Yi Shen, Ziqian Li, Yuhao Zhu, Huiqing Wen and Wen Liu (<i>Xi'an Jiaotong-Liverpool University</i>)

<p>Thursday, October 28, 15: 45 – 17: 45</p>
<p>Thursday, October 28, 15: 45 – 17: 45</p> <p>Session A5: Circuit for Medical</p>

	Title
1	0386: Multi-Physiological Parameters Integrated Medical System for Home Healthcare Application (invited paper)
15:45 ~16:15	Feng Zou, Zhenming Wang, Song Ma, Liubin Li and Yuhua Cheng (<i>Shanghai Research Institute of Microelectronics, Peking University; Peking University; Shanghai Soap Co., Ltd.</i>)
2	0057: An ECG Automatic Detection System with Baseline Drift Removal Based on SG Filter
16:15 ~16:30	Jiangbo Wei, Chenghao Zhang, Jiayi Ma, Zhihang Li and Maliang Liu (<i>Xidian University</i>)
3	0213: A Two-Stage Time-Division Multiplexing AFE with Input Impedance Boosting DDA for EEG Signal Acquisition
16:30 ~16:45	Di Gao, Lianxi Liu (<i>Xidian University</i>)
4	0220: A Review and Perspective on Electrode Patch-Based Fetal ECG Monitoring ASIC
16:45 ~17:00	Weiqi Zhi, Ting Yi and Zhiliang Hong (<i>Fudan University</i>)
5	0223: High-Input-Impedance Amplifiers Design for Dry-Electrode Biopotential Acquisition: A Review
17:00 ~17:15	Peizhuo Wang, Ting Yi and Zhiliang Hong (<i>Fudan University</i>)

<p>Thursday, October 28, 15: 45 – 17: 45 Session B5 : Memory Device & Circuit II</p>
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	Title
1	0068: Reliability Issues in Charge-Trap 3D NAND Flash Memories and Optimization Strategies (invited paper)
15:45 ~16:10	Jiezhi Chen (<i>Shandong University</i>)
2	0198: True Random Number Generator Based on Switching Probability of Volatile Ge_xSe_{1-x}ovonic Threshold Switching Selectors (invited paper)
16:10 ~16:35	Z. Chai, P. Freitas, W. Zhang, J. F. Zhang and J. Marsland (<i>Liverpool John Moores University, United Kingdom; Xi'an Jiaotong University</i>)
3	0388: Large Coercive Field in Hf_{0.5}Zr_{0.5}O₂-based Capacitors with Gd Top Electrode (invited paper)
16:35	Xiaoyue Zhao, Minghao Shao, Houfang Liu, Ruiting Zhao, Xichen Sun, Xiao Liu,

~17:00	Xiaoming Wu, Yi Yang and Tian-Ling Ren (<i>Tsinghua University</i>)
4	0275: Novel 15T SRAM Cell for Low Voltage High Reliability Application
17:00 ~17:15	Yongkang Han, Yulin Zhao, Qiao Hu, Xuanzhi Liu, Bo Peng, Haijun Jiang, Jianguo Yang and Xiaoyong Xue (<i>Fudan University; Institute of Microelectronics of the Chinese Academy of Sciences; University of Science and Technology of China</i>)
5	0276: Research on Two-dimensional MXenes Based Synaptic Devices for the Future In-memory Computing
17:15 ~17:30	Chun Zhao, Tianshi Zhao, Zongjie Shen, Yixin Cao, Yina Liu, Li Yang, Ivona Z Mitrovic, Eng Gee Lim and Ce Zhou Zhao (<i>Xi'an Jiaotong-Liverpool University; University of Liverpool, United Kingdom</i>)
6	0339: A HfO₂ Ferroelectric Capacitor based 10T2C High Reliability Non-Volatile SRAM for Low Power IoT Applications
17:30 ~17:45	Jing Li, Yulin Zhao, Bo Peng, Xuanzhi Liu, Qiao Hu, Sheng Dai, Jianguo Yang and Yuejun Zhang (<i>Ningbo University; Institute of Microelectronics of the Chinese Academy of Sciences; University of Science and Technology of China</i>)

