

2025 IEEE International Symposium on Circuits and Systems (ISCAS 2025)

**London, United Kingdom
25-28 May 2025**

Pages 1-446



**IEEE Catalog Number: CFP25ISC-POD
ISBN: 979-8-3503-5684-7**

**Copyright © 2025 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP25ISC-POD
ISBN (Print-On-Demand):	979-8-3503-5684-7
ISBN (Online):	979-8-3503-5683-0
ISSN:	0271-4302

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Does the Maximum Stable Amplitude Depend on Reconstruction Filters in Incremental $\Delta\Sigma$ ADCs?	1
<i>Paul Kaesser, Omar Ismail, Joachim Becker, Maurits Ortmanns</i>	
GNN4HHR: A GNN Based Model for Hybrid Hardware Representation	6
<i>Xiao Ji, Yiran He, Zirui Jiang, Haihua Shen</i>	
Novel Generic Two-Amplifier Oscillator Structures	11
<i>Brent J. Maundy, Ahmed S. Elwakil, Costas Psychalinos</i>	
Low-Complexity Linear Feedback Shift Register Architecture for CRC En/Decoding	15
<i>Yok Jye Tang, Jiaxuan Cai, Xinmiao Zhang</i>	
CleanUMamba: A Compact Mamba Network for Speech Denoising Using Channel Pruning	20
<i>Sjoerd Groot, Qinyu Chen, Jan C. Van Gemert, Chang Gao</i>	
Design and Analysis of Latch-Type Comparators for Cryogenic Operations	25
<i>Qibang Zang, Wang Ling Goh, Andres Brito, Anh Tuan Do</i>	
A One-Time Self Calibration Technique for Open-Loop FIA in Noise Shaping SAR Achieving Ultra Gain PVT-Robustness	30
<i>Ruikai Fan, Weifeng Qiao, Musen Lin, Haigang Feng, Zhongfeng Wang, Xinpeng Xing</i>	
Hardware Friendly Transformer Optimization with Dynamic Attention Matrix Fusion	35
<i>Qingyao Yang, Xiaoqin Wang, Yumei Zhou, Qiang Li, Shushan Qiao</i>	
Passive-Integrated Two-Port-Quasi-Reflectionless RF Bandpass Filters with Beyond-3-DB- Bandwidth Flat Group Delay	40
<i>Narsin Iranpour, Li Yang, Roberto Gómez-García, Xi Zhu</i>	
Simulating Spiking Neural Networks with 8-Bit Floating-Point Numbers	45
<i>Pablo Urbizagastegui, André Van Schaik, Runchun Wang</i>	
A Three-Phase Fully-Integrated Reconfigurable Switched-Capacitor Converter for Near-Threshold Computing	50
<i>Yue Zhong, Wing-Hung Ki, Junmin Jiang, Lingfeng Zhu, Yang Liu</i>	
A Generic Circuit Platform of Covering All Rational Numbers for Deterministic Stochastic Computing in the Time Dimension	55
<i>Xiangye Wei, Junjian Ma, Liming Xiu, Yimao Cai</i>	
A Low-Noise, High-Input-Impedance Pre-Amplifier for Piezoelectric MEMS Microphone	60
<i>Weiye Song, Yucong Huang, Zihan Chen, Xingbo Wang, Terry Tao Ye</i>	
Compensation of Excess Loop Delay in Continuous-Time Incremental $\Delta\Sigma$ ADCs	65
<i>Paul Kaesser, Omar Ismail, Joachim Becker, Maurits Ortmanns</i>	
A 40 μ W 915MHz Receiver with Sub-Passive Third-Harmonic Mixer Achieving -88dBm Sensitivity and Multi-Channel Selection	70
<i>Binbin Chen, Heyu Ren, Wenjun Gong, Sirou Li, Liangjian Lyu, C.-J. Richard Shi</i>	
Analysis of Clock Jitter in VCO-ADCs Under Presence of Mismatch and Blocking Signals	75
<i>J. Granizo, V. Medina, L. Hernandez, R. Garvi</i>	

SDLA-Based Logarithmic Amplifier Integrated with Magnitude Discriminator and Time Discriminator for Real-Time ESD Event Detection	80
<i>Chang-Jiun Lai, Ming-Dou Ker</i>	
A Stacked MOSFET-Based RF Switch with Inductive Biasing Network	85
<i>Oguzhan Oezdamar, Valentyn Solomko</i>	
Enhancing HDR Video Compression Based on Deep Effective Bit Depth Adaptation.....	90
<i>Chen Feng, Zihao Qi, Duolikun Danier, Fan Zhang, Xiaozhong Xu, Shan Liu, David Bull</i>	
Incremental $\Delta\Sigma$ ADCs Without Periodic Reset	95
<i>Omar Ismail, Paul Kaesser, Markus Sporer, John G. Kauffman, Maurits Ortmanns</i>	
Enhancing Common Subexpression Elimination Algorithms	100
<i>Bryan Kwan, Denis Onen</i>	
A 0.6V Digital-Intensive Pulse Injection 32-KHz Crystal Oscillator Using Stacked Logic Gates.....	105
<i>Zhizhan Yang, Jun Yin, Rui P. Martins, Pui-In Mak</i>	
A Compact 11-Bit Source-Driver with Adder-Embedded Hybrid DAC for Mobile OLED Displays	110
<i>Fan Guo, Lu Chang, Xin Zheng, Congwei Liao, Shengdong Zhang</i>	
SA-DS: A Dataset for Large Language Model-Driven AI Accelerator Design Generation.....	115
<i>Deepak Vungarala, Mahmoud Nazzal, Mehrdad Morsali, Chao Zhang, Arnob Ghosh, Abdallah Khreishah, Shaahin Angizi</i>	
In-Memory Logic Synthesis Methods Based on Read Decoupled 8T and Transpose 11T SRAMs	119
<i>Feng Wei, Xiaole Cui, Sunrui Zhang</i>	
A High-Speed 8-Bit Single-Channel SAR ADC with Tailored Bit Intervals.....	124
<i>Xinyu Li, Ruida Wang, Mengying Zhang, Congyi Zhu, Zhongfeng Wang, Jun Lin</i>	
Low-Clock Latency SDRR-Based AES	129
<i>Mehmet Ali Cetin, Hayssam El-Razouk</i>	
Live Demonstration: Automated DNN Deployment on the IBM HERMES Project Chip	134
<i>Corey Lammie, Julian Büchel, Athanasios Vasilopoulos, Giacomo Camposampiero, Lionel Noussi, William Andrew Simon, Manuel Le Gallo, Abu Sebastian</i>	
DCHAS: Dual-Channel Heterogeneous Agent System for Optimizing Agricultural Irrigation Decisions	135
<i>Buwen Liu, Lirui Zhi Jia, Shengquan Liu, Bo Kong, Xiaoli Zhang, Guangxin Yu</i>	
A 1/10 DTC Range Reduction Technique in a Fractional-N MDLL Using a Reference Triggered Ring Oscillator	140
<i>Kyumin Kwon, Yaswanth Kumar Cherivirala, David D. Wentzloff</i>	
Deep Brain Neurostimulation Through Engineered Circular Spiral Micro-Coils	145
<i>Tahereh Tala Masalehdan, Changhao Ge, Mahdieh Shojaei Baghini, Huxi Wang, Hossein Eslahi, Roghaieh Parvizi, Hadi Heidari</i>	
An Incremental $\Sigma\Delta$ Current-To-Digital Converter with Dynamically Scalable Power Consumption and No Dead Time.....	150
<i>Antonio Colucci, Massimo Rigo, Carlo Fiocchi, Piero Malcovati, Edoardo Bonizzoni</i>	

A 90%-Random Fault Coverage Area-Efficient LED Driver Current Monitor	154
<i>Antonio Colucci, Massimo Rigo, Alessandro Carbonini, Carlo Fiocchi, Piero Malcovati, Edoardo Bonizzoni</i>	
Instantaneous Capacitance Matching Based Current Response Algorithm for EM Reliability Analysis	158
<i>Zongfeng Ma, Zhong Guan</i>	
An All-Digital Time-Domain Compute-In-Memory Engine for Convolutional Neural Networks in 22nm.....	163
<i>Jie Lou, Florian Freye, Christian Lanius, Tobias Gemmeke</i>	
Efficient Floating-Point Divider Based on Hybrid Cubic-Quadratic Goldschmidt Algorithm.....	168
<i>Liangtao Dai, Haocheng Zhu, Yuan Wang, Xin Lou</i>	
A Benchmarking Platform for DDR4 Memory Performance in Data-Center-Class FPGAs	173
<i>Andrea Galimberti, Gabriele Montanaro, Andrea Motta, Federico Proverbio, Davide Zoni</i>	
A 40-Nm 6.75 TOPS/W Quantization-Aware NN Processor for High-Energy-Efficiency Image Recognition	178
<i>Jun-Wei Yu, Jen-Chieh Cheng, Jia-You Yu, Shih-Yu Pan, Yi-Chung Wu</i>	
MCG-STNet: Multi-Level Cross-View Graph Convolution Networks for Spatio-Temporal Forecasting	183
<i>Hexiang Liu, Qilong Han, Jingyu Sheng, Dan Lu, Min Zheng, Hui Sun</i>	
Masking Based Protection Mechanism for Ascon Against CPA Attack	188
<i>Sying-Jyan Wang, Ho Lam Cheung, Katherine Shu-Min Li</i>	
A 16-Channel ASIC for In-Vivo Measurement of Pancreatic Beta-Cell Activity and FOPP Detection	193
<i>Moustafa Nawito, Harald Richter, Jens Anders, Joachim Burghartz</i>	
On the Density of Periodic Windows for the Rössler System	198
<i>Zbigniew Galias</i>	
Optimization of CRC-Based Single-Bit Error Correction Using a Perfect Hash Table Structure	203
<i>Zouhair Ziani, Stéphane Coulombe, François-Xavier Coudoux, Patrick Corlay</i>	
Adaptive Local Reconstruction for Geometry-Based Point Cloud Compression.....	208
<i>Qian Zhang, Lizhi Hou, Yiling Xu</i>	
A High-Speed High-Precision Comparator with Offset Calibration for SHA-less Pipeline ADCs	213
<i>Shuoxiong Yang, Dejian Li, Peng Wang, Fule Li, Zhihua Wang</i>	
What PNN Says About Spur Rolloff Rates in MASH-Based CP-PLLs with Polynomial Distortion.....	218
<i>Xu Lu, Michael Peter Kennedy</i>	
FPGA-Based Hardware Architecture for Sequence Alignment by Genetic Algorithm	223
<i>Laura H. Garcia, Arkan Alkamil, Mokhles A. Mohsin, Johannes Menzel, Darshika G. Perera</i>	
Super Microscaling: Enhancing Precision and Hardware Efficiency in Deep Learning Quantization.....	228
<i>Jing Feng, Zhuang Cao, Xin Ju, Mei Wen, Yang Guo</i>	
Optimizing Area and Power of MAC Arrays in DNN Accelerators Via Overflow-Aware Partial Sum Management	233
<i>Zhaoteng Meng, Lin Shu, Zhan Li, Kailin Lv, Chang Lin, Long Xiao, Jie Hao</i>	

CIPL: A Fast and Low-Power Level Shifter for Wide-Range Voltage Conversion	238
<i>Weijie Jiang, Xinfu Zheng, Jiacong Sun, Georges Gielen, Marian Verhelst, Wim Dehaene</i>	
Multi-Dimensional Range Joins on HBM-Enabled FPGAs	243
<i>Aman Sinha, Shih-Chen Lo, Bo-Cheng Lai</i>	
An In-Memory Computing Architecture Utilizing a 1Capacitor-1Nanoelectromechanical Switch Device.....	248
<i>Changwoo Park, Jin Wook Lee, Myeongsu Shin, Seungju Lee, Geun Tae Park, Sungsik Hong, Woo Young Choi, Jinwook Burm</i>	
An FPGA-Based Quantization and Acceleration Framework for Multi-DNN	253
<i>Chenyang Li, Han Jiao, Wenjin Huang, Yihua Huang, Fei Liu</i>	
Stress-Dependent MOSFET Model Valid in All Operating Regions for Use in Circuit Simulations	258
<i>Andro Žamboki, Leo Gocan, Josip Mikulic, Gregor Schatzberger, Tvrtko Mandic, Adrijan Baric</i>	
Multidimensional Speech Feature Extraction for Depression Detection Using MDCF-Net	263
<i>Ligang Ren, Yan Ling, Tianxiang He, Juntian Du, Ruiji Xu, Hengtian Zhang, Keji Mao</i>	
Data-Driven Modeling of the Koopman-Oriented Chua Circuit Based on Reservoir Computers.....	268
<i>Gülnur Yilmaz Bingöl, Enis Günay</i>	
A Class-AB Slew Rate-Enhanced OTA for Triboelectric Sensing Interfaces in Smart Textiles.....	273
<i>Alessandro Fortunati, Elisabetta Moisello, Emmanuele Mozzorecchia, Emanuele Quartieri, Antonio Aprile, Edoardo Bonizzoni, Piero Malcovati</i>	
Early Termination of the MSDF Computations Towards Efficient Inference in Neural Networks	278
<i>Sahar Moradi Cherati, Mohsen Barzegar, Leonel Sousa</i>	
A Sliding Mode-Based Filter for Non-Stationary Signals	283
<i>Ludovica Luciano, Arnau Dòria-Cerezo, Josep M. Olm</i>	
A Linear-Regression-Assisted Trimming Scheme for CMOS Voltage Reference	288
<i>Chengyu Che, Yao Jiang, Xinfei Guo, Ka-Meng Lei, Rui Martins, Pui-In Mak</i>	
MDE: Modality Discrimination Enhancement for Multi-Modal Recommendation	293
<i>Hang Zhou, Yucheng Wang, Huijing Zhan</i>	
A Low-Noise High-Precision Dual-Mode Offset Calibration for High-Speed Dynamic Comparators.....	298
<i>Shang Xu, Xujia Luo, Pengzhe Wang, Shuwen Liang, Guoan Wu, Lamin Zhan</i>	
An NoC-Based Latency Upper-Bound Model for Reducing Timestep Length in SNN Communication	303
<i>Ziyang Kang, Shiming Li, Lei Wang, De Ma, Gang Pan</i>	
A 10-12 GHz Embedded Multi-Band LC Notch Filter Low-Noise Amplifier with High Anti-Interference.....	308
<i>Jiabin Wang, Tianlong Zhang, Yidan Cheng, Chenge Wang, Zhiyu Wang, Wei Chen, Faxin Yu</i>	
A 40nm Early-Warning AVFS Design with Path Activation-Based Monitoring Point Optimization	313
<i>Cai Li, Zhuoyuan Li, Kaize Zhou, Lishuo Deng, Junyi Qian, Xiaojie Yin, Kana Meng, Weiwei Shan</i>	