<p>Thursday, October 28, 15: 45 – 17: 45</p> <p>Session C5 : RF Circuit III</p>
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	Title
1	0354: 0.5W X-Band SOI 4-Channel Beamforming TR IC (invited paper)
15:45 ~16:15	Nan Li, Zengqi Wang, Weitian Liu, Qiao Zhang, Jichao Zhan, Na Yan, Tingting Han, Mi Tian, Weiqiang Zhu, Zhijian L and Jianhua Lu (<i>Archrowave Microelectronics Co; Fudan University</i>)
2	0361: An Integrated System Evaluation Engine for Cross-Domain Simulation and Design Optimization of High-Speed 5G Millimeter-Wave Wireless SoCs (invited paper)
16:15 ~16:45	Weimin Shi, Fuzhan Chen, Xinyi Liu, Chongyun Zhang, Zilu Liu, Tianxin Min, Bo Xu, Li Wang, Jian Kang and C. Patrick Yue (<i>Integrated Circuits Design Center; The Hong Kong University of Science and Technology, Hong Kong, China</i>)
3	0135: A C-Band Power Amplifier with Over-Neutralization Technique and Coupled-Line MCR Matching Methods for 5G Communication in 0.25-μm GaAs
16:45 ~17:00	Zhiyang Zhang, Junyan Ren and Shunli Ma (<i>Fudan University</i>)
4	0144: A 0.9V 0.1-4GHz LNTA in 28-nm CMOS Achieving +11.3dBm IIP3 With Self-loaded Linearization Technique
17:00 ~17:15	Fan Chen, Wei Li, Chuanguo Wang and Hongtao Xu (<i>Fudan University</i>)

Thursday, October 28, 15: 45 – 17: 45

Session D5 : Advance Process I

	Title
1	0092: Designer Germanium Quantum-dot Arrays for CMOS Quantum Electronic Devices (invited paper)
15:45 ~16:15	I-Hsiang Wang, Pei-Wen Li (<i>National Yang Ming Chiao Tung University, Taiwan, China</i>)
2	0070: NMOS LSI Development from 1970's to the beginning of 1980's (invited paper)
16:15 ~16:45	Hiroshi Iwai (<i>National Yang Ming Chiao Tung University, Taiwan, China</i>)
3	0090: Enabling Monolithic Heterogeneously Integrated Si/III-V Technology Platform (invited paper)
16:45 ~17:15	Siau Ben Chiah, Xing Zhou and Kenneth Eng Kian Lee (<i>Nanyang Technological University, Singapore; Low Energy Electronic Systems, Singapore</i>)
4	0302: Channel Stress Engineering Through Source/Drain Recess Optimization and Its Process Variation Study for 5 nm-node FinFETs
17:15 ~17:30	Dawei Wang, Tao Liu, Xin Sun, Kun Chen, Jingwen Yang, Chunlei Wu, Min Xu and David Wei Zhang (<i>Fudan University; Shanghai Integrated Circuit Manufacturing Innovation Center Co.</i>)

Thursday, October 28, 17: 45 – 18: 45

Thursday, October 28, 17: 45 – 18: 45

Poster Session II

	Title
P2-1	0039: An Efficient Hardware Architecture for Epileptic Seizure Detection Using EEG Signals Based on 1D-CNN
	Lingsong Zhu, Dongsheng Liu, Jiahao Lu, Lai Wei and Xuan Cheng (<i>Huazhong University of Science and Technology</i>)
P2-2	0040: A Phased-array Optoelectronic Detector using Phase-difference Filtering Technology for Incremental Encoder Application
	Jiaqi Jiang, Hongbo Zhang, Yunhao Fu and Yuchun Chang (<i>Jilin University</i>)
P2-3	0044: Impact of Hydrogen Anneal on Peripheral PMOS NBTI and Array Transistor GIDL in DRAM
	Xiong Li, Huangxia Zhu, Xiaolin Guo, Cajun Mu, Peng Feng, Qi-a Xu, Blacksmith Wu and Kanyu Cao (<i>ChangXin Memory Technologies</i>)

P2-4	0050: A Novel Etch Scheme to Form Sloped Profile by Standard Anisotropic CMOS Process
	Ming Li, Xiaoxu Kang and Xiaolan Zhong (<i>Shanghai IC R&D Center</i>)
P2-5	0075: Reconfigurable Clock Tree Design Methodology for Wide Voltage Scaling Using Custom Buffer
	Xuexiang Wang, Yiran Sun and Mingming Fang (<i>Southeast University</i>)
P2-6	0078: Deep Analysis of the SSN at LPDDR5 IO Interface
	Maosong Ma, Jianbin Liu, Xinhua Cai and Honglong Shi (<i>Changxin Memory Technology</i>)
P2-7	0082: Pitch Device Design in 10 nm-Class DRAM Process through DTCO
	Yangzhe Tang, Zhongming Liu, Weibing Shang, Fengqing Zhang, Bernard Wu, Zhong Kong, Hongwen Li, Hong Ma and Kanyu Gao (<i>Changxin Memory Technology</i>)
P2-8	0086: MMV Batch Look Ahead Orthogonal Matching Pursuit (MBLAOMP) Algorithm for Joint Sparse Recovery
	Sujuan Liu, Chengkai Cui, Xiaoyao Lv and Yuhao Liu (<i>Beijing University of Technology</i>)
P2-9	0088: A 2-stage with 3-stack 1-tap DFE Sense Amplifier based on Dual Reference for High Speed & Low Power DRAM Interface
	Yinchuan Gu, Chris Eom, Jake Jung, Brian Lee, Edwin Kim and Kanyu Cao (<i>Changxin Memory Technology</i>)
P2-10	0089: Adaptive OCD and ODT Control for Channel S/I Enhancement in DDR4 SDRAM
	Yanwu Du, Chris Eom, Jake Jung, Brian Lee, Edwin Kim, Kanyu Cao (<i>Changxin Memory Technology</i>)
P2-11	0100: Resistive Switching Characteristics of HfOx/Al2O3 Nano-multilayers Structure Memristor Fabricated by Atomic Layer Deposition
	Jian Liu, Ke Wang, Xiaolong Zhou, Xiaopeng Xiao, Yongming Tang, Zhongyuan Ma, Kunji Chen (<i>East China University of Technology; Nanjing University</i>)
P2-12	0105: Process Optimization for CMOS Compatible MEMS Capacitive Acoustic Sensor
	Ming Li, Xiaoxu Kang and Xiaolan Zhong (<i>Shanghai IC R&D Center</i>)
P2-13	0107: A Fast Aging-aware Static Timing Analysis Prediction Frame of Digital Integrated Circuits
	Jiahui Hu, Changhao Yan, Chao Guo, Ronggui Jiang, Dian Zhou and Xuan Zeng (<i>Fudan</i>)

	<i>University)</i>
P2-14	0112: A New Sparsity Preserving Model Order Reduction Algorithm for Multi-terminal RC Networks
	Xin Chen, Lin Pan and Yangxin Xiang (<i>Tongji University</i>)
P2-15	0122: Fabrication, Characterization and Modeling of CVD based Amorphous Silicon Resistor
	Wei Liu, Chengpeng Duan, Defu Guo, Hanlin Qin, Renwang Ma, Shuai Yuan and Qinwei Ou (<i>Xi'an Zhongke Lead IR-Tech Co., Ltd.; Xidian University</i>)
P2-16	0125: Superjunction MOSFET with Trench Schottky Contact and Embedded High-k Insulator for Excellent Reverse Recovery
	Rui Li, Mingmin Huang, Xi Zhang, Min Hu, Zhimei Yang, Yao Ma and Min Gong (<i>Sichuan University</i>)
P2-17	0158: Modified Peripheral MRAM Sensing for In-memory Boolean Logic
	Zhong-Jian Bian, Xiaofeng Hong, Juntong Chen and Hao Cai (<i>Southeast University</i>)
P2-18	0163: A CPU-FPGA Based Heterogeneous Accelerator for RepVGG
	Yiliang Guo, Mingjun Jiang, Feng Dong, Kehua Yu, Ke Chen, Wei Qu and Jianfei Jiang (<i>Shanghai Jiao Tong University; iQIYI Science & Technology Co., Ltd.</i>)
P2-19	0186: Characterization and Classification of Heavy Ion Induced Failures in FPGA-based Logical Circuits
	Shuai Gao, Chang Cai, Bingxu Ning, Ze He and Jie Liu (<i>Institute of Modern Physics, Chinese Academy of Science; University of Chinese Academy of Sciences; Fudan University; Shanghai Fudan Microelectronics Group</i>)
P2-20	0187: The Study of Parameters variation of nMOSFET Affected by the HCI
	Zhang Xiaowen, Lin Xiaoling and Gao Rui (<i>Science and Technology on Reliability Physics and Application of Electronic Component Laboratory</i>)
P2-21	0196: Scalable Systolic Array Multiplier Optimized by Sparse Matrix
	RiMing Jia, Tu Xu and YuChun Chang (<i>Dalian University of Technology</i>)
P2-22	0197: Effective Register Allocation for Configurable VLIW Crypto-Processor
	Aiqing Wu, Mengni Bie, Longmei Nan and Wei Li (<i>China Institute of Information Science and Technology; Fudan University</i>)
P2-23	0216: An ECG Acquisition System with Piezoelectric Energy Harvesting for Low Power Healthcare Devices
	Yu Huang, Puqing Yang and Zhaofeng Zhang (<i>Shanghai Advanced Research Institute; ShanghaiTech University; University of Chinese Academy of Sciences</i>)