A 4.8dB NF, 3-To-119GHz Distributed LNA with Three-Turn Transformer and Multiple Magnetic Coupling Feedback Network in 28nm CMOS.....	317
<i>Yujia Wang, Jincheng Zhang, Shunli Ma, Junyan Ren</i>	
A Novel Current-Balanced Adaptive Zero Current Detection Scheme for Buck DC-DC Converter	322
<i>Kaishan Zheng, Li Niu, Ying Hou, Xiaosong Wang, Yu Liu</i>	
A 14.9- μ W Quasi-Passive Error-Feedback Noise-Shaping SAR Converter with 78-DB Dynamic Range for Audio Activity Detection	327
<i>Marco Tambussi, Marco Grassi, Gino Rocca, Stefano Valle, Matteo Grandi, Edoardo Bonizzoni, Piero Malcovati</i>	
Hard Thresholding Based Stochastic Algorithm for Distributed Sparse Recovery	332
<i>Ketan Atul Bapat, Shashank S., Mrityunjoy Chakraborty</i>	
A 6-Bit Capacitance-To-Digital Converter with 690nJ/c-S FoM Based on Metal Oxide TFTs for Flexible Electronics	337
<i>Yixin Fu, Zhixuan Wang, Shuai Yuan, Yudi Zhao, Junchen Dong, Kai Zhao</i>	
On-Die Differential Sensing for Monitoring and Analysis of Dynamic Computing Environments	342
<i>Shahriar Hadayeghparast, Xiang Li, Aleksa Deric, Daniel Holcomb</i>	
A Comprehensive Evaluation of Encrypted DNN Inference Methods	347
<i>Yu-Te Ku, Ming-Chien Ho, Yu Xiao, Feng-Hao Liu, Chih-Fan Hsu, Ming-Ching Chang, Shih-Hao Hung, Wei-Chao Chen</i>	
SDTA: An Efficient Sparse DNN Training Accelerator with Data Hierarchical Pre-Fetching and Dynamic Scheduling	352
<i>Mengting Wang, Yuntao Han, Yingchang Mao, Peng Shao, Zhengyan Liu, Qiang Liu</i>	
Analysis and Modeling of Hybrid Boost Converter with Always Reduced Inductor Current and Continuous Output-Current Delivery	357
<i>Yinglyu Xiong, Zehao Tao, Miaomiao Chen, Xun Liu, Ka Nang Leung</i>	
Enhancing SNR in the Audio Band Through Cross-Coupled Source Follower for Piezoelectric Microphones.....	362
<i>Marco Schewa, Richard Gaggl, Bjoern Eversmann, Christian Bretthauer, Henning Ahrens, Ralf Brederlow</i>	
Enhanced CppSim-Based Behavioral Simulator for Predicting Noise Floor and Spurs in Fractional-N Frequency Synthesizers	367
<i>Haoyang Shen, Michael Peter Kennedy</i>	
A 1.92mW 1.6-To-3.2GHz Third-Harmonic Blocker-Tolerant Receiver Front-End Using Dual Current-Reuse N-Path LNA and Band-Switchable Balun.....	372
<i>Rundi Wu, Yetong Wang, Qing Li, Zongle Ma, Keping Wang</i>	
Delay Locked Loop Modulation Driver with Optimal Current Spreading: An Enabler for Megapixel iToF Sensors	377
<i>Gal Fadida, Erez Tadmor</i>	
AO-EDC: An Accuracy-Oriented Error Detection and Correction Scheme for DVFS System Based on Propagation Detection at Half-Path Points	382
<i>Zitao Liang, Jiliang Liu, Kangning Wang, Linnan Li, Zhi Li, Huidong Zhao, Shushan Qiao</i>	
Live Demonstration: A Photovoltaic Dynamic Vision Sensor.....	387
<i>Pablo Fernández-Peramo, Juan A. Leñero-Bardallo, Ángel Rodríguez-Vázquez</i>	

A Burst-Mode Cryogenic Thermal Imager Readout IC with Spatial and Temporal Compression	388
<i>Xiaoyu Lian, Pedro Felzenszwalb, Pradeep R. Guduru, Jacob K. Rosenstein</i>	
CANet: Cellular Aggregation Network for Point Cloud Quality Assessment	393
<i>Lingxia Jiang, Jian Xiong, Chao Zhang, Jiucheng Xie, Hao Gao</i>	
28/39 GHz Dual-Band GaN Power Amplifier Design.....	398
<i>Swarup Chakraborty, Tian Xia</i>	
Efficient Layered New Bit-Flipping QC-MDPC Decoder for BIKE Post-Quantum Cryptography.....	403
<i>Jiaxuan Cai, Xinmiao Zhang</i>	
Reconfigurable Precision INT4-8/FP8 Digital Compute-In-Memory Macro for AI Acceleration	408
<i>Jinane Bazzi, Mohammed E. Fouda, Ahmed Eltawil</i>	
A 230-NA Quiescent Current and Enhanced Transient Performance DC-DC Converter with Suppressed Under/Overshoot for IoT SoCs.....	413
<i>Zhi Li, Huidong Zhao, Zhenhao Huang, Linnan Li, Shushan Qiao</i>	
StreamDCIM: A Tile-Based Streaming Digital CIM Accelerator with Mixed-Stationary Cross- Forwarding Dataflow for Multimodal Transformer.....	417
<i>Shantian Qin, Ziqing Qiang, Zhihua Fan, Wenming Li, Xuejun An, Xiaochun Ye, Dongrui Fan</i>	
XNC: XOR and NOT-Based Lossless Compression for Optimizing Unquantized Embedding Layers in Large Language Models	422
<i>Junghyeok Lee, Jihoon Jang, Hyun Kim</i>	
Robust Transmitter Detection Method for Realizing Long-Distance Visible Light Communication Using Light-Trail Surface by Propeller LED Transmitter	427
<i>Shintaro Arai, Wataru Tafusa, Daisuke Ito</i>	
A Compact SHA256 Accelerator in 22nm for Energy Bounded Use-Cases with 8.2GHash/J.....	432
<i>Shutao Zhang, Xin Fan, Michael Gansen, Tobias Gemmeke</i>	
Improved Encoding for Overfitted Video Codecs	437
<i>Thomas Leguay, Théo Ladune, Pierrick Philippe, Olivier Déforges</i>	
Gap Channel Routing with Fixed Wires	442
<i>Masayuki Shimoda, Atsushi Takahashi, Kosuke Yanagidaira, Mikiko Hirai, Toshikazu Watanabe, Toshimitsu Iwasawa, Chikaaki Kodama</i>	
AquaNeRF: Neural Radiance Fields in Underwater Media with Distractor Removal	447
<i>Luca Gough, Adrian Azzarelli, Fan Zhang, Nantheera Anantrasirichai</i>	
In Pixel VCO-Based 5V 58.5μW Capacitance Sensing for Large Area Electrowetting Arrays	452
<i>Mauricio Velazquez Lopez, Samuel Olafusi, François Berghmans, Nikolas Papadopoulos, Kris Myny</i>	
Analysis of Virtual Load Damping Provision from IBR-Dominated Distribution Networks.....	457
<i>Angelo Brambilla, Davide Del Giudice, Daniele Linaro, Federico Bizzarri</i>	
NES-DM: Representative Attention-Based CNN Network for Medical Image Classification.....	462
<i>Zhuojun Li, Lanjun Wang, Anan Liu</i>	

Cryogenic Circuit Performance Prediction Using Design-Oriented Model (SEKV) on 22nm FDSOI	467
<i>Brian Martinez, Hung-Chi Han, Flávio. E Bergamaschi, Quentin Schmidt, Antoine Faurie, Edoardo Charbon, Yvain Thonnart, Baptiste Jadot, Xavier Jehl, Mikaël Cassé, Christian Enz, Franck Badets</i>	
Reduction of IBR-Dominated Distribution Networks by Multi-Port Synthesis and Clustering	472
<i>D. Del Giudice, S. Haddadi Vaighan, F. Bizzarri, D. Linaro, A. M. Brambilla</i>	
Empowering the Future Workforce: Enhancing Student Participation and Securing Skilled Professionals Through Extracurricular STEM Courses.....	477
<i>Sarah-Lena Debus, Jessica Malerczyk, Lech Kolonko, Giuseppina Lauricella-Giglia, Daniya Belkheir, Ibrahim Cekici, Kolja Thomas, Jörg Velten, Anton Kummert</i>	
Upsampling Improvement for Overfitted Neural Coding.....	482
<i>Pierrick Philippe, Théo Ladune, Gordon Clare, Félix Henry, Théophile Blard, Thomas Leguay</i>	
CPSnB: Compressing and Processing Spatial Similarity Near Memory Bank for DNNs.....	487
<i>Wang Wang, Xin Zhong, Manni Li, Zixu Li, Jiayu Yang, Zijian Huang, Yinyin Lin, Chengchen Wang, Xiankui Xiong</i>	
Structural Health Monitoring System Using Active Ultrasonic Nodes Powered by Optical Fiber	492
<i>Sujay Hosur, Md Arifur Rahman Sarker, Ardavan Javid, Noel Christopher Giebink, Mehdi Kiani</i>	
A Resource-Efficient Dually-Addressable Memory Architecture on FPGA	497
<i>YanJun Yang, Christos Giotis, Themis Prodromakis, Alex Serb</i>	
A Digital Dynamic Power Monitor Based Adaptive Clocking System for Voltage Droop Mitigation in 5nm Mobile Application Processor	502
<i>Byung-Su Kim, Minsu Kim</i>	
A Compact Frequency Comb Generator for Large-Format Superconducting Microwave Kinetic Inductance Detectors	506
<i>SungYoun Seo, Frank Danso, Changsub Kim, Sungho Kim</i>	
Quantum Machine Learning: An Interplay Between Quantum Computing and Machine Learning	511
<i>Jun Qi, Chao-Han Huck Yang, Samuel Yen-Chi Chen, Pin-Yu Chen</i>	
Derivation of Modular Multiple-Input Multiple-Output Converters with Flexible Output Forms and Simple Control	516
<i>Zhigao Liang, Xiaolu Lucia Li, Quanzhen Duan</i>	
Hardware Accelerated Marker-Based Accurate Rigid Object 6-DoF Pose Tracking System.....	521
<i>Hua-Yang Weng, Li-Yang Huang, Shao-Yi Chien</i>	
Improve GPGPU Front-End Efficiency Via Inter-Warp Instruction Sharing	526
<i>Yu-Yu Hsiao, Liang-Chou Chen, Chung-Ho Chen</i>	
An Accurate and Compact Design Integrating Seven Common Nonlinear Functions in Deep Learning	531
<i>Jye-En Wu, Ting-Wei Hu, Chih-Yao Liang, Juinn-Dar Huang</i>	
LoSeVO: Local Sequence Constraints for Deep Visual Odometry	536
<i>Xinchen Zhang, Ran Zhu, Rujun Song, Di He, Tingyong Yang, Zhuoling Xiao, Bo Yan</i>	

ZSCIL: Zero-Shot Class Incremental Learning Method for Signal Recognition	541
<i>Wenjie Sun, Rujun Song, Sidi Liang, Di He, Zhuoling Xiao, Bo Yan</i>	
Memory-Efficient RGBD Visual Odometry for Mobile Devices	546
<i>Li-Yang Huang, Pin-Yi Lin, Shao-Yi Chien</i>	
A 172.1dB-FoM 19.5kHz-BW DT $\Delta\Sigma$ ADC Using CLS-Assisted Fast Self-Quenching Floating Inverter Amplifier with Sampling Noise Cancellation	551
<i>Ximing Wang, Yo Kumano, Tomohiro Nezuka, Yoshikazu Furuta, Tetsuya Iizuka</i>	
LPRE: Logarithmic Posit-Enabled Reconfigurable edge-AI Engine	556
<i>Omkar Kokane, Mukul Lokhande, Gopal Raut, Adam Teman, Santosh Kumar Vishvakarma</i>	
Cloud-Edge Architecture for 4K 360-Degree Video Encoding in FoV-Based Live DASH	561
<i>Andoni Salcedo-Navarro, Miguel Garcia-Pineda, Juan Gutiérrez-Aguado</i>	
A 389 μ m ² 26.7nW 8-Bit 100kS/s SAR ADC with Hybrid C-CI DAC	566
<i>Kyungmin Lee, Seungjun Song, Hyungil Chae</i>	
Live Demonstration: Hardware/Software Co-Design to Exploit RRAM Programmability for Emerging Edge Classification Using ArC TWO	570
<i>Cristian Sestito, Georgios Papandroulidakis, Patrick Foster, Spyros Stathopoulos, Shady Agwa, Themis Prodromakis</i>	
Deep Unfolding WMMSE Algorithm and Architecture Co-Design for Relay-Assisted Carrier Aggregation and MU-MIMO Systems	571
<i>Chi-Wei Chen, Shu-Kae Liu, An-Yeu Andy Wu</i>	
Independent Parallel Signal Processing Using Programmable Metasurfaces	576
<i>Javad Shabanpour</i>	
A 0.8V, 113nW Single-BJT Sub-BGR Using an nMOS PTAT Amplifier at 0.9V Supply	581
<i>Joan Aymerich, Chutham Sawigun, Burak Kahraman, Jose Cisneros-Fernandez, Xiaolin Yang, Carolina Mora Lopez</i>	
CAMC: A Multi-Chiplet Accelerator with Heterogeneous Memory-Based Computing Architecture for DNN Training	585
<i>Xiaobai Chen, Hao Dong, Jiacheng Mei, Jun Li, Yifei Tian, Jieming Yin, Fu Xiao</i>	
Harnessing GPU Acceleration for Exact DNA Sequence Matching Via the KMP Algorithm.....	590
<i>Beatrice Branchini, Pierluigi Negro, Ian Di Dio Lavore, Marco D. Santambrogio</i>	
Genetic Motifs as a Blueprint for Mismatch-Tolerant Neuromorphic Computing	595
<i>Tommaso Boccatto, Dmitrii Zendrikov, Nicola Toschi, Giacomo Indiveri</i>	
Cross Technology Prediction for SRAM Stability Analysis	600
<i>Jihene Bouhlila, Rainer Buchty, Mladen Berekovic</i>	
A Compact Full Pipeline Architecture of SM3 Algorithm with High Throughput and High Efficiency	605
<i>Tuo Li, Chao Cheng, Changhong Wang, Ruiting Wang, Xiaofeng Zou, Dunshan Yu</i>	
A Novel Ultra-Low-Power, Tunable, LPF and BPF Biquad Based on New Fully Differential Folded-Gain-Boosting	610
<i>Matteo Lombardo, Francesco Centurelli, Pietro Monsurrò, Alessandro Trifiletti</i>	