P2-24	0235: A Novel Tri-input Schottky Barrier FET Exhibiting Three-Input Series Switching Function
	Xuejie Zhang, Zhidi Jiang, and Jianping Hu (<i>Ningbo University</i>)
P2-25	0237: A High-Performance Mel-scale Frequency Cepstral Coefficients Digital Circuit Used on Keyword-Spotting Chip
	Jiankun Huang, Xinjie Feng, Congying Zhou and Yongzhen Chen (<i>Tongji University</i>)
P2-26	0238: A Process Optimization Method for Carrier Stored Trench Bipolar Transistor (CSTBT) Device
	Hang Xu, Dong-Hui Zhao, Hao Zhu, Qing-Qing Sun and David Wei Zhang (<i>Fudan University</i>)
P2-27	0243: Development and Characterization of High Temperature Plasma Nitridation Process for Advanced CMOS Technology Application
	Xiaoxu Kang, Xiaolan Zhong, Zhangfa Chen, Zhengkai Dao, Qiang Zhang, Hao Wan, Yamin Zhou, Ming Li, Yingjia Guo, Ran Nie and Tao Wu (<i>Shanghai IC R&D Center; ShanghaiTech University; Shanghai Engineering Research Center of Energy Efficient and Custom AI IC</i>)
P2-28	0270: Efficient High-Level Synthesis of Approximate Computing Circuits via Multi-fidelity Modeling
	Yingqi Li, Fan Yang, Changhao Yan and Xuan Zeng (<i>Fudan University</i>)
P2-29	0274: Monolithically Integrated PWM Circuit Based on AlGaIn/GaN MIS-HMETs for All-GaN Smart Power System
	Yi Shen, Ziqian Li, Ang Li and Wen Liu (<i>Xi'an Jiaotong-Liverpool University</i>)
P2-30	0287: A High-Efficient and Configurable Hardware Accelerator for Convolutional Neural Network
	Hui Zhang, Zhaojie Li, Heqing Yang, Xu Cheng and Xiaoyang Zeng (<i>Fudan University</i>)
P2-31	0293: 16-Channel Readout Circuit for Nucleic Acid Testing Based on Graphene Electrolyte-gated Field-effect Transistors (EGFETs)
	Wei Zhang, Yunlin Liu, Zhibo Chen, Yating Zou, Yizhou Jiang, Yajie Qin and Lu Ye (<i>Fudan University</i>)
P2-32	0303: Implementation of A CRNN-based Low-power Keyword Recognition System on FPGA
	Limo Guo, PengXu Lin, Lei Guo and Bo Liu (<i>Southeast University</i>)
P2-33	0307: A Fine-grained Sparse Neural Network Accelerator for Image Classification
	Hao Zhang, Aorui Gou, Yibo Fan and Xiaoyang Zeng (<i>Fudan University</i>)

P2-34	0308: An Analytical Jitter Transfer Model for Mueller-Muller Clock and Data Recovery Circuits
	Tao Liu, Fangxu Lv, Bin Liang, Heming Wang, Jianye Wang and Miaomiao Wu (<i>National University of Defense Technology</i>)
P2-35	0311: A Time Constant Estimation Method for Block RC Circuits with Application to Power Grid Analysis
	Chen Dong, Limin Hao, Guoyong Shi, Zhenya Zhou and Minghou Cheng (<i>Shanghai Jiao Tong University; Beijing Huada Emperyan Software Co. Ltd.</i>)
P2-36	0314: Exploiting Dynamic Bit Sparsity in Activation for Deep Neural Network Acceleration
	Yongshuai Sun, Naifeng Jing (<i>Shanghai Jiao Tong university</i>)
P2-37	0321: A Semi-Floating Gate Transistors In-Memory Computing design with 40.14 TOPS/W for matrix-multiplication with frequently updated weight
	Yukai Lin, Yu Wang, Xianwu Hu, Jiayun Feng, Gan Wen, Xiankui Xiong, Haidong Tian and Yufeng Xie (<i>Fudan University; ZTE Corporation; State Key Laboratory of Mobile Network and Mobile Multimedia Technology</i>)
P2-38	0332: A Multi-conductance States Memristor-based CNN Circuit Using Quantization Method for Digital Recognition
	Zhecheng Guo, Yuejun Zhang, Suling Xu, Zhixin Wu and Wanlong Zhao (<i>Ningbo University</i>)
P2-39	0334: A ReRAM-based 10T2R SRAM Using Power-off Recovery Function for Reducing Power
	Sheng Dai, Yuejun Zhang, Huihong Zhang and Jing Li, Ye Lin (<i>Ningbo University</i>)
P2-40	0335: A Novel Power PiN Diode with p-type Schottky Anode and Trench Oxide for Improving Reverse Recovery
	Weidan Li, Mingmin Huang, Yun Li, Zhimei Yang and Min Gong (<i>Sichuan University</i>)
P2-41	0340: A Three-valued Adder Circuit Implemented in ZnO Memristor with Multi-resistance States
	Zhixin Wu, Yuejun Zhang, Shimin Du, Zhecheng Guo and Wanlong Zhao (<i>Ningbo University</i>)
P2-42	0341: Optimization of Node-clustering-based DAG Partition Targeting NVDLA Architecture
	Shijie Hu, Gaoming Du, Jiashen Li, Zhenmin Li, Wei Ni, Yongsheng Yin and Xiaolei Wang (<i>Hefei University of Technology</i>)

P2-43	0346: Fabrication of High-performance a-IGZO Thin-film Transistor with Post-annealing Treatment
	Tiantian Pi, Dongqi Xiao, Hui Yang, Xiaohan Wu, Wenjun Liu, Shijin Ding and David Wei Zhang (<i>Fudan University</i>)
P2-44	0350: Development of MEMS Capacitive Mirror Structure with CMOS Compatible Process
	Wei Liu, Chengpeng Duan, Defu Guo, Peng Wang, Hanlin Qin, Shuai Yuan and Qinwei Ou (<i>Xi'an Zhongke Lead IR-Tech Co., Ltd.; Xidian University</i>)
P2-45	0362: AlGaIn/GaN HEMTs with Electric Field Modulation Effect: A Comprehensive Study
	Haijun Guo, Chunwei Zhang, Hao Kan and Chao Cao (<i>University of Jinan; Shandong University</i>)

Friday

Friday, October 29, 8: 30 – 10: 00

Thursday, October 29, 8: 30 – 10: 00

Keynote Session K4

- K4-1** **Always-On Sensor Nodes Entirely Powered by Sustainable Energy Sources –
Enabling a Smarter, Greener and Better World (8: 30-9: 15)**
Prof. Massimo Alioto, National University of Singapore, Singapore

Friday, October 29, 10: 15– 12: 15

Friday, October 29, 10: 15 – 12: 15
Session A6 : EDA Technology I

	Title
1	0353: Modeling and Simulation of the Electromigration for Interconnects Design and Reliability Prediction (invited paper)
10:15 ~10:45	Xiaoyan Liu (<i>Peking University</i>)
2	0200: Machine Learning in Nanometer AMS Design-for-Reliability (invited paper)
10:45 ~11:15	Tinghuan Chen, Qi Sun and Bei Yu (<i>Chinese University of Hong Kong, Hongkong, China</i>)
3	0118: High-Dimensional Bayesian Optimization for Automated Analog Circuit Design via Add-Graph Structure
11:15 ~11:30	Yan Wang, Changhao Yan, Dian Zhou and Xuan Zeng (<i>Fudan University</i>)

Friday, October 29, 10: 15 – 12: 15
Session B6 : Imaging Sensor I

	Title
1	0047: Novel Photodetectors and Image Sensors based on SOI Substrate (invited paper)
10:15 ~10:45	Jiaxing Zuo, Jing Wan (<i>Fudan University</i>)
2	0205: ZnO Wheatstone bridge for UV light detection (invited paper)
10:45 ~11:15	Wenbo Peng, Xiaochuan Guo, Yahui Cai, Shuwen Guo, Xiaolong Zhao, Yongning He (<i>Xi'an Jiaotong University</i>)
3	0251: All-Inorganic Two-Dimensional Ruddlesden-Popper Perovskite Cs₂PbI₂Cl₂ Nanosheet Films for Self-Powered, Visible-Blind UV Photodetectors (invited paper)
11:15 ~11:45	Yanshuang Ba, Sunjie HuangFu, Miaomiao Li, Junxiao Ma, Weidong Zhu, Dazheng Chen, He Xi, Jincheng Zhang, Chunfu Zhang and Yue Hao (<i>Xidian University</i>)

Friday, October 29, 10: 15 – 12: 15
Session C6 : Power Management

	Title
1	0114: A Cold-Start SECE and BUCK-SECE Hybrid Rectifier for Piezoelectric

	Energy Harvester
10:15 ~10:30	Hongyu Lu, Yinshui Xia (<i>Ningbo University</i>)
2	0210: A High-Sensitivity , Low-Power Dual-Band RF Energy Harvesting and Managing System for Bio-Potential Acquisition
10:30 ~10:45	Yuyuan Tian, Lianxi Liu (<i>Xidian University</i>)
3	0267: Multi-Output SEIPC Multiplied Boost Converter with Exclusive Control
10:45 ~11:00	Yuki Sekine, Shogo Katayama, Yasunori Kobori, Anna Kuwana and Haruo Kobayashi (<i>Gunma University, Japan</i>)
4	0348: A Dual Path Hybrid Step-Up Converter with Enhanced Drive Voltage for Low Voltage Applications
11:00 ~11:15	Hailiang Xiong, Qingbing Zhao, Rui Yang, Zeya Xie, Shaowei Zhen, Dongmin Ding and Bo Zhang (<i>University of Electronic Science and Technology</i>)
5	0349: A Battery Powered Hybrid Dual-Path Step-Up DC-DC Converter with Output Powered Bootstrap Driver
11:15 ~11:30	Qingbing Zhao, Hailiang Xiong, Rui Yang, Zeya Xie, Shaowei Zhen, Dongmin Ding and Bo Zhang (<i>University of Electronic Science and Technology</i>)