A Hyperspectral Reconstruction Algorithm Based on a Mask-Free Dual-Camera.....	615
<i>Zeyu Cai, Ziyu Zhang, Gong Cheng, Chunlu Li, Ru Hong, Zilei Zhang, Chang Qiu, Minxia Li, Yufan Jiang, Jie Yang, Chengqian Jin, Feipeng Da</i>	
RISC-V Based Keccak Co-Processor for NIST Post-Quantum Cryptography Standards.....	620
<i>Alessandra Dolmeta, Valeria Piscopo, Mattia Mirigaldi, Maurizio Martina, Guido Masera</i>	
Real-Time ORB Accelerator with ROS Integration for Embedded FPGA SoCs.....	625
<i>Andre Costa, Pedro Tomás, Nuno Roma, Nuno Neves</i>	
A Floating-Point SRAM-Based CIM Macro with Asynchronous Normalization and Parallel Sorting Alignment.....	630
<i>Zhiting Lin, Xin Wang, Xiaofeng Song, Dongcheng Wang, Rongtao Li, Shichen Yu, Wenqiang Zhang, Yu Liu, Xin Li, Xiulong Wu</i>	
A State-Space Model for the Analysis of VCO-Based Filters Using PFM.....	635
<i>Simon Ooghe, Luis Hernandez, Johan Raman, Pieter Rombouts</i>	
A Novel Approximate Multiplier Based on Improved Logarithmic and Antilogarithmic Conversions	640
<i>Gennaro Di Meo, Davide De Caro, Luca Tegazzini, Ettore Napoli, Antonio G. M. Strollo</i>	
A Lightweight Peripheral Design for RRAM-Based LUTs.....	644
<i>Philipp Grothe, Christoph Hübner, Rainer Buchty, Mladen Berekovic, Saleh Mulhem</i>	
Mitigation of Vertical Fixed Pattern Noise in CMOS Image Sensors Through Analog Offset Dithering and Dynamic Clock Adjustment.....	649
<i>Jaemin Jung, Sungyong Kim, Shinhwan Lim, Kyoungmin Koh, Hae-Seung Lee</i>	
Spectrogram-Based Spectrum Prediction for AI-Managed Cognitive-Radio Edge Devices	654
<i>A. Rojas, G. Liñán-Cembrano, G. Jovanovic Dolecek, J. M. De La Rosa</i>	
Live Demonstration: RF Frame Detection Using YOLOv8 for Spectrum Sensing.....	658
<i>A. Rojas, G. Liñán-Cembrano, G. Jovanovic Dolecek, J. M. De La Rosa</i>	
A BW-Extended Multi-Band Receiver with High-Order N-Path Filtering at RF Front-End and BB Achieving 200MHz BW and 36.5dBm OB-IIP3	659
<i>Gengzhen Qi, Yunchu Li, Shaolin Liao, Pui-In Mak</i>	
Intelligent Rapid Antenna Design with Integrated Impedance Matching Network for Wireless Communication System.....	663
<i>Jiaoran Wang, Jungang Zhang, Yuqi Ding, M. Talha Kirimi, Nosrat Mirzai, John Mercer, Hadi Heidari</i>	
Live Demonstration: AI-Assisted High-Level Design of Sigma-Delta Modulators	668
<i>P. Manrique-Merchán, G. Liñán-Cembrano, J. M. De La Rosa</i>	
FlexPE: Flexible Processing Elements for Workload Optimization and Acceleration on FPGAs.....	669
<i>Lasya Punya Sree Gundumogula, Rachana Kaparthy, Himanshu Rai, Nanditha Rao</i>	
Objective Quality Assessment of Full-Scene Resampling-Based Coding for VVC Standard.....	674
<i>Kra Tchimbíé Koffi, Thomas Amestoy, Elie Mora, Anissa Mokraoui</i>	
Network-On-Interposer Co-Design for Heterogeneous Chiplet-Based Integrated Systems.....	679
<i>Andres Ayes, Eby G. Friedman, Marilyn Wolf</i>	
A Wireless Headstage Based on a 32-Channel Neuromodulator Integrated Circuit.....	684
<i>Markus Sporer, Dominik Fritschi, Nicolas Graber, Stefan Reich, Maurits Ortmanns</i>	

CMOS Ring Oscillator Ising Machine Using Sub-Harmonic Injection Locking	689
<i>Eslam Elmitwalli, Zeljko Ignjatovic, Selçuk Köse</i>	
Machine Learning and Genetic Programming-Based Behavioral Modeling Approaches of Li-Ion Batteries.....	694
<i>Giulia Di Capua, Mario Molinara, Antonio Maffucci, Francesco Porpora, Nicola Femia, Nunzio Oliva</i>	
A 1 GHz 27 mW Low-Power Direct Digital Synthesizer for RF Carrier Signal Generation in Trapped-Ion Quantum Computer Operating at 9.4K	699
<i>Paul Shine Eugene, Peter Toth, Alexander Meyer, Sebastian Halama, Vadim Issakov</i>	
DPAcc: An FPGA-Based Differential Privacy Acceleration Framework	704
<i>Ao Dong, Yuxiang Wang, Pengyang Li, Yifei Tian, Xiaobai Chen, Jieming Yin</i>	
FlexAcc: Accelerating Batch Normalization Through GPU-FPGA Integration.....	709
<i>Haishuai Zhang, Zhihao Li, Pengyang Li, Xuehuai Shi, Xiaobai Chen, Jieming Yin</i>	
SSMA: A Memory-Efficient Accelerator for State Space Model in the Mamba	714
<i>Qiwei Dong, Siyu Zhang, Zhongfeng Wang</i>	
A Robust DC-DC Converter with Negative Voltage Bootstrapping Using Low-Temperature Poly-Si Oxide TFTs for Fully Flexible Circuits	719
<i>Yuxuan Zhu, Lingxiao Qian, Congwei Liao, Shengdong Zhang</i>	
Dynamic ADC and Equalizer Adaptation with Background SNR Monitoring for a DSP-Based PAM-4 Receiver	724
<i>You-Cheng Tu, Rui-Yong Kuo, Wei-Zen Chen</i>	
SalIC: Saliency-Enhanced Learned Image Compression for Balanced Quality.....	729
<i>Mingwei He, Jiaqi Zou, Yifei Xu, Songlin Sun, Jintao Wang</i>	
A Reference Double-Sampling PLL-Based Eight Phase Clock Generator Achieving 0.18mW/GHz/Phase and -251.9dB FOMJitter-N	734
<i>Sirou Li, Weijia Zeng, Kaiyun Cao, Liangjian Lyu, C.-J. Richard Shi</i>	
A 1FeFET-1T-1C Based Compute-In-Memory Macro with Capacitor Reused Pipeline SAR ADC	739
<i>Minghan Jiang, Rui Xiao, Xinran Li, Shuaiting Li, Xiaolei Zhu, Yishu Zhang, Haibin Shen, Kejie Huang</i>	
Learning More Comprehensive Representations of ICs for Enhanced Routing Congestion Prediction	744
<i>Yinjie Chen, Di Zhang, Hua Chen</i>	
Design and Application of a Novel Readout ASIC for SiPM Array	749
<i>Xiang Zhang, Yonggang Wang, Xinchu Xu, Huandong Huang</i>	
CIT-CTPlacer: An Analytical RDL Chiplet-Terminal Co-Placement Algorithm for Large-Scale 2.5D IC	754
<i>Xihao Liang, Yujie Wang, Xupengkai Lu, Lang Feng, Jixiang Zhu, Ying Wang, Yinhe Han</i>	
Live Demonstration: Securing Wireless ICs Against Supply Chain Attacks Using SyncLock	759
<i>Alán Rodrigo Díaz-Rizo, Hassan Aboushady, Haralampos-G. Stratigopoulos</i>	
A 5.8-GHz 4.8-MW -247.1dB-FoM DTC-Free Sampling $\Delta\Sigma$ Fractional-N PLL with Embedded Phase Interpolation	760
<i>Ye Wang, Jingcheng Tao, Chun-Huat Heng</i>	

A 12-Bit SAR ADC Utilizing Background Capacitor Calibration with LLM-LMS Algorithm	765
<i>Chung-Wei Lin, Yung-Hui Chung</i>	
A 3.5 ppm/°C Novel Curvature-Compensated Bandgap Reference Using Four-Input Current Feedback Amplifier with 3σ Inaccuracy of $\pm 0.05\%$	770
<i>Kai Jing, Yangpeng Jia, Ronghui Liu, Fengjuan Wang, Yuan Yang</i>	
A High-Density Transcranial Electrical Stimulation System on Chip with Real-Time Bio- Impedance Sensing	775
<i>Shaokai Yuan, Jinghan Yao, Yufei Liu, Jianzheng Li, Yajie Qin</i>	
HieRFP: A Hierarchical Recognition and Floorplanning Framework for Reusable Modules	779
<i>Zixuan Li, Kanglin Tian, Jianwang Zhai, Zirui Li, Kang Zhao</i>	
Monotonic Neural Network Based Rate-Distortion Modeling for H.266/VVC	784
<i>Xiang Pan, Zhenzhong Chen</i>	
A Novel Stereo Matching Network for Underwater Scenes	789
<i>Lywei Zhu, Yakun Ju, Ying Gao</i>	
Towards Defining an Efficient and Expandable File Format for AI-Generated Contents	794
<i>Yixin Gao, Runsen Feng, Xin Li, Weiping Li, Zhibo Chen</i>	
Design, Implementation and Performance of an IIoT Node for Vibration Monitoring	799
<i>Igor Bisio, Chiara Garibotto, Aldo Grattarola, Alessandro Iskra, Fabio Lavagetto, Andrea Sciarrone, Matteo Zerbin</i>	
Multi-Scale Feature Extraction for ECG Beat Classification Using a CNN-Transformer Network with Imbalance Mitigation	803
<i>Allam Jaya Prakash, Mohamed Atef</i>	
InternVQA: Advancing Compressed Video Quality Assessment with Distilling Large Foundation Model	808
<i>Fengbin Guan, Zihao Yu, Yiting Lu, Xin Li, Zhibo Chen</i>	
A Self-Powered Pressure Sensor System Based on Triboelectric Energy Harvesting for Knee Implants	813
<i>Trinh Van Thai, Phan Dang Hung, Yunchul Chung, Kim Hoang Nguyen, Sohyun Ha, Minkyu Je</i>	
Function-Reused Oscillator-PA for IoT Applications	817
<i>Jiawen Chen, Kai Xu, Robert Bogdan Staszewski</i>	
HyperGS: Efficient Real-Time 3D Gaussian Rendering Processor Through Hierarchical Sorting	822
<i>Cheng Nian, Xiaorui Mo, Jiaying Peng, Weiyi Zhang, Fasih Ud Din Farrukh, Fei Chen, Chun Zhang</i>	
A Reconfigurable Digital Compute-In-Memory Heterogeneous Macro for Differential Frame Convolution and Spiking Neural Network	827
<i>Cheng Zhao, Li Lun, Zhenhui Dai, Haozhe Chen, Yingying Cui, Xiaoxin Cui</i>	
A CMOS Power-Efficient Continuous-Time Delta-Sigma Resistor-To-Digital Converter for Force- Sensing Applications	832
<i>Meng-Hsun Yu, Ruo-An Lin, Min-Hua Chang, Chia-Chen Hsieh, Yu-Te Liao</i>	

DyLock: A Dynamic Key-Based SAT and Structural Attacks Resilient Low-Overhead Logic Locking.....	837
<i>Jugal Gandhi, Diksha Shekhawat, Jaya Dofe, Jai Gopal Pandey</i>	
In-Memory Reconstruction of Compressively-Sampled Signals by Nonlinear Closed-Loop Analog Circuits	842
<i>Piergiulio Mannocci, Giuseppe Falcone, Daniele Ielmini</i>	
Ising Machine Based on Charge Re-Distribution	847
<i>Yongchao Liu, Lianlong Sun, Matthew Burns, Michael Huang, Hui Wu</i>	
Miniaturized Wirelessly-Powered Biphasic Current Stimulator for Implantable Neurostimulation	852
<i>Chang-Chun Yang, Ming-Dou Ker</i>	
ZergPPU: An Evolutionary Multi-Mode Post Processor for Vision Neural Networks	857
<i>Weilun Wang, Chen Chao, Zheng Wang</i>	
A 41.7 MS/s 2.4 Ps-Rms-Jitter Time Converter with 4-Core Interleaved Analog-Multiplexed Architecture	862
<i>Francesco Malanga, Mehmet Caglar Koca, Mehmet Ali Uluisik, Giulia Acconcia, Ivan Rech</i>	
TRUE-BSG: A True Random Bit-Stream Generator for Fast and Efficient Stochastic Computing	867
<i>Mehran Shoushtari Moghadam, Shelby Williams, Abu Kaisar Mohammad Masum, M. Hassan Najafi, Sercan Aygun, Magdy Bayoumi</i>	
GASA: Rank-Sliced Gather-Scatter Activations and Application to Sparsity-Preserving Parameter-Efficient Fine-Tuning	872
<i>H. T. Kung, Andrew Sabot</i>	
Cost-Effective Reconfigurable MCM with Common-Value Elimination and Alignment	877
<i>Kihwan Kim, Xuan Truong Nguyen, Dongsuk-Jeon, Hyuk-Jae Lee</i>	
An Effective Digital Calibration Method Based on Volterra Neural Network for Pipeline ADCs	882
<i>Yuguo Xiang, Danfeng Zhai, Junyan Ren, Fan Ye</i>	
A 75-MHz-BW 3rd-Order Time-Interleaved Noise-Shaping SAR ADC with Shared EF-CIFF Loop Filter and Ring Buffer	887
<i>Xiyu He, Yi Zhong, Nan Sun, Lu Jie</i>	
Efficient Circuit Performance Prediction Using Machine Learning: From Schematic to Layout and Silicon Measurement with Minimal Data Input	892
<i>Dimple Vijay Kochar, Maitreyi Ashok, John Cohn, Anantha P. Chandrakasan, Xin Zhang</i>	
A 240-MV 33.8- μ V/ $^{\circ}$ C 1.5-NW Voltage Detector for Energy Harvesting	897
<i>Wenjun Gong, Binbin Chen, Liangjian Lyu, C.-J. Richard Shi</i>	
Multiple Sampling and Pixel-Wise Accumulation in CMOS Capacitive Sensor Array System for Real-Time Droplet Analysis	902
<i>Lin-Hung Lai, Wen-Yue Lin, Yu-Chen Hung, Yu-Hsian Wang, Hsi-Hao Huang, Chen-Yi Lee</i>	
Live Demonstration: Crowdsourcing Cardiopulmonary Sound Labeling Via Gamified Interactive Learning (HEALSound)	907
<i>Xuya Jiang, Changyan Chen, Yichen Long, Huajie Huang, Qing Zhang, Yuhang Zhang, Jian Zhao, Rui Pan, Yongfu Li</i>	