<p>Friday, October 29, 10: 15 – 12: 15 Session D6 : Advanced Process II</p>

	Title
1	0365: Controlled Domain Wall Directions within Nanodevices Integrated on the Surface of LiNbO3 Single Crystals (invited paper)
10:15 ~10:45	Jun Jiang , Jie Sun , Chao Wang and Anquan Jiang (<i>Fudan University</i>)
2	0077: Optimization of Protective Layer Process for Micro-bridge Structure based MEMS/Sensors Application
10:45 ~11:00	Bo Zhang , Xiaoxu Kang and Xiaolan Zhong (<i>Shanghai Huahong Grace Semiconductor Manufacturing Corporation; Shanghai IC R&D Center</i>)
3	0182: Investigate Performance of In2O3-based NO2 Gas Sensor with Rod Array Structure
11:00 ~11:15	Hsin-Ying Lee ¹ , Li-Yi Jian , and Ching-Ting Lee (<i>National Cheng Kung University, Taiwan, China; Yuan Ze University, Taiwan, China</i>)
4	0373: Self-powered Electrochromic Windows for Smart Home by Hybridizing

	Enhanced Perovskite Solar Cells
11:15 ~11:30	Qi Jiabin, Qiu Feilong, Zhao Yi (<i>China Nanhu Academy of Electronics and Information Technology</i>)
5	0374: Combined-solvent engineering of HPbI₃ for efficient FAPbI₃ perovskite solar cells
11:30 ~11:45	Wentao Tang, Xudong Yang, Yi Zhao (<i>Nanhu Research Institute of China Electronics Technology Corporation; Zhejiang University; Shanghai Jiao Tong University</i>)

Friday, October 29, 13: 30 – 15: 30

Friday, October 29, 13: 30 – 15: 30

Session A7: EDA Technology II

	Title
1	0093: Machine Learning based SET Propagation Prediction for Large Scale Integrated Circuits
13:30 ~13:45	Ruiqiang Song, Jiageng Shi, Jinjin Shao and Xiaoyu Zhang (<i>National University of Defense Technology</i>)
2	0145: Power Optimization with Reinforcement Learning in Logic Synthesis
13:45 ~14:00	Chenghao Yang and Yinshui Xia (<i>Ningbo University</i>)
3	0204: Highly Efficient Modulo Loop Pipeline For High Level Synthesis
14:00 ~14:15	Chang Wu, Jundong Xie and Kexin Wang (<i>Fudan University</i>)
4	0231: CongestNN: An Bi-Directional Congestion Prediction Framework for Large-Scale Heterogeneous FPGAs
14:10 ~14:30	Chenyue Ma, Yifeng Xiao, Sifei Wang, Jun Yu and Jianli Chen (<i>Fudan University</i>)
5	0232: Analytical Global Placement for Heterogenous FPGAs Based on the eDensity Model
14:30 ~14:45	Huimin Wang, Xingyu Tong, Runming Shi, Sifei Wang, Jun Yu and Jianli Chen (<i>Fudan University</i>)
6	0343: A Practical High-Level Synthesis Framework
14:45 ~15:00	Aoxiang Qin, Minghua Shen and Nong Xiao (<i>Sun Yat-sen University</i>)

Friday, October 29, 13: 30 – 15: 30

Session B7 : Imaging Sensor II

	Title
1	0049: 2D-Materials-Based Self-Driven Photodetectors (invited paper)
13:30 ~13:55	Changjian Zhou and Cary Yang (<i>South China University of Technology; Santa Clara University, USA</i>)
2	0123: CMOS-Compatible Time-of-Flight 3D Imaging Sensors and System (invited paper)
13:55 ~14:20	Shun-Qi Dai, Cristine jin Estrada, An-Nan Xiong, Chen Xu, Jie George Yuan and Mansun Chan (<i>The Hong Kong University of Science and Technology, Hongkong, China; AI Chip Center for Emerging Smart Systems, Hongkong, China; SmartSens Technology</i>)
3	0170: Pixel Design of Ultra-high Speed CMOS Image Sensor (invited paper)
14:20 ~14:45	Peng Feng, Liyuan Liu and Nanjian Wu (<i>Institute of Semiconductors, Chinese Academy of Sciences; Center of Materials Science and Optoelectronics Engineering, University of Chinese Academy of Sciences; Center for Excellence in Brain Science and Intelligence Technology, Chinese Academy of Sciences</i>)
4	0193: A Single-Slope PWM Imaging Method for Multi-Mode Dynamic Vision Sensor
14:45 ~15:00	Qijuan Wu, Mingyu Wang, Jingjing Liu and Wenhong Li (<i>Fudan University</i>)
5	0217: An Efficient Markov Random Field Based Denoising Approach for Dynamic Vision Sensor
15:00 ~15:15	Xi Cheng, Haozhe Zhu, Jingjing Liu, Mingyu Wang and Xiaoyang Zeng (<i>Fudan University</i>)
6	0253: An Efficient Space Spatiotemporal Noise Filter for Dynamic Vision Sensor
15:15 ~15:30	Bohan Feng, Xi Cheng, Jingjing Liu, Mingyu Wang, Wenhong Li and Zheng Zhou (<i>Fudan University</i>)

Friday, October 29, 13: 30 – 15: 30

Session C7 : Clock & High Speed Circuit

	Title
1	0063: A Charge Pump with Perfect Current Matching Applied to Phase-Locked Loop in 65nm CMOS
13:30 ~13:45	Jintao Zu, Haigang Feng (<i>Tsinghua University</i>)

2	0095: A 5-156.25Gb/s high pin efficiency Receiver Based on CNRZ-5 for USB High-Speed Interface
13:45 ~14:00	Zhang Geng, Fangxu Lv, Zhengbin Pang, Heming Wang, Dongbin Lv, Tao Liu and Jinwang Zhang (<i>Air Force Engineering University; National University of Defense Technology</i>)
3	0103: Adaptive DLL Update Scheme for Power Fluctuation Immunity Using Phase Error Detector
14:00 ~14:15	Siman Li, Chris Eom, Jake Jung, Brian Lee, Edwin Kim and Kanyu Cao (<i>Design Center CXMT</i>)
4	0115: A 0.9V Supply 12.5Gb/s LVDS Receiver in 28nm CMOS Process
14:10 ~14:30	Jinrong Li, Jue Wang, Xu Cheng, Yicheng Zeng and Xiaoyang Zeng (<i>Xiangtan University; Fudan University</i>)
5	0131: An Adaptive DFE Using Pattern-Dependent Data-Level Reference in 28nm CMOS Technology
14:30 ~14:45	Ai He, Weixin Gai, Kai Sheng and Ninghuang Li (<i>Peking University</i>)
6	0215: An Enhanced SSCP for Frequency Drift Suppressing in SSPLL
14:45 ~15:00	Chenyue Shi, Shengyuan Zhou and Jing Jin (<i>Shanghai Jiao Tong University</i>)
7	0347: Analysis of Single Events Effects on Supply Regulated LC-Tank Voltage-Controlled Oscillator
15:00 ~15:15	Xi Chen, Qiancheng Guo, Hengzhou Yuan, Zhenyu Wu and Yang Guo (<i>National University of Defense Technology</i>)

Friday, October 29, 15: 45 – 17: 45

Friday, October 29, 15: 45 – 17: 45

Session A8: Device Reliability

	Title
1	0041: Electronic System Reliability Under Radiation Environment from Devices' Radiation Test (invited paper)
15:45 ~16:15	Cher Ming Tan (<i>Chang Gung University, Taiwan, China</i>)
2	0096: Radiation Effects on Hafnia-Based Ferroelectric Tunneling Junctions (invited paper)
16:15	Jinshun Bi (<i>Institute of Microelectronics, chinese academy of sciences</i>)

~16:45	
3	0054: An integrated method for extracting the statistical distribution of RTN time constants(invited paper)
16:45 ~17:15	Mehzabeen Mehedi, Kean H. Tok, Jian F. Zhang, Zhigang Ji, Zengliang Ye, Weidong Zhang and John S. Marsland (<i>Liverpool John Moores University, United Kingdom; Shanghai Jiaotong University</i>)
4	0273: Simulation of SEU Response of Advanced 20 nm FDSOI SRAMs
17:15 ~17:30	Chang Cai, Ze He, Jian Yu, Jie Liu, Gengsheng Chen, Jiyuan Bai and Jun Yu (<i>Fudan University; Chinese Academy of Sciences</i>)