CLIP-DQA: Blindly Evaluating Dehazed Images from Global and Local Perspectives Using CLIP.....	908
<i>Yirui Zeng, Jun Fu, Hadi Amirpour, Huasheng Wang, Guanghui Yue, Hantao Liu, Ying Chen, Wei Zhou</i>	
HEALSound: Healthcare Education and Labeling for Cardiopulmonary Sounds.....	913
<i>Yichen Long, Changyan Chen, Huajie Huang, Xuya Jiang, Qing Zhang, Yuhang Zhang, Jian Zhao, Rui Pan, Yongfu Li</i>	
Multi-View Joint Online LiDAR-Camera Extrinsic Calibration	918
<i>Zecheng Wu, Mingyu Liu, Xin Jin</i>	
Gain Cell-Based Analog Content Addressable Memory for Dynamic Associative Tasks in AI.....	923
<i>Paul-Philipp Manea, Nathan Leroux, Emre Nefci, John Paul Strachan</i>	
MTJ Based Temperature-Adaptive VCO (TAVCO) for Compensating CP-PLL Frequency Drift	928
<i>Yongliang Zhou, Jingxue Zhong, Yingxue Sun, Chengxing Dai, Weizhe Tan, Chunyu Peng, Wenjuan Lu, Xin Li, Zhiting Lin, Xiulong Wu</i>	
An Integer-Only Quantization Framework for Edge Deployment of Large Language Models	933
<i>Yaqi Hu, Zhuqing Yuan, Weichen Gao, Sheng Zhang, Yongpan Liu</i>	
AMS-HD: Acute Mountain Sickness Detection with Hyperdimensional Computing.....	938
<i>Abu Kaisar Mohammad Masum, Reeti Pradhananga, Jonas I. Schmidt, Mehran Shoushtari Moghadam, M. Hassan Najafi, Bige Unluturk, Ulkuhan Guler, Sercan Aygun</i>	
A 550MHz-B and Width 40dB-Gain Range Analog Baseband with Dynamic PVT Compensation Achieving 26.1 dBm OIP3 in 28-Nm CMOS.....	943
<i>Guo Wei, Xuanyan Liu, Tian Tian, Yanshu Guo, Wenqiang Huang, Fule Li, Zhihua Wang, Hanjun Jiang</i>	
A Novel Parallel Convolution-Self-Attention Neural Network Based Calibration Scheme for Pipelined and Pipelined-SAR ADCs	948
<i>Xizhu Peng, Bowen Zhang, Zhifei Lu, Jinda Yang, Jie Pu, He Tang</i>	
Topology-Adaptive Design Automation for Ultra-Wideband CMOS D-Band Antennas.....	953
<i>Shiqi Wang, Qingfeng Zhang, Rui Pan, Yalun Li, Kai Kang, Yun Li</i>	
Live Demonstration: SoC Design of Lightweight Cryptography for Real-Time Monitoring System.....	958
<i>Yi-Hsuan Lee, Po-Chun Chen, Yu-Cheng Huang, Chia-Chou Chuang, Narn-Yih Lee, Pei-Yin Chen</i>	
High-Fidelity, Low-Latency State Detection for 300 Trapped Ion Qubits	959
<i>Kaiji Liu, Zhipeng Gan, Shian Guo, Chenxi Wang, Chuanxin Huang, Xuanzeng Song, Bin Fan, Quanxin Mei, Yukai Wu, Binxiang Qi, Luming Duan</i>	
MiNL: Micro-Images Based Neural Representation for Light Fields	964
<i>Hanxin Zhu, Henan Wang, Zhibo Chen</i>	
Splice, Focus and Relife: High-Resolution Periodic Pattern Generation	969
<i>Xicheng Lan, Wenshuo Gao, Luyao Zhang, Jiaying Liu, Shuai Yang</i>	
A Non-Intrusive Speech Quality Assessment Method for Low-Rate Communication.....	974
<i>Lingxia Lin, Ye Li, Peng Zhang, Xingye Yu, Tianyu Cai, Hongyuan Zou, Min Zheng</i>	
Modeling of Less-Significant Group Quantization for Hybrid CIM Architecture	979
<i>Shaochen Li, Xi Chen, Lingyi Kong, He Wang, Xing Wang, Yi Yang, Xin Si</i>	

ACSNN: A 61.25 TOPS/W, 1.65 Ns Delay SNN Processor that Combines CIM-Inspired Synapse and Asynchronous Architecture	984
<i>Tingran Chen, Yi Zhao, Yuxuan Ran, Yueting Li, Wang Kang, Biao Pan</i>	
AI-Based Optimization of a DC-DC Buck Converter Control Network Across DCM and CCM Operating Region	989
<i>Lorenzo Nikiforos, Giuseppe Gabriele, Francesco Gabriele, Luciano Prono, Fabio Pareschi, Riccardo Rovatti, Gianluca Settici</i>	
Fully Integrated Dynamic Power Cell Allocation SIDO SC DC-DC Converter with a 263.8mV/ns DVS Speed and a 19.8ns Transient Recovery Time	994
<i>Feiyu Li, Qishen Fang, Man-Kay Law</i>	
A 0.74 μ J/Decision and 22.59 TOPS/W Keyword Spotting CIM Processor with Short-Current-Free Multi-Level ReRAM and Adaptive-Decision-Level Nonlinear ADC	998
<i>Dongwook Kim, Hoichang Jeong, Keonhee Park, Seungbin Kim, Sunhong An, Kyuho Lee</i>	
Accuracy-Preserving Layer Normalization Approximations for Efficient Transformer Hardware Accelerators.....	1003
<i>Nazim Altar Koca, Anh Tuan Do, Chip Hong Chang</i>	
Highly Reliable Active Pixel Circuit Based on Dual-Gate TFTs for Dynamic X-Ray Medical Imaging.....	1008
<i>Jiangbo Hu, Yuhan Zhang, Lingxiao Qian, Congwei Liao, Shengdong Zhang</i>	
An FPGA Processor Combining Point Cloud and SNN for DVS-Based ADAS Application	1013
<i>Wenjia Wang, Hongwei Ren, Wenten Yi, Kexun Cheng, Lehao Tan, Ying Cui, Chen Li, Bojun Cheng, Biao Pan</i>	
ResDDQN-FPGA: A Reinforcement Learning Framework for Dynamic and Efficient Control in Resonant DC-DC Converters	1018
<i>Yutong Chen, Hai Li, Lei Gong, Chao Wang</i>	
A Reinforcement Learning-Based Retraining-Free Pruning for Encoder-Based Language Models	1023
<i>Bobin Xie, Renda Han, Guangzhen Yao, Haiming Li, Simeng Zhang, Yutong Chen, Sandong Zhu, Long Zhang</i>	
Realization of Negative Power Reactance.....	1028
<i>Li Ding, Xiaohui Qu, Chi Kong Tse</i>	
AMC: Adaptive Mixed Compression for ML Models Based on Block-Wise Sensitivity	1033
<i>Yeji Lee, Eunbin Park, Youngjoo Lee</i>	
Measured Firmware Management for Integrity of Edge Devices.....	1038
<i>Michael Lazarou, Miltos Grammatikakis, George Kornaros</i>	
Classification-Based False Alarm Suppression for SAR Target Detection.....	1043
<i>Nan Yang, Libo Huang, Zhulin An, Yongjun Xu, Xia Hong, Wing-Kuen Ling</i>	
PDR-KAN: Pipeline-Driven Reconfigurable Accelerator for Kolmogorov–Arnold Networks with Cross-Mode Sparsity Support.....	1048
<i>Wenhui Ou, Zhuoyu Wu, Yike Li, Alexandra Geciova, Zheng Wang, C. Patrick Yue</i>	
NAME: NoC-Based Accelerators Mapping Exploration for High Performance DNN Inference	1053
<i>Jinlun Ji, Hengyue Gao, Heng Zhang, Yuqi Lu, Kai He, Yulong Song, Wenjie Fan, Li Li, Yuxiang Fu</i>	

A Variable Gain Phase Shifter Based on Hybrid Control Scheme.....	1058
<i>Mingfeng Cai, Yan Wang, Lei Zhang</i>	
A Unified FFT/NTT Design for Efficient NTRU Equation Solving in FALCON Cryptography.....	1062
<i>Jun-Hao Liao, Kuan-Ting Cho, Ming-Der Shieh</i>	
PQA-FGS: Piecewise Quadratic Approximation with Fine-Grained Segmentation for High-Precision Non-Linear Computation.....	1067
<i>Lianghua Quan, Bei Wang, Fei Lyu, Hui Chen</i>	
The Photoacoustic Quality-Enhancement Neural Network Processor with the Scalable and End-To-End Architecture by Improving the Sparsity Level	1072
<i>Miao Sun, Zhengyuan Zhang, Jie Ma, Caijie Liang, Boyi Dong, Yange Wang, Zhongzhiguang Lu, Yahui Li, Xiangjun Yin, Shenglong Zhuo, Yifan Wu, Yingjie Cao, Tianyang Zhou, Jian Qian, Patrick Yin Chiang, Lei Qiu, Yuanjin Zheng</i>	
Extended Bandwidth Open-Loop VCO Based ADC Using Interleaving with a Single VCO Channel.....	1077
<i>Subhash Chevella, Ivan O'Connell, Daniel O'Hare</i>	
Enabling Fault Isolation in Fault Injection for Automotive-Grade Circuits Simulation.....	1082
<i>Yulong Liu, Junhao Lin, Yuheng Li, Pingsheng Zhang, Zenan Yan, Yuan Wang, Song Jia</i>	
A 31.25 MHz Bandwidth 52.4 dB SNDR VCO Based ADC with On-Chip Non-Linearity Correction.....	1087
<i>Purushothaman A, Subhash Chevella, Brannick Paraic, Ivan O'Connell</i>	
A 46 TOPS/W In-/Near-Memory Computing Processor for Large Language Model with Extended Sparse Attention	1091
<i>Sunhong An, Hoichang Jeong, Seungbin Kim, Keonhee Park, Dongwook Kim, Kyuho Lee</i>	
Ridge Regression and Iterative Hard-Thresholding Guided Interpolation from Noisy Samples by Prolate Spheroidal Wave Functions.....	1096
<i>Chun-Jen Shih, Jian-Jiun Ding</i>	
Self-Powered and Self-Sensing Floor Tiles and Fall Detection System.....	1101
<i>Gongwei Wang, Junrui Liang</i>	
An Event-Based Line Sensor with Configurable Antagonistic Center Surround	1106
<i>Arturo Di Girolamo, Christian Metzner, Özcan Urhan</i>	
A Sub- μ W Digital Temperature Compensation Architecture for Arbitrary Voltage and Current Reference Generation	1111
<i>Natalie Ownby, Prerana Singaraju, Suprio Bhattacharya, Steven M. Bowers, Benton H. Calhoun</i>	
Optimized and Reconfigurable Hardware Design for ASCON AEAD and Hash Standards.....	1116
<i>Islam Elsadek, Eslam Tawfik</i>	
A Piecewise Multi-Correlation Based Digital Background Calibration Scheme for Pipelined ADCs	1121
<i>Yutao Peng, Zhifei Lu, Lingfeng Bian, Wei Zhang, He Tang, Xizhu Peng</i>	
Low Power Hybrid Residual Amplifier and Comparator Design Based on Complementary Parametric Amplifier	1126
<i>Lei Qian, Guangzu He, Liang Qi, Yongfu Li, Yan Liu</i>	

Automated Penetration Testing for Industrial IoT Systems: Enhancing Efficiency and Reducing Reliance on Human Expertise	1130
<i>Fatim Sbai, Waqar Asif, Lyubomir Ivaylovmarkov, Nagham Saeed</i>	
A 65nm 100MS/s-400MS/s Multi-Column SAR/SS ADC with Reconfigurable 2-8 Bit Resolution for Optical and In-Memory Computing.....	1135
<i>Anying Jiang, Ye Lin, Jiayuan Chen, Wenhe Yin, Yize Wang, Mingqian Yang, Li Du, Yuan Du</i>	
A New 16-Bit IoT ASIC Design for the AES Encryption Algorithm	1140
<i>Doaa Ashmawy, Arash Reyhani-Masoleh</i>	
AI-Based System for Brain Tumor Segmentation and 3D Visualization.....	1145
<i>Rim El Badaoui, Anandaeaswaran Brainthra, Ester Bonmati Coll, Alexandra Psarrou, Barbara Villarini</i>	
SlimSeiz: Efficient Channel-Adaptive Seizure Prediction Using a Mamba-Enhanced Network	1150
<i>Guorui Lu, Jing Peng, Bingyuan Huang, Chang Gao, Todor Stefanov, Yong Hao, Qinyu Chen</i>	
A Resonator-Optimized 15mW 18-50GHz Quad-Core-Six-Mode VCO with 204dBc/Hz FoMT and 0.058mm ² Compact Area in 40nm CMOS.....	1155
<i>Changqi Zhou, Haobin He, Hao He, Jianbo Huang, Shiguang Zhong, Zhijian Chen</i>	
The Adiabatic Capacitive Neuron: A Cross CMOS Technology Performance Comparison.....	1160
<i>Himadri Singh Raghav, Mike Smart, Sachin Maheshwari, Alexander Serb</i>	
A 56-Gb/s 0.39-PJ/bit PAM-4 Transmitter Frontend with Shunt-Ffe Tail-Less Driver and External Bias-Tees	1165
<i>Yooseong Jang, Seokmin Yun, Jeonghyu Yang, Taeho Shin, Eunji Song, Jaeduk Han</i>	
A 1.91 POPS/W Energy-Efficient SRAM Based Signed Multi-Bit Time Domain CIM Architecture	1170
<i>Subhradip Chakraborty, Dinesh Kushwaha, Himanshu Ranjan, Sudeb Dasgupta</i>	
A Deep Learning Accelerator for Modified YOLOv7-Tiny with Shortcut-Aware Layer Fusion	1175
<i>Wei-En Huang, Yi-Shan Huang, Shyh-Jye Jou</i>	
Low Offset, High-Resolution Threshold Logic Design in 22nm FDSOI	1180
<i>Himadri Singh Raghav, Sachin Maheshwari, Mike Smart, Alexander Serb</i>	
RRR: Robust Runtime Reconfigurable Shared Cache Management Scheme for GPGPUs	1185
<i>Varun Venkitaraman, Shrasti Bhargava, Tejeshwar B. Thorawade, K. Kokkiligadda, Rahul Kumar, Virendra Singh</i>	
Online Prediction of Core Body Temperature from Sweat Wearable Printed Sensors Using Recurrent Neural Network	1190
<i>Shu Wang, Silvia Demuru, Céline Lafaye, Jaemin Kim, Brince Paul Kunnel, Cyril Besson, Ilya Kiselev, Vincent Gremeaux, Mathieu Saubade, Danick Briand, Shih-Chii Liu</i>	
CustomFit: Customizing Task-Optimized and Size-Specific Subnets from a Single Base Network During Runtime	1195
<i>Longbiao Cheng, Sheng Zhou, Shih-Chii Liu</i>	
Compact Yet Highly Accurate Printed Classifiers Using Sequential Support Vector Machine Circuits	1200
<i>Ilias Sertaridis, Spyridon Besias, Florentia Afentaki, Konstantinos Balaskas, Georgios Zervakis</i>	

Averaging Dynamic Element Matching Architectures for R-2R Digital-To-Analog Converters	1205
<i>Francesco Gagliardi, Danilo Scintu, Massimo Piotto, Paolo Bruschi, Michele Dei</i>	
Characterization and Mitigation of ADC Noise by Reference Tuning in RRAM-Based Compute-In-Memory	1210
<i>Ying-Hao Wei, Zishen Wan, Brian Crafton, Samuel Spetalnick, Arijit Raychowdhury</i>	
Three-Input Ciphertext Multiplication for Homomorphic Encryption	1215
<i>Sajjad Akherati, Yok Jye Tang, Xinmiao Zhang</i>	
Air Leak Detection Using Sobel-Enhanced YOLO Algorithm from Infrared Images.....	1220
<i>Shuaiang Rong, Emadeldeen Hamdan, Hamed Khaleghi, Aslihan Karatas, Ahmet Enis Cetin</i>	
DPD-NeuralEngine: A 22-Nm 6.6-TOPS/W/mm ² Recurrent Neural Network Accelerator for Wideband Power Amplifier Digital Pre-Distortion	1225
<i>Ang Li, Haolin Wu, Yizhuo Wu, Qinyu Chen, Leo C. N. De Vreede, Chang Gao</i>	
A 99.8-NV/ $\sqrt{\text{Hz}}$ $\Delta\Sigma$ Modulator with an Input-Impedance-Boosted kT/C-Noise-Cancellation Integrator for Biopotential-Signal Acquisition	1230
<i>Jiho Myung, Gichan Yun, Heewon Choe, Yegeun Kim, Sohmyung Ha, Minkyu Je</i>	
Live Demonstration: Real-Time High-Amplitude Signal Acquisition with 2-Channel Modulo ADC	1235
<i>Zeyuan Li, Wenyi Yan, Ruixiang Zhu, Lu Gan, Hongqing Liu</i>	
A 48 Gbps Communication Link Over D-Band Polymer Microwave Fiber	1236
<i>Yu Yan, Vessen Vassilev, Frida Strömbeck, Dapeng Wu, Herbert Zirath</i>	
Effect of Capacitor Mismatch Nonlinearity on Inference Accuracy in Analog Compute-In-Memory Architectures	1240
<i>Abdulkarim Alorf, Brady Taylor, Yiran Chen</i>	
Efficient Bearing Sensor Data Compression Via an Asymmetrical Autoencoder with a Lifting Wavelet Transform Layer	1245
<i>Xin Zhu, Ahmet Enis Çetin</i>	
Enhanced Programmability of Reconfigurable Intelligent Surfaces for Smart Cities Using Application-Specific Integrated Circuits	1250
<i>Loukas Petrou, Thorsten Brandt, Yorgos Stratakos, Marco A. Antoniadis, Panos Megerditchian, Konstantinos Michail, Anastasis Kounoudes, Julius Georgiou</i>	
Hardware Implementation of Modified Noisy Gradient Descent Bit-Flipping Decoders	1255
<i>Qingan Li, Wai-Man Tam, Francis C. M. Lau</i>	
Framework for Augmenting Main Memory with CXL-Connected Emerging Memory Alternatives.....	1260
<i>Khakim Akhunov, Dwaipayan Biswas, Emil Karimov, Arvind Sharma, Hyungrock Oh, Maarten Rosmeulen, Julien Ryckaert, James Myers</i>	
A Threshold-Voltage Compensation Circuit for Organic Thin-Film Transistor Active-Matrix Neurostimulation System	1265
<i>Shikai Wang, Bowen Liu, Xueqing Li, Huazhong Yang, Yongpan Liu, Chen Jiang</i>	
Resource-Efficient Compilation of Distributed Quantum Circuits for Solving Large-Scale Wireless Communication Network Problems	1270
<i>Kuan-Cheng Chen, Felix Burt, Shang Yu, Chen-Yu Liu, Min-Hsiu Hsieh, Kin K. Leung</i>	
LiDAR Point Cloud Upsampling with Mamba Architecture.....	1275
<i>Yu-Chi Chung, Che-Lu Chang, Jui-Chiu Chiang</i>	

ScatterSplatting: Enhanced View Synthesis in Scattering Scenarios Via Joint NeRF and Gaussian Splatting	1280
<i>Renrong Hu, Qianyu He, Dongyu Du, Xin Jin</i>	
EFVC: Error-Propagation-Free Neural Video Coding with Reversible Transform	1285
<i>Junqi Liao, Li Li, Dong Liu, Houqiang Li</i>	
Learning-Based Realtime Synthetic Aperture Radar Imaging for Embedded System on Satellite	1290
<i>Tianyang Yu, Bi Wu, Weiqiang Liu</i>	
IVCA: Inter-Relation-Aware Video Complexity Analyzer	1295
<i>Junqi Liao, Yao Li, Zhuoyuan Li, Li Li, Dong Liu</i>	
Functionalized ImmunoFET for Detection of Phosphatidyl-L-Serine.....	1300
<i>Utku Noyan, Sahil Shah, Pamela Abshire</i>	
A Framework for Automatic Synthesis of Neuromorphic Architectures with Heterogeneous Integration of CMOS and Memristors.....	1305
<i>Sarah Johari, Arghavan Mohammadhassani, Anup Das</i>	
OTFS for Joint Radar and Communication: Algorithms, Prototypes, and Experiments	1310
<i>Xiaojuan Zhang, Yonghong Zeng, Francois Chin Po Shin</i>	
A Low-Complexity Sparse Representation Algorithm for DOA Estimation of Coherent Signals with Unknown Mutual Coupling	1315
<i>Mengxia He, S. C. Chan</i>	
EAS-CiM 2.0: Event-Driven Asynchronous Stream-Based Compute-In-Memory Kernels with Scalable Precision.....	1320
<i>R. Sreekumar, M. Morsali, Naomi Solomon, Y. Gao, M. Park, Kyusang Lee, R. K. Krishnamurthy, Mircea R. Stan</i>	
High-Performance Implementations of Classic McEliece KEM on GPUs	1325
<i>Dingyan Xu, Yiwen Gao, Yongbin Zhou, Jian Weng</i>	
An Area-Efficient and Bit-Width Configurable Carry-Save Adder Tree for Spiking Transformers.....	1330
<i>Chaoming Fang, Ziyang Shen, Fengshi Tian, Jie Yang, Mohamad Sawan</i>	
Fast and High-Precision Analog In-Sensor Visual Computing Using Fully Amorphous Metal Oxide Thin-Film Transistors	1335
<i>Lingxiao Qian, Tengyan Huang, Haotian Han, Yuxuan Zhu, Congwei Liao, Shengdong Zhang</i>	
MTJ Based Temperature Compensated Beta Multiplier Voltage Reference.....	1340
<i>Yongliang Zhou, Yingxue Sun, Jingxue Zhong, Chengxing Dai, Weizhe Tan, Chunyu Peng, Xin Li, Zhigang Li, Zhiting Lin, Xiulong Wu</i>	
A Low-Voltage Analog to Information Converter with Hybrid Quantization	1345
<i>Hui Qian, Zhiqiang Wang, Zhengyu Huang, Chenhui Feng</i>	
PAT-ViT: Token Pruning-Based Adversarial Tuning for Robust Vision Transformers	1350
<i>Yun-Hao Yang, Yuan-June Luo, Wan-Jung Chen, An-Yeu Andy Wu, Shih-Hsu Huang, Mladen Berekovic</i>	
An Energy-Efficient Daily Surveillance System with DVS-CIS Sensor Fusion and Event-Based NPU Triggering	1355
<i>Mincheol Cha, Keehyuk Lee, Bobaro Chang, Soosung Kim, Daniel Moon, Taeho Lee, Tae Sung Kim, Hyuk-Jae Lee, Hyunsurk Ryu, Xuan Truong Nguyen</i>	

Communication in Brain Circuits and Systems: A Primer.....	1360
<i>Vladimir Omelyusik, Lily Gebhart, Satish S. Nair</i>	
An SRAM-Based Digital Compute-In-Memory Macro with Dual-Bit Input Data Sparsification and Restructuring for Energy-Efficient MAC	1365
<i>Jingyang Chen, De Ma, Zhiping Yu, Xiaolei Zhu</i>	
An Always Dual-Path Hybrid DC-DC Converter with Multiphase Interleaving Switched-Capacitor Cell Obtaining 45% Output Ripple Reduction	1370
<i>Zhewen Yu, Junwei Huang, Zhiguo Tong, Mo Huang, Rui P. Martins, Yan Lu</i>	
A 250M-2.5GHz Two-Stage Duty-Cycle Corrector with 10%-90% Correction Range and 3-Cycle Correction Latency for Mitigating Aging Effects	1375
<i>Zhiting Li, Lishuo Deng, Cai Li, Changwei Yan, Zhangrui Qian, Weiwei Shan</i>	
A Multi-Modal Contrastive Learning Framework for Intelligent Fault Diagnosis with Enhanced Time-Frequency Alignment.....	1380
<i>Xin Jiang, Depeng Kong, Haibing Yin, Xiaofeng Huang, Weiwei Zhang, Lida Yin, Hang Lu</i>	
APCPU: Adaptive-Pooling Compression Processing Unit for Energy-Efficient DNNs Processing	1385
<i>Wang Wang, Wending Zhao, Manni Li, Zixu Li, Jiayu Yang, Zijian Huang, Yinyin Lin, Chengchen Wang, Xiankui Xiong</i>	
Low-Power Spike-Based Wearable Analytics on RRAM Crossbars	1390
<i>Abhiroop Bhattacharjee, Jinqian Shi, Wei-Chen Chen, Xinxin Wang, Priyadarshini Panda</i>	
A 4.5-Track Standard Cell Library with Buried Power Rails in 7nm Node	1395
<i>Kai-Jie Tong, Ting-An Jian, Shang-Mou Zhou, Yi-Jia Wu, Bo-Xiang Yang, Meng-Ru Lin, Ming-Yi Huang, Shi-Xian Tang, Ya-Zhu Yang, Zheng-Jie Peng, Yu-Cheng Lin, Rung-Bin Lin</i>	
A Low Power Integrate-And-Fire Neuron Circuit Using an a-IGZO-Based Thin-Film Transistor with an Inverter Transition Point Programming Method.....	1400
<i>Yumin Yun, Chanjin Park, Junhyeong Park, Soo-Yeon Lee</i>	
900-NW 876-MHz -79-DBm Pulse-Driven MEMS Oscillator Based Sub-Sampling OOK/FSK WuRX.....	1405
<i>Zhenbo He, Jingchng Tao, Ying Zhang, Yao Zhu, Chun-Huat Heng</i>	
Design of Reliable and Modeling-Attack Resistant Strong PUFs for Lightweight Applications	1409
<i>Sying-Jyan Wang, Gong-Chi Wang, Chi-Yun Chen, Katherine Shu-Min Li</i>	
Blind Quality Assessment of Light Field Images Via Fourier Channel Attention and Multi-Scale Fusion.....	1414
<i>Chengwei Wang, Jian Ma, Junbo Wang, Dong Liang, Linsheng Huang, Qi Zheng, Hao Sheng</i>	
Packetized Pipelined Pillar Feature Net Accelerator for LiDAR 3D Object Detection.....	1419
<i>Qingyu Deng, Xinyu Chen, Wei Zhang, Beining Zhao, Yuhang Gu, Shan Cao, Zhiyuan Jiang</i>	
Reconfigurable Image Acquisition and Processing Subsystem for MPSoCs	1424
<i>Mohamed Soliman, Antti Nurmi, Syed Mohsin Abbas</i>	
A Multiplier-Balanced and Area-Efficient Architecture for Low-Frequency Non-Separable Secondary Transform.....	1429
<i>Chang Liu, Leilei Huang, Chenyu Zhao, Chengkang Huang, Bingjing Hou, Hao Zhang, Yibo Fan</i>	

Impact of Variability Compensation on the Performance of an RRAM-Based 3-SAT Solver	1434
<i>Arne Heitmann, Mohammad Hizzani, John Paul Strachan</i>	
A 87.8% Peak Efficiency SIDO Energy Harvesting System with Emergency Power Supply Mode and Hybrid Zero-Current Detector	1439
<i>Jingtao Fang, Lin Peng, Zilin Yang, Yu Wang, Yongfu Li, Yanhan Zeng</i>	
ReBA: A Hybrid Sparse Reconfigurable Butterfly Accelerator for Solving Partial Differential Equations Via Hardware and Algorithm Co-Design.....	1444
<i>Pinfeng Jiang, Letian Wang, Yilong Fang, Yi Wang, Mingde Zhu, Xiangshui Miao, Xingsheng Wang</i>	
Scaling Co-Packaged Optical Interconnects Using Hybrid 2.5D/3D Integration.....	1449
<i>Austin Rovinski, Yanghui Ou, Christine Ou, Devesh Khilwani, Yuyang Wang, Songli Wang, Sunwoo Lee, Keren Bergman, Alyosha Molnar, Christopher Batten</i>	
Steerable Zero-Shot Neural Architecture Search for Efficient Edge Inference	1454
<i>Simon Narduzzi, Rémy Vuagniaux, Kishan Sharma, Shih-Chii Liu, L. Andrea Dunbar</i>	
Scalable and Real-Time Power System Simulation Based on Heterogeneous CPU-FPGA Co- Operation.....	1459
<i>Hangyu Yang, Jiyuan Liu, Mingwang Xu, Wei Gu, Yongming Tang, He Li</i>	
Performance of Ring Oscillators for Cryogenic Electronics Integration from 4 to 200 K	1464
<i>Conor Power, Mike Asker, Dennis Andrade-Miceli, Dirk Leipold, Imran Bashir, Robert Bogdan Staszewski, Elena Blokhina</i>	
APCer: An Agile Physical Compiler for Multi-Port Register File	1469
<i>Na Bai, Tianbo Ming, Biwei Liu, Yaohua Xu, Yi Wang</i>	
High-Fidelity Object Removal Through Boosting Diffusion Processes.....	1474
<i>Hongbo Xu, Haihui Fan, Xiaoyan Gu, Wei Zhang, Wu Liu</i>	
Sorted Weight Sectioning for Energy-Efficient Unstructured Sparse DNNs on Compute-In-Memory Crossbars	1479
<i>Matheus Farias, H. T. Kung</i>	
Channel Sensing Based Distance Estimation in Backscattering RF Tag Networks.....	1484
<i>Yang Xie, Yang Li, Abeer Ahmad, Xiao Sha, Petar M. Djuric, Samir R. Das, Milutin Stanacevic</i>	
High Energy Efficiency Spatial Parallel Stochastic Computing for Precision Scalable Neural Processing Unit.....	1489
<i>Yakun Zhou, Jienan Chen</i>	
Diversity-Preserving Robust Watermarking for Diffusion Model Generated Images	1494
<i>Linghong Wan, Li Dong, Diqun Yan, Rangding Wang</i>	
LPerceptual Quality Assessment of AI Generated Content Videos: A Dataset and Benchmark.....	1499
<i>Zhichao Zhang, Wei Sun, Xinyue Li, Yunhao Li, Jun Jia, Xiongkuo Min, Zicheng Zhang, Chunyi Li, Zhongpeng Ji, Fengyu Sun, Shangling Jui, Guangtao Zhai</i>	
Harnessing Forecast Uncertainty in Deep Learning for Time Series Anomaly Detection with Posterior Distribution Scoring	1504
<i>Van Kwan Zhi Koh, Ye Li, Ehsan Shafiee, Zhiping Lin, Bihan Wen</i>	

An SoC Design and Fabrication Hands-On Educational Course Within One Week Using Structured ASIC.....	1509
<i>Hideharu Amano, Atsutake Kosuge, Hirofumi Sumi, Naonobu Shimamoto, Yukinori Ochiai, Yurie Inoue, Tohru Mogami, Yoshio Mita, Makoto Ikeda</i>	
Noise-Induced Simultaneous Firing in Uncoupled Leaky Integrate-And-Fire Circuits	1514
<i>Akio Takada, Tadashi Tsubone</i>	
Kung-Fu: An Energy-Efficient Compute-In-Memory Approach for Neural Network Inference Using Multi-Level Binary Computing Fusion.....	1519
<i>Tianyu Liao, Yiming Chen, Wenjun Tang, Zhonghao Chen, Yu Wang, Huazhong Yang, Xueqing Li</i>	
VaLI: Variability-Aware Fine-Tuning with Low-Rank Adapter and Iterative Training for ReRAM Computation-In-Memory	1524
<i>Tao Wang, Naoko Misawa, Chihiro Matsui, Ken Takeuchi</i>	
Towards Low-Power High-Performance Content-Addressable Memory: A Robust Precharge-Free Approach.....	1529
<i>Ramiro Taco, Esteban Garzón, Adam Teman, Leonid Yavits, Marco Lanuzza</i>	
Piecewise Linear Performance Models for Analog Mixed-Signal Verification.....	1534
<i>Jan Rödel, Carna Zivkovic, Neha Chavan, Sören Kwasigroch, Christoph Grimm</i>	
Design and Optimization of Integrated Switching Regulators Using Pre-Computed Lookup Tables	1539
<i>Giovanni Dalla Colletta, Alberto Dalla Costa, Matteo Agostinelli, Stefano Saggini</i>	
High-Performance Co-Processing Architecture Using SOT-MRAM-Based In-Memory Computing Scheme	1544
<i>Kai Tian, Bi Wu, Ke Chen, Weiqiang Liu</i>	
A 10-Bit SAR ADC with a Low-Kickback-Noise Comparator and a Process-Variation-Independent Capacitive DAC for Biosensing Applications	1549
<i>Yi Feng, Chia-Ling Wei</i>	
NIMA: Near In-Memory High-Precision Accumulation Unit for Heterogeneous Analog/Digital Deep Learning Acceleration	1554
<i>Irem Sanli, Elena Ferro, Athanasios Vasilopoulos, Thomas Boesch, Abu Sebastian, Irem Boybat</i>	
Non-Volatile Content-Addressable Memory for Energy-Efficient & High-Performance Search and Update Operations.....	1559
<i>Alessandro Bedoya, Benjamin Zambrano, Ramiro Taco, Luis Miguel Prócel, Marco Lanuzza, Esteban Garzón</i>	
A 23–29 GHz 3-Stack Power Amplifier in 22nm FD-SOI CMOS Technology	1564
<i>Kun Gao, Jiewen Wang, Yudi Yang, Yuhang Zhang, Zixuan Wang, Wenhua Chen, Zhenghe Feng</i>	
LoRaWAN Architectures in the ISM2400 Band for AgriFood Applications.....	1569
<i>Elena Filipescu, Fabio Scatozza, Giovanni Paolo Colucci, Corrado Puligheddu, Carla Fabiana Chiasserini, Daniele Trincherio</i>	
Stacked Ring Oscillator Design for Broadband Memory Testing from 3MHz to 3.7GHz	1574
<i>Junha Lee, Dongho Shin, Kangyoon Lee</i>	

Collaborative Decoder-Side Motion Vector Refinement for Video Coding	1578
<i>Jialin Li, Zhuoyuan Li, Yao Li, Li Li, Houqiang Li</i>	
A Lightweight and Efficient BRAM-Free NTT Unit for Crystals-Dilithium	1583
<i>Junjie Zhong, Bei Wang, Zeren Zhu, Weiqiang Liu, Yijun Cui</i>	
A Low Phase Noise Dual Core Colpitts Push-Push Type VCO at 78 GHz in 90 nm SiGe BiCMOS Technology	1588
<i>Shuvadip Ghosh, Hao Li, Nils Pohl</i>	
Generalized Shifting-Based PAPR Reduction Architecture for Discrete Multitone Systems.....	1593
<i>Byeong Yong Kong</i>	
A 210-230GHz SiGe Hybrid Mixing System with Pre-And Post-Driving Amplifiers	1598
<i>Xin Zhang, Hao Liu, Fanyi Meng</i>	
Analog Crosstalk Cancellation for High Data Rate Communication Links	1603
<i>Frida Strömbeck, Herbert Zirath</i>	
Design Technology Co-Optimization for CFET SRAM Cells Considering Double-Sided Signal/Power Routing.....	1607
<i>Yu-Cheng Lu, Meng-Lin Wu, Vita Pi-Ho Hu</i>	
Cluster Synchronization and Associative Memory in Adaptive Networks with Neural Plasticity	1612
<i>Matteo Lodi, Francesco Sorrentino, Marco Storace</i>	
A 28GHz 2-By-2 MIMO Transceiver Employing Transformer Gain Equalization Technique	1617
<i>Hang Zhao, Michael M. Green</i>	
Zero-Aware Regularization for Energy-Efficient Inference on Akida Neuromorphic Processor	1622
<i>Takehiro Habara, Takashi Sato, Hiromitsu Awano</i>	
Visual Saliency Prediction for Augmented Reality Videos	1627
<i>Zongyi Xie, Huiyu Duan, Yuxin Zhu, Pengfei Wang, Xiongkuo Min, Guangtao Zhai</i>	
Implantable Closed-Loop Neuromodulation Platform Dedicated to Diabetes Diagnosis and Treatment.....	1632
<i>Razieh Eskandari, Mostafa Katebi, Hui Wu, Ziqi Tan, Yutao Mao, Miad Faezipour, S. Abdollah Mirbozorgi, Mohamad Sawan</i>	
PUF-Based Edge DNN Model IP Protection with Self-Obfuscation and Publicly Verifiable Ownership	1637
<i>Jingdong Jiang, Yue Zheng, Chip-Hong Chang</i>	
Explaining Sigma-Delta Modulators with Pulse Frequency Modulation	1642
<i>Victor Medina, Pieter Rombouts, Luis Hernandez</i>	
A Dynamic Biasing Circuit for Low-Power Push-Pull Input Buffer	1647
<i>Rui Zhang, Yidong Yuan, Peng Wang, Lingxiao Shen, Fule Li, Zhihua Wang, Yi Hu, Zhenguo Li</i>	
An All-Digital Voltage Droop Detector Utilizing a Multi-Phase Clock Assisted Nyquist Counter.....	1651
<i>Zhangrui Qian, Kaize Zhou, Yuxuan Du, Zhiting Li, Weiwei Shan</i>	
Low-Power Complex Multiplier Pin Assignment Based on Spatial and Temporal Signal Properties.....	1656
<i>Per Larsson-Edefors, Erik Börjeson</i>	

Touching Silicon: Educational Use of the Atomic Force Microscope in Circuits and Systems	1660
<i>Marco Carminati, Giorgio Ferrari, Marco Sampietro</i>	
Multiple Glancing at Quality: Benchmark Dataset and Objective Quality Assessment Metric for Low-Light Image Enhancement	1665
<i>Yudong Mao, Peilin Chen, Zhao Wang, Qiuping Jiang, Shiqi Wang</i>	
High Sensing Margin and Parallelism 6T-2MTJ SOT-MRAM Based TCAM for energy-Efficient Similarity Priority Calculation in MANNs.....	1670
<i>Shengchao Zhou, Teng Zou, Zeming Wang, Xianwu Hu, Hongrui Meng, Yajun Wu, Chuxin Zhang, Caihua Wan, Yufeng Xie</i>	
A 55-FJ/Comparison Dynamic Current Comparator with Parasitic Charge Recycling Technique	1675
<i>Nishan Chettri, Antonio Aprile, C. Marco Ippolito, Giuseppe Bruno, Edoardo Bonizzoni, Piero Malcovati</i>	
Smart Pattern Generation on Programmable Dielectrophoresis Array Chip for Single Particle Manipulation	1680
<i>Yu-Hsiang Wang, Wen-Yue Lin, Lin-Hung Lai, Chen-Yi Lee</i>	
High-Throughput Packet Aggregator for the Back-End DAQ of CERN CMS HGCAL Detector	1685
<i>Martim Rosado, Pedro Tomás, Nuno Roma, André David</i>	
A Low-Power Low-Resistance Switched-Capacitors Bandgap Reference Generator with -40°C to 175°C Operative Range.....	1690
<i>Lorenzo Pulcini, Paolo Del Croce, Andrea Baschiroto</i>	
Anti-Counterfeiting Secured Design of a Bandgap Reference Circuit	1695
<i>Hazem H. Hammam, Hassan Aboushady, Haralampos-G. Stratigopoulos</i>	
Efficient Double-Tail Dynamic Comparator Circuit for High-Performance Analog-To-Digital Data Converters	1700
<i>Stefano D'Amico, Antonio Vincenzo Radogna, Giuseppe Grassi</i>	
Design and Analysis of GaN Based Isolated Double-Step-Down Converter for High-Step-Down Application	1705
<i>Hongjie Peng, Ziheng Liu, Ju Gao, Jiayin He, Xin Wang, Jinyan Wang</i>	
Live Demonstration: A Real-Time Event Encoder for Seizure Monitoring on Neuromorphic Hardware	1710
<i>Saptarshi Ghosh, Olympia Gallou, Shyam Narayanan, Jim Bartels, Giacomo Indiveri</i>	
SSD Failure Prediction Model Based on Multimodal Data Fusion.....	1711
<i>Guo Li, Zijun Jing, Jing Li</i>	
Design of a Spurious-Free VCO-ADC for Audio.....	1716
<i>Andres Quintero, Carlos Perez, Pedro Amaral, Dietmar Straeussnigg, Andreas Wiesbauer</i>	
Design of Delta Sigma Modulator Using Approximate Adder with Near-Normal Error Distribution for Fractional-N Frequency Synthesizer.....	1721
<i>Abhinav S, Ishan Acharyya, Umesh Khetan, Mohd Wajid, Abhishek Srivastava</i>	
A High-Gain Three-Stage Auto-Zeroing Residual Amplifier for High-Precision Pipelined SAR ADC	1726
<i>Xu Liu, Renjie Fu, Yiqin Chen, Hongjie Ye, Bi Wang, Zhaohao Wang, Hui Zhang</i>	

ARC: Application-Level Refinement and Cache Mapping for Performance Optimization on the Edge.....	1731
<i>Manolis Katsaragakis, Christos Lamprakos, Peter Kourzanov, Manu Komalan Perumkunnil, Lazaros Papadopoulos, Francky Catthoor, Dimitrios Soudris</i>	
Underwater Optical Wireless Data and Power Transfer System for Internet of Underwater Things.....	1736
<i>Rajeev Kumar Kottilingal, Nandakumar Nambath</i>	
Analog Linearization of VCO-Based ADCs with Machine-Learning-Assisted Co-Design	1741
<i>Viet Nguyen, R. Bogdan Staszewski</i>	
Cryo-CMOS 0.432mW UHF Filter for Scalable Quantum Computing in 22nm FD-SOI Technology	1746
<i>Stavroula Kapoulea, Hossein Eslahi, Zeeshan Ali, Mohammed Waqas Mughal, Meraj Ahmad, Martin Weides, Hadi Heidari</i>	
An SRAM Compute-In-Memory Based NTT Accelerator for CRYSTALS-KYBER.....	1751
<i>Jinyang Hu, Xinyuan Pang, Dong Jiang, Gaopeng Fan, Enyi Yao</i>	
3D IGZO Charge-Coupled Memory DTCO & STCO Analysis for Compute-Near-Memory Applications.....	1756
<i>Bowen Wang, Khakim Akhunov, Hyungrock Oh, Fernando Garcia-Redondo, Yukai Chen, Arvind Sharma, Jiacong Sun, Sahan Gamage, Maarten Rosmeulen, Swaraj Bandhu Mahato, Rishabh Kishore, Subhali Subhechha, Jaydeep Kulkarni, Marian Verhelst, Dwaipayan Biswas, Marie Garcia Bardon, Wim Dehaene, Julien Ryckaert</i>	
A Convoluted Journey from CMOS to Spin Waves	1761
<i>Pantazis Anagnostou, Arne Van Zegbroeck, Said Hamdioui, Christoph Adelman, Florin Ciubotaru, Sorin Cotofana</i>	
A Digital Neuromorphic Architecture for Unsupervised Shortest Path Computation on Real-World Graphs	1766
<i>Arghavan Mohammadhassani, Shadi Matinizadeh, L. M. Varshika, Anup Das</i>	
Machine Learning for Improving Timing Accuracy	1771
<i>Mohamed Amine Riahi, Sani Nassif, Norbert Wehn</i>	
An Efficient and Flexible Hybrid Implementation of Pair and Triplet-Based STDP Learning	1775
<i>Zongfan Wu, Zhibin Luo, Junyi Mai, Enyi Yao</i>	
Fourier Phase Retrieval with Diffusion Priors Guided by Failure Detection	1780
<i>Duoduo Xue, Wenrui Dai, Ziyang Zheng, Xinyu Peng, Junni Zou, Hongkai Xiong</i>	
In-Memory Computing Architecture for Tsetlin Machine Inference Using MTJ-Based Crossbar	1785
<i>Akash Kumar, Vineeth Botsa, Omar Ghazal, Srinivas Boppu, Rishad Shafik</i>	
High Time-Resolution PWM Generator for GaN Converters	1790
<i>Michelangelo Orabona, Stefano Passi, Andrea Gambero, Roberto Bardelli, Francesco D'Angelo</i>	
Enhanced Time Amplifier with Trimming Voltage for Error Reduction in Time-To-Digital Converters	1795
<i>Javad Ahmadi-Farsani, Ion Vornicu, Laurentiu Acasandrei</i>	
Electrostatically Adaptable Current Mirror Based on Germanium Field-Effect Transistors	1800
<i>Andreas Fuchsberger, Alexandra Dobler, Lukas Wind, Andreas Kramer, Julian Kulenkampff, Maximilian Reuter, Daniele Nazzari, Giulio Galderisi, Enrique Prado Navarrete, Johannes Aberl, Moritz Brehm, Jens Trommer, Klaus Hofmann, Masiar Sistani, Walter M. Weber</i>	

A Compact, Programmable, 17 mV to 10 V Compliant, Current Source for Neural Stimulation	1805
<i>Santiago Martínez, Francisco Veirano, Timothy Constandinou, Fernando Silveira</i>	
VOTED – Versal Optimization Toolkit for Education and Heterogeneous Systems Development	1810
<i>Giuseppe Sorrentino, Paolo S. Galfano, Eleonora D’Arnese, Davide Conficconi</i>	
Analytical Layer Assignment with Simulated Annealing Refinement	1815
<i>Zhijie Cai, Min Wei, Peng Zou, Xiqiong Bai, Zhifeng Lin, Jianli Chen</i>	
Memristor Resistance State Tuning with High-Frequency Periodic Inputs.....	1820
<i>I. Messaris, V. Ntinis, D. Prousalis, A. S. Demirkol, R. Tetzlaff, S. Zhang, V. Rana, S. Menzel, A. Ascoli</i>	
Parasitic Capacitance Reduction for a Bi-Directional floating-Base-PNP ESD Device for CAN Bus	1825
<i>Xiahui Wang, Nils Johannes Kimmel, Christian Stromberg, Bhaskar Choubey</i>	
Efficient Lossless Compression with Distribution Quantized Finite-State Autoregressive Model	1829
<i>Yufeng Zhang, Yuxuan Li, Carl James Debono, Weiyao Lin</i>	
A High-Accuracy and Low-Resource Design for Nonlinear Functions in AI Accelerators	1834
<i>Zirui Zhang, Liang Chen, Xin Liu, Dongjun Xu</i>	
FCCQA: A High-Performance FPGA-Based Accelerator for Approximate Nearest Neighbor Search.....	1839
<i>Tianle Miao, Zhipeng Wu, Dejian Li, Yongxiang Lyu, Mang I. Vai, Yu Liu</i>	
MBDS: A MultiBody Dynamics Simulation Dataset for Graph Networks Simulators	1844
<i>Sheng Yang, Tao Peng, Zeyu Li, Fengge Wu, Junsuo Zhao</i>	
Legalization Framework with Design Rule Constraints Enhanced by Monte-Carlo-Based Cell Priority Optimization.....	1849
<i>Benchao Zhu, Guohao Chen, Jiawei Li, Peng Zou, Haokai Sun, Zhifeng Lin, Jianli Chen</i>	
Long-Short-GNN: A Novel Graph Neural Network for Detecting FPGA IP Circuits for Hardware Assurance	1854
<i>Heyi Zhang, Tong Lin, Feng Ji, Deruo Cheng, Yiqiong Shi, Bah Hwee Gwee</i>	
Input-Reflectionless MMIC Bandpass Filter with High-Selectivity Based on GaAs IPD Technology	1859
<i>Jiancheng Dong, Jian Fang, Yingbin Cai, Xu Zhu, Tao Yang</i>	
A New Hardware Trojan Attack on Scan-Obfuscated Logic-Locked Circuits	1862
<i>Anjum Riaz, Gaurav Kumar, Yamuna Prasad, Satyadev Ahlawat, Virendra Singh</i>	
Granular Spintronics-Based Reservoir Computing for Temporal Applications.....	1867
<i>Oliver Fridorf, Lasse Møller Ryan Bjørnskov, Alex Jenkins, Luana Benetti, Sonal Shreya, Yasser Rezaeiyan, Tim Böhnert, Ricardo Ferreira, Farshad Moradi, Hooman Farkhani</i>	
Biased Compressor Based Approximate Multiplier Design Using Genetic Algorithm	1872
<i>Zhiqiang Wen, Yan Sun, Shangshang Yao, Weikang Xu, Jianmin Zhang</i>	
Efficient Digital Beamforming for Satellite Payloads Using a 2D FFT-Based Parallel Architecture.....	1877
<i>Luis M. Garcés-Socarrás, Jorge L. González-Rios, Rakesh Palisetty, Raudel Cuiman, Vu Nguyen Ha, Juan A. Vázquez-Peralvo, Geoffrey Eappen, Ti Ti Nguyen, Juan C. M. Duncan, Symeon Chatzinotas, Björn Ottersten, Calos L. Marcos, Adem Coskun, Stephen King, Salvatore D’Addio, Piero Angeletti</i>	
Performance Analysis of Phoneme Based Voice Recognition System on Different Accents	1882
<i>Ahmet Ayberk Tarçin, Yunus Koç, Dogukan Köse</i>	

SmartNMC: A 1Mb-200 μ W-20fps Near-Imager Spatio-Temporal Inference Hardware Module	1887
<i>William Guicquero, Nicolas Pelletier, Van Thien Nguyen, Jean-Philippe Noël, Manuel Pezzin, Marjorie Gary, Sylvain Choisset</i>	
A Transceiver for NMR Field Probes Integrated in a Low-Power CMOS Process	1892
<i>Guillaume Mocquard, Oskar Björqvist, Klaas P. Pruessmann, Thomas Burger</i>	
Charge Pump Capacitance Ratio Read Out Design System Approach.....	1897
<i>Eusebio Belfiore, Michele Vaiana, Angelo Genova, Carmelo Morello</i>	
A Low-Energy Spiking Neural Network Architecture for Reinforcement Learning Toward Classification Tasks at the Edge	1902
<i>Necati Teoman Bahar, Joshua Ifeanyi Okonkwo, Hasan Ulsan, Ali Muhtaroglu</i>	
Image Quality Vs Performance in Super-Resolution for SAR Ship Classification	1907
<i>Ch Muhammad Awais, Marco Reggiannini, Davide Moroni</i>	
Live Demonstration: Event-Based Learning in Spiking Networks on Analog Hardware Using JAX.....	1912
<i>Elias Arnold, Eric Müller, Johannes Schemmel</i>	
A Nyquist-Rate 128 GS/s 6-Bit 64x Time-Interleaved SAR ADC in 22nm FD-SOI	1913
<i>Christian Rudorf, Nima Lotfi, Sebastian Linnhoff, Enne Wittenhagen, Aantas Kesten, Friedel Gerfers</i>	
MicroViT: A Vision Transformer with Low Complexity Self Attention for Edge Device.....	1918
<i>Novendra Setyawan, Chi-Chia Sun, Mao-Hsiu Hsu, Wen-Kai Kuo, Jun-Wei Hsieh</i>	
FPGA-Par: An Efficient Algorithm for Elegant Partitioning in Multi-FPGA Systems	1923
<i>Hengyue Gao, Chenyang Dai, Jinlun Ji, Bin Yan, Qiyue Zhao, Jiangtao Yuan, Feng Li, Li Li, Yuxiang Fu</i>	
Enabling Machine Learning for Power Modeling Via Artificial Netlist Generation	1928
<i>Philipp Fengler, Junpeng Chen, Sani Nassif, Ulf Schlichtmann</i>	
The Algorithmic and Architectural Optimizations for Highly Efficient Tensor Decomposition Engines	1933
<i>I-Ting Tsai, Chung-An Shen</i>	
A High-Sensitivity and Wide-Dynamic-Range Image Sensor with Extended-Silicon Responsive Spectrum from 254 nm to 1310 nm.....	1938
<i>Tao Ma, Xiaoliu Liu, Xin Jin, Chao Gao, Zhou Zhou, Kai Wang, Yihong Qi</i>	
Neuromorphic Audio Dataset for Predictive Maintenance in Peristaltic Pumps	1942
<i>Juan M. Montes-Sánchez, Juan P. Domínguez-Morales, Saturnino Vicente-Díaz, Ángel Jiménez-Fernández</i>	
A Low-Power BJT-Based Temperature Sensor with Wide Range and High Resolution	1947
<i>Tongyu Luo, Lin Peng, Bincheng Lei, Yubin Xu, Hen Jiang, Hanjie Cai, Yongfu Li, Yanhan Zeng</i>	
An Efficient Training Architecture for Nonlinear Softmax Function in Transformers.....	1952
<i>Haikuo Shao, Zhongfeng Wang</i>	
Portable Sensor System for Real-Time Monitoring of Dust Deposition in Space Applications.....	1957
<i>Florin Ciobanu, Francesco Zanetto, Marco Carminati, Julien Eck, Giorgio Ferrari, Marco Sampietro</i>	

Input-Adaptive Mixed-Precision Framework for Efficient Object Detection	1961
<i>Isaac Jeong, Ji-Ye Jeon, Kihwan Kim, Dongsuk Jeon, Hyuk-Jae Lee</i>	
Inference of Parameterized Fourier Transforms	1966
<i>Rong Zhang, Jian-Jiun Ding, Chun-Jen Shih</i>	
Dynamic Spatial Filtering with Residual Spectral Mapping for Lightweight Multichannel Speech Enhancement	1971
<i>Xingyu Shen, Runze Wang, Wei-Ping Zhu</i>	
A Mutually Coupled High Speed Multi-Phase Clock Distribution Scheme for Improved Signal Integrity	1976
<i>Raghavendra Rukmani Gowrishankar, Kiran Baby, Soumya Ranjan Nayak</i>	
Low-Energy NTT and INTT Architectures for Image Encryption and Decryption.....	1981
<i>Eloisa Barros, Leonardo Antonietti, Rodrigo Lopes, Morgana Da Rosa, Eduardo Da Costa, Rafael Soares</i>	
Enhanced CNN Performance Without Retraining Via Weight Approximation and Data Reuse	1986
<i>Mohammed F. Tolba, Hani Saleh, Baker Mohammad, Mahmoud Al-Qutayri, Thanos Stouraitis</i>	
Radiation-Hardened Design of TCAM for Single-Event Upset Tolerance.....	1991
<i>Jiaqi You, Erya Deng, Zhongkun Shen, You Wang, Weiqiang Liu</i>	
LiCSPA: Lightweight Countermeasure Against Static Power Side-Channel Attacks	1996
<i>Jitendra Bhandari, Mohammed Nabeel, Likhitha Mankali, Ozgur Sinanoglu, Ramesh Karri, Johann Knechtel</i>	
A High-Performance In-Memory Multi-Bit Adder Based on TST-MRAM.....	2001
<i>Erya Deng, Zhongkun Shen, Yu Gong, Weiqiang Liu</i>	
Low Power and High Efficiency Power Management Circuits Based on Flexible LTPO Technologies for Wearable Applications	2006
<i>Yunxi Gou, Xuguang Sun, Leilai Shao, Xiaolei Zhu</i>	
FARMER: An Online-Learning Driven Methodology for Workload Consolidation on Large FPGAs	2011
<i>Gabriele Montanaro, Francesco Trovò, Davide Zoni</i>	
TSCIM: A 28nm Transposed Stochastic CIM Macro for On-Chip Training and Inference	2016
<i>Yu Liu, Yang Lou, Kangkang Mao, Xin Li, Chenghu Dai, Xiulong Wu, Zhiting Lin</i>	
A Refresh-Reduction Digital eDRAM CIM Macro Using Asymmetric Error Tolerance Scheme	2021
<i>Yue Cao, Yuanyuan Han, Keji Zhou, Chengshuo Yu, Tianci Cai, Jianguo Yang</i>	
DERMIS: Toward a Fully-Integrated Large-Area High-Resolution Tactile Slip Sensing Solution	2026
<i>Mark Daniel Alea, Maria Atalaia Rosa, Sara Farfalha, Kris Myny, Georges Gielen</i>	
Hardware Efficient Accelerator for Spiking Transformer with Reconfigurable Parallel Time Step Computing.....	2031
<i>Bo-Yu Chen, Tian-Sheuan Chang</i>	
A Layer-Wise N:M Sparsity Aware Transformer Accelerator Leveraging Temporal Locality with Butterfly Network.....	2036
<i>Qinfan Wang, Yuan Song, Xilong Kang, Qingwen Wei, Cai Hao, Bo Liu</i>	
Grouped Transform for Ultra-Low-Complexity Learned Image Compression	2041
<i>Wen Tan, Youneng Bao, Fanyang Meng, Yongsheng Liang</i>	

A 50 Gb/s Rad-Hard Quad TIA IC for Onboard Satellite Interconnects	2046
<i>Philip Ostrovsky, Aintzane Lujambio, David Lobato</i>	
Enhancing LLM Performance on Hardware Design Generation Task Via Reinforcement Learning	2051
<i>Yifang Zhao, Weimin Fu, Shijie Li, Yi-Xiang Hu, Xiaolong Guo, Yier Jin</i>	
A 22nm All-Digital Fully Synthesizable Adaptive Clock Generator for Fast Frequency Adjustment in AI Processor	2056
<i>Xueping Liu, Le Ye, Tianyu Jia</i>	
A Reconfigurable Dual-Band Bidirectional Image Rejection Mixer for 5G FR2 Applications	2061
<i>Zhenyu Han, Kaixue Ma, Xu Wang</i>	
Rabbit: Dynamic Clock Randomization to Protect Against Side-Channel Attacks	2066
<i>Davide Galli, Matteo Matteucci, Davide Zoni</i>	
A Novel Memristor-Based Majority Logic and Efficient Approximate Full Adder for Image Processing.....	2071
<i>Zhouchao Gan, Yifeng Xiong, Fan Yang, Mengjie Li, Xiangshui Miao, Xingsheng Wang</i>	
A Low-Power Analog Hardware Sigmoid-Based Neural Network for Biomedical Applications	2076
<i>Vassilis Alimisis, Christos Dimas, Andreas Papathanasiou, Paul P. Sotiriadis</i>	
Halfbex: A RISC-V Microarchitecture with Narrow Data Path for Improved Energy Efficiency.....	2081
<i>Āantas Kesten, Tobias Kaiser, Jenny Lichtenstein, Christian Rudolf, Friedel Gerfers</i>	
A Power-Efficient Attention-Infused CNN Hardware Accelerator for RF Spectrum Monitoring	2086
<i>Zhifan Song, Abdelrahman Emad Abdelazim, Pirouz Bazargan Sabet, Franck Wajsbürt, Haralampos-G. Stratigopoulos, Hassan Aboushady</i>	
A 12.6V 130MHz Rail-To-Rail Output Bipolar Amplifier with Overdrive Supply Current Limit.....	2091
<i>Gautam R, Subha Sarkar</i>	
Live Demonstration: 4×4 Memristive Cellular Nonlinear Network in EDGE Detection Operation	2096
<i>Yongmin Wang, Kristoffer Schnieders, Siyuan Jia, Vasileios Niinas, Gennadiy Gvozdev, Felix Cüppers, Susanne Hoffmann-Eifert, Alon Ascoli, Ronald Tetzlaff, Stefan Wiefels, Vikas Rana, Stephan Menzel</i>	
Jumping Memory for Memristive Reservoir Computing	2097
<i>Xinming Shi, Peng Zhou</i>	
A SoC for an Active Implantable Microsystem for Closed-Loop Optogenetic Neuromodulation	2102
<i>Natalia Martínez, Berkay Ozbek, Yan Liu, Dorian Hacı, Peilong Feng, Ahmad Shah Idil, Sara Ghoreishizadeh, Nick Donaldson, Patrick Degenaar, Andrew Jackson, Timothy G. Constandinou</i>	
CSIA-UIIM: A Universal Ising Machine Based on CIM-Friendly Spring-Ising Algorithm.....	2107
<i>Yihao Chen, Zhelong Jiang, Pengcheng Feng, Jinke Yu, Rongxuan Shen, Gang Chen, Zhigang Li, Huaxiang Lu</i>	
Benchmarking Cryogenic Circuits Using 5 nm FinFETs for Quantum Processing.....	2112
<i>Anirban Kar, Shivendra Singh Parihar, Florian Klemme, Yogesh Singh Chauhan, Hussam Amrouch</i>	

Direct Fabrication and Performance Evaluation of InGaZnO Thin-Film Electronics on a Flexible Polyurethane Substrate	2117
<i>Niko Münzenrieder, Luisa Petti, Hugo De Souza Oliveira, Giuseppe Cantarella, Rafael Libanori, André R. Studart</i>	
S-PAM: Superconductor-Semiconductor Interface Circuit with Pulse-Amplitude Modulation	2122
<i>Yerzhan Mustafa, Selçuk Köse</i>	
An Asynchronous Peak Finding Approach for Neuromorphic Depth Sensing in Flash LiDAR	2127
<i>Yiyang Liu, Sarrah M. Patanwala, Alistair Gorman, Istvan Gyongy, Robert K. Henderson</i>	
Real-Time Seizure Detection in Microelectrode Array Based on Z-Test Spike Detection for Hardware Implementation	2132
<i>Gabriel Galeote-Checa, Teresa Serrano Gotarredona, Gabriella Panuccio, Bernabe Linares-Barranco</i>	
A Mixed-Signal Computing-In-Memory Solver for Integer Constrained Least Square Problems	2137
<i>N. V. Kidambi, W. C. Wang, D. Kim, S. Sharma, N. M. Rahman, S. Zhang, S. Mukhopadhyay</i>	
FPGA-Based Wordlength Optimization for DSP	2142
<i>Chenhao Yang, Jinsheng Bian, Erik Börjeson, Per Larsson-Edefors</i>	
Improving Scalability of NoC-Based Neuromorphic Hardware with Compressed AER (C-AER) Protocol	2147
<i>Arghavan Mohammadhassani, Sarah Johari, Krupa Tishbi, Anup Das</i>	
MedBiSeNet: Efficient Bilateral Segmentation Network for Real-Time Medical Image Processing	2152
<i>Jiwon Kim, Kyungkeon Chung, Ghangmin Yun, Jaekyung Lee, Jueun Jung, Bokyoung Seo, Hyejin Lee, Kyuho Lee</i>	
HRC-CIM: Hybrid RRAM-Capacitor Cell Based Compute-In-Memory with High Linearity, Parallelism and Energy Efficiency	2157
<i>Jinshan Li, Zongwei Wang, Hao Ding, Yunfan Yang, Shigeng Zhao, Shengyu Bao, Jingwei Sun, Ruiqing Xie, Zhuoya Chen, Yimao Cai, Ru Huang</i>	
An SDR-Based Monostatic Wi-Fi System with Analog Self-Interference Cancellation for Sensing	2162
<i>Andreas Toftegaard Kristensen, Alexios Balatsoukas-Stimming, Andreas Burg</i>	
A Reconfigurable High-Dynamic Range $\Delta\Sigma$ Front-End with Event-Based Decimation for Bandwidth-Efficient Implantable Neural Interfaces	2167
<i>Natalia Martínez, Juan Sapriza, Davide Schiavone, Giovanni Ansaloni, Luke Bashford, Andrew Jackson, David Atienza, Timothy G. Constandinou</i>	
CDM-QTA: Quantized Training Acceleration for Efficient LoRA Fine-Tuning of Diffusion Model	2172
<i>Jinming Lu, Minghao She, Wendong Mao, Zhongfeng Wang</i>	
Physical Design-Aware Power Side-Channel Leakage Assessment Framework Using Deep Learning	2177
<i>Dipayan Saha, Jingbo Zhou, Farimah Farahmandi</i>	
Measurement and Analysis of Dynamic Energy Consumption in Microelectromechanical Relays	2182
<i>Qi Tang, Elliott Worsey, Mukesh K. Kulsreshath, Yue Fan, Yingying Li, Simon Bleiker, Harold Chong, Frank Niklaus, Dinesh Pamunuwa</i>	
QC-CNN: Highly Quantized Compressive CNN for Efficient Ventricular Arrhythmia Detection in Implantable Cardioverter Defibrillators	2187
<i>Zining Wang, Jian Gao, Weidong Cao, Zhengze Jia, Yiyu Shi, Xuan Zhang</i>	

Advancing Autonomous Vehicle ITS with V2X and V2I Periodic Calibration.....	2192
<i>Wanquan Zhang, Abubakar Yusuf, Xiaochuan Qiu, Olaoluwa Popoola, Muhammad Ali Imran</i>	
Dual Task Learning: A Semi-Supervised Approach to Medical Image Joint Segmentation and Registration	2197
<i>Subrato Bharati, M. Omair Ahmad, M. N. S. Swamy</i>	
360° Active Phase Shifter Using Compact Quadrature Phase Generator and Amplitude Control.....	2202
<i>Meysam Sohani Darban, Behdad Jamadi, Jeffrey Sean Walling</i>	
A High-Speed and Compact On-Chip CMOS Temperature Sensor for 3D-NAND Flash Memory.....	2207
<i>Dojeon Lee, Suhwan Kim</i>	
UbiMoE: A Ubiquitous Mixture-Of-Experts Vision Transformer Accelerator with Hybrid Computation Pattern on FPGA.....	2212
<i>Jiale Dong, Wenqi Lou, Zhendong Zheng, Yunji Qin, Lei Gong, Chao Wang, Xuehai Zhou</i>	
Linearization Angle Widened Predistortion for Hybrid Beamforming Array Utilizing Iterative Post-Weighting	2217
<i>Zeyuan Zhang, Yan Li, Songjie Yang, Ning Wei, Chau Yuen</i>	
Distributed Polarimetric SAR Compression with Joint Deblocking Using Side Information	2222
<i>Paras Maharjan, Sayush Maharjan, Zhu Li, Neil Rogers, George York</i>	
Educational Framework for Power Side-Channel Attacks on Neural Networks in Embedded Systems.....	2227
<i>Rupesh Raj Karn, Prithwish Basu Roy, Johann Knechtel, Ozgur Sinanoglu</i>	
Hardware Security Chip Based on PUF Technology for Real-Time Respiratory Disease Diagnosis System Protection.....	2232
<i>Hsiao-Chi Lin, Meng-Ting Wan, Xiang-Yuan Deng, Sing-An Chiu, Chia-Yu Yeh, Wai-Chi Fang</i>	
GDS2SEM: Diffusion-Based Layout-To-SEM Post-Fabrication Emulation for IC Validation.....	2237
<i>Walaa Amer, Sani Nassif, Fadi Kurdahi</i>	
Efficient CNN-Based Side-Channel Attacks on Dilithium Without Device Access.....	2242
<i>Zehua Qiao, Yuejun Liu, Yongbin Zhou, Yuhao Zhao, Hao Yuan, Dixiao Du</i>	
Efficient Feature Compression for Machines with Global Statistics Preservation	2247
<i>Md Eimran Hossain Eimon, Hyomin Choi, Fabien Racapé, Mateen Ulhaq, Velibor Adzic, Hari Kalva, Borko Furht</i>	
A Reference-Less All-Digital BPSK-Based Clock and Data Recovery Circuitry for Die-To-Die Interfaces	2252
<i>Yi-Ting Yang, Hao-Chiao Hong, Kuo-Hsing Cheng</i>	
Restoration of Bitstream-Corrupted Images: A Mamba-Based Thumbnail-Guided Network	2257
<i>Qiongyang Hu, Yi Wang, Lap-Pui Chau</i>	
LayoutCopilot: LLM-Empowered Analog Layout Design Towards Enhanced Human-Machine Interaction.....	2262
<i>Bingyang Liu, Haoyi Zhang, Xiaohan Gao, Xiyuan Tang, Yibo Lin, Runsheng Wang, Ru Huang</i>	
A Highly Efficient and Compact Pulse-Modulated Class-E RF Power Amplifier with 24.2-DBm Psat and 40% Peak PAE for NB-IoT and GNSS in 22nm FD-SOI CMOS	2267
<i>Merkourios Katsimpris, Thomas Burger, Hua Wang</i>	

LLM Training Workload IO Characteristics.....	2272
<i>Kiran Gunnam, Alex Mohandas, Mahesh Kumar Dhote, Rajesh Bhagwat, Darshan P, Kanaiah Kothalikar</i>	
Design of Linear Battery Charger with Self-Blocking Reverse Current Path for Biomedical Applications.....	2278
<i>Wen-Hsiang Huang, Ming-Dou Ker</i>	
A 62.8 TOPS/W FP-INT Digital Computing-In Memory Processor with Bit-Reordered Adder Tree and Low Active Hierarchical Accumulator	2283
<i>Sunjoon Whang, Sangwoo Ha, Soyeon Um, Sangjin Kim, Hoi-Jun Yoo</i>	
A 2.67 mJ/Frame Video Mamba Accelerator with Importance-Aware Redundancy Elimination and SSM Computing Reformulation.....	2288
<i>Youngjin Moon, Sangwoo Ha, Soyeon Kim, Junha Ryu, Hoi-Jun Yoo, Donghyeon Han</i>	
A 32.65 μ m ² Spin/Area Large Scale Ising CIM with Progressive Circular Dataflow and Bi-Directional eDRAM Cell Array.....	2293
<i>Jingu Lee, Sangwoo Ha, Sunjoon Whang, Soyeon Kim, Sangjin Kim, Soyeon Um, Wooyoung Jo, Hoi-Jun Yoo</i>	
A “Nyquist-Like” Noise Theorem for Linear Periodically-Switched RLC Networks.....	2298
<i>Shanthi Pavan</i>	
A 17.1 TOPS/W FP-INT Transformer Inference Accelerator with Sparsity Boosting and Output Importance-Aware Processing	2303
<i>Jeonggyu So, Seongyon Hong, Jiwon Choi, Wooyoung Jo, Sangjin Kim, Hoi-Jun Yoo, Donghyeon Han</i>	
Optimal Transport Based and Softplus Loss Functions for Anomaly Detection	2308
<i>Kai-Lin Hu, Jian-Jiun Ding</i>	
Low Matchline Voltage Swing Content-Addressable Memory Cell.....	2313
<i>Cristhopher Mosquera, Ramiro Taco, Benjamin Zambrano, Luis Miguel Prócel, Esteban Garzón, Marco Lanuzza</i>	
A Cryogenic High Voltage Analog Switch for Trapped Ion Quantum Computers	2318
<i>Mohammad Abu Zahra, Jens Repp, Michael Sieberer, Matthias Brandl, Ralf Brederlow</i>	
A 51.2 Fps Real-Time 3DGS-SLAM Accelerator Using Diagonal Feeding with Symmetric Alpha Reuse and Voxel-Based 3D Gaussian Cache Management	2323
<i>Hyunnam Joo, Seryeong Kim, Jongjun Park, Junha Ryu, Hoi-Jun Yoo</i>	
Controlled Single-Phase-Shift Modulation Method for a Fully Integrated Dual Active Bridge Converter.....	2328
<i>Francesco Romano, Elisabetta Moisello, Alessandro Liotta, Pietro Giannelli, Giovanni Frattini, Edoardo Bonizzoni, Piero Malcovati</i>	
A 65.1 TOPS/W Digital CIM Processor for Ultra-Low-Bit Transformers with Multiplexer-Based Adder and Scaling Factor-Based Reordering	2333
<i>Nayeong Lee, Sangyeob Kim, Seongyon Hong, Jiwon Choi, Hoi-Jun Yoo</i>	
SA-CIM: A 28nm 16Mb RRAM-Based Sparsity-Aware Compute-In-Memory Macro for Edge AI Algorithm Processing	2338
<i>Hao Ding, Zongwei Wang, Jinshan Li, Shigeng Zhao, Heting Gao, Junbo Ao, Ling Liang, Yimao Cai, Ru Huang</i>	

AxMED: Formal Analysis and Automated Design of Approximate Median Filters Using BDDs	2343
<i>Vojtech Mrazek, Zdenek Vasicek</i>	
A Real-Time 4.31 mJ/Frame Neural-3DGS Processor with Voxel Similarity Memory Management and Opacity-Based Sparsity Generation	2348
<i>Hongseok Lee, Wonhoon Park, Sanghyuk An, Junha Ryu, Hoi-Jun Yoo</i>	
Preliminary Steps Towards a Low Power Integrated Circuit for AgriTech: A Relaxation Oscillator for Stem Impedance Monitoring.....	2353
<i>Mattia Barezzi, Stefano Calvo, Luca Rolle, Danilo Demarchi, Umberto Garlando</i>	
Point Cloud Processing Using Non-Volatile Memories with Circuit and Sensor Noise.....	2358
<i>Minseong Park, Su-In Yi, Suhas Kumar</i>	
A 915MHz 97nW Low-Area Wake-Up Receiver with an Envelope-Tracking Mixer Achieving −73.2dBm Sensitivity	2363
<i>Binbin Chen, Heyu Ren, Wenjun Gong, Liangjian Lyu, C.-J. Richard Shi</i>	
Partial Synchronization in Islanded Microgrid Containing Identical Converters and Ring Network.....	2368
<i>Jingxi Yang, Chi K. Tse, Meng Huang, Dong Liu, Zhenxi Wu, Hua Han</i>	
Impact of Distributed Secondary Control on Transient Stability of Islanded Microgrids	2373
<i>Jingxi Yang, Zhenxi Wu, Chi K. Tse, Meng Huang, Chao Charles Liu, Hua Han</i>	
ITERTL: An Iterative Framework for Fine-Tuning LLMs for RTL Code Generation	2378
<i>Peiyang Wu, Nan Guo, Xiao Xiao, Wenming Li, Xiaochun Ye, Dongrui Fan</i>	
A Hybrid All-NMOS Rectifier with Gate-Biasing Techniques Achieving a 22.3 dB Power Dynamic Range.....	2383
<i>Simeng Yin, Yixin Zhou, Xianguang Li, Jialei Wu, Jinzhe Qin, Hao Zhang, Kaixue Ma, Keping Wang</i>	
Control Loop Architectures for High-Frequency Switching-Mode DC-DC Buck Converters.....	2388
<i>Filippo Boera, Elisabetta Moisello, Cristian Garbossa, Edoardo Bonizzoni</i>	
Analysis and Design of ULV DIGOTAs in 16 nm CMOS FinFET	2393
<i>Ricardo Machado, Pedro Toledo, Luís Bica Oliveira, Miguel Máximo, Mauro Santos, João Oliveira, Paolo Stefano Croveti</i>	
Background Calibration for Mixed Mismatches in TIADC Using Taylor-Volterra-Series-Based Model	2398
<i>Song Wang, Xu Cheng, Ziyu Guo, Jun Han</i>	
15-40 GHz Broadband Variable Gain Amplifier with 24.5 dB Linear-In-Decibel Gain Control Range in SiGe BiCMOS.....	2403
<i>Xun Chen, Jonas Winkelhake, Muh-Dey Wei, Renato Negra</i>	
A 60 GHz Frequency Synthesizer in 0.13 μm SiGe BiCMOS for Biomedical Implant Applications	2407
<i>Adilet Dossanov, Vincent Lammert, Michael Aichner, Vadim Issakov</i>	
Efficient Cell Segmentation and Classification by Leveraging an Auto Prompt Generator and a New Fine-Tuning Strategy	2412
<i>Jeongahn Lee, Wang Haixin, Zhou Jinjia</i>	
SQNR Improvement of Incremental Zoom ADCs with Raised-Order CoI Filter and Dither Injection.....	2417
<i>Lingxin Meng, Menglian Zhao, Zhichao Tan</i>	

A Simple Approach to ECG Motion Artifacts Reduction by MDWD Coefficients Removal	2421
<i>Elisabetta Spinazzola, Luciano Prono, Fabio Pareschi, Riccardo Rovatti, Gianluca Setti</i>	
Variation-Adaptive Negative Bitline and Skip Bitline Pre-Charge Scheme for Low-Power SRAM	2426
<i>Lishuo Deng, Changwei Yan, Yiran Zhang, Xin Si, Weiwei Shan</i>	
Fully-Integrated Differential RRAM Cell Designs with Multi-Level Capability and Enhanced Read Margin	2431
<i>Stefan Pechmann, Peter Reichel, Thorsten Spätling, Amelie Hagelauer</i>	
A DC-Coupled Neural Recording Analog Front-End with Bi-Level Bulk Modulation-Based EDO Compensation in 40nm Bulk CMOS	2436
<i>Arnau Diez-Clos, Xiaohua Huang, Bert Monna, Dante G. Muratore</i>	
A Memory-Based Continuous-Flow FFT Processor with a Conflict-Free In-Place Addressing Scheme Supporting Composite Power Points	2441
<i>Chih-Chia Chang, Hung-Shu Yu, Pei-Yun Tsai</i>	
Machine Learning Based Dynamic Overload Surge Protection System for Electrical Appliances	2446
<i>Janish Gajera, Adla Jahnavi, Nikhil Pinto, Rupinder Kaur, Arghavan Asad, Farah Mohammadi</i>	
A Ring Temperature Sensor for Quantum Applications	2451
<i>Ali Esmailiyan, Eugene Koskin, Dennis Andrade-Miceli, Andrii Sokolov, Teerachot Siriburanon, Dirk Leipold, David J. Redmond, Imran Bashir, Elena Blokhina, R. Bogdan Staszewski</i>	
Partitioning SFQ Circuits for Serial Biasing in Heterogeneous Circuits	2456
<i>Tejumadejesu Oluwadamilare, Eby G. Friedman</i>	
LogSimViT: Logarithmic Similar Pattern Skipping for Hardware Acceleration of ViT	2461
<i>Isaac Jeong, Kihwan Kim, Seongho Jeong, Dongsuk Jeon, Hyuk-Jae Lee</i>	
Experiences Scaffolding a Computer Engineering Project Course to Improve Student Outcomes	2466
<i>Hammond Pearce</i>	
A High In-Band Linearity Gain-Boosted N-Path Filter with BW-Extended	2471
<i>Xujia Luo, Shang Xu, Haotian Zhang, Guoan Wu, Lamin Zhan</i>	
Spiking Neural Network Accelerator Architecture for Differential-Time Representation Using Learned Encoding	2476
<i>Daniel Windhager, Lothar Ratschbacher, Bernhard A. Moser, Michael Lunglmayr</i>	
A Design Study of Power-Efficient Opamp Topologies for Discrete-Time $\Delta\Sigma$ Modulators	2481
<i>Mahmoud Ghoneim, Omar Ismail, John G. Kauffman, Maurits Ortmanns</i>	
A Deep Cascade Framework for Non-Intrusive Power Disaggregation in Solar-Powered Households	2486
<i>Giulia Tanoni, Redemptor Laceda Taloma, Emanuele Principi, Danilo Communiello, Stefano Squartini</i>	
Compact Sub-THz Frequency Conversion Module in 28-