<p>Friday, October 29, 15: 45 – 17: 45</p> <p>Session B8 : Testing & ESD Protection</p>
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	Title
1	0160: CDM Measurement for Bare Dies and Wafers (invited paper)
15:45 ~16:15	Teruo Suzuki (<i>Socionext Inc, Japan</i>)
2	0065: LSI Testing: A Core Technology to a Successful LSI Industry(invited paper)
16:15 ~16:45	Xiaoqing Wen (<i>Kyushu Institute of Technology, Japan</i>)
3	0179: An Overview of Design, Fabrication, and Cooling Techniques of 3D-ICs (invited paper)
16:45 ~17:15	Ibrahim M. Abdel-Motaleb (<i>Northern Illinois University, USA</i>)
4	0101: An On-chip Path Delay Measurement Sensor for Aging Monitoring
17:15 ~17:30	Dongrong Zhang, Qiang Ren and Donglin Su (<i>Beihang University</i>)
5	0320: A LVTSCR-Based Compact Structure for Latch-up Immune
17:30 ~17:45	Songyan Wang, Xiaomei Fan, Zhihua Zhu, Yingtao Zhang, Ruike Chen, Yao Wang and Juin J. Liou (<i>Zhengzhou University</i>)

<p>Friday, October 29, 15: 45 – 17: 45</p> <p>Session C8: Clock Technology</p>

	Title
1	0072: Silicon-Base Flexible-Grid Mode and Wavelength-Selective Switch (invited paper)
15:45	Weiwei Chen (<i>Ningbo University</i>)

~16:15	
2	0356: Design and Co-Simulation of QPSK and NRZ/PAM-4/PAM-8 VCSEL-Based Optical Links Utilizing an Integrated System Evaluation Engine (invited paper)
16:15 ~16:45	Fuzhan Chen, Chongyun Zhang, Tianxin Min, Bo Xu, Quan Pan and C. Patrick Yue (<i>The Hong Kong University of Science and Technology, Hongkong, China; Southern University of Science and Technology; LiPHY Communications Limited, Hongkong, China</i>)
3	0360: Design and Verification of a 334-Mb/s DCO-OFDM Li-Fi Transceiver Using Integrated System Evaluation Engine (invited paper)
16:45 ~17:15	Tianxin Min, Jian Kang, Bo Xu, Weimin Shi and C. Patrick Yue (<i>The Hong Kong University of Science and Technology, Hong Kong, China; LiPHY Communications Limited, Hongkong, China</i>)
4	0367: On-Chip Filter for Mitigating EMI-Related Common-Mode Noise in High-Speed PAM-4 Transmitter (invited paper)
17:15 ~17:45	Zilu Liu, Rehan Azmat, Xinyi Liu, Li Wang and C. Patrick Yue (<i>The Hong Kong University of Science and Technology, Hong Kong, China; LiPHY Communications Limited, Hongkong, China</i>)

ASICON 2021 Technical Sessions Overview

Date	Time	Overview			
Oct.26	9:00-12:15	Tutorial Session T1 & T2			
	13:30-18:15	Tutorial Session T3 & T4 & T5			
Oct.27	8: 30-9: 00	Opening			
	9: 00-10: 30	Keynote Session K1-1 & K1-2			
	10: 45-12: 15	Keynote Session K2-1 & K2-2			
	13: 30-15: 30	Session A1 Digital Unit & Module	Session B1 Efficient AI Hardware	Session C1 Analog & Mixed-Signal	Session D1 Device simulation
	15: 45-17: 45	Session A2 Processor & Signal Processing	Session B2 Computing-in/near-Memory I	Session C2 Data Converter	Session D2 Novel Device I
	17: 45-18: 45	Poster Session I			
Oct.28	8: 30-10: 00	Keynote Session K3-1 & K3-2			
	10: 15-12: 15	Special Session A3 Image Processing	Session B3 Computing-in/near-Memory II	Session C3 RF Circuit I	Session D3 Novel Device II
	13: 30-15: 30	Special Session A4 Information Security	Session B4 Memory Device & Circuit I	Session C4 RF Circuit II	Session D4 Novel Device III
	15: 45-17: 45	Special Session A5 Circuit for Medical	Session B5 Memory Device & Circuit II	Session C5 RF Circuit III	Session D5 Advanced Process I
	17: 45-18: 45	Poster Session 2			
Oct.29	8: 30-10: 00	Keynote Session K4-1			
	10: 15-12: 15	Session A6 EDA Technology I	Session B6 Imaging Sensor I	Session C6 Power Management	Session D6 Advanced Process II
	13: 30-15: 30	Session A7 EDA Technology II	Session B7 Imaging Sensor II	Session C7 Clock & High Speed Circuit	
	15: 45-17: 45	Session A8 Device Reliability	Session B8 Testing & ESD Protection	Session C8 Optical Communication	
	19: 00-21: 00	Closing Ceromony			

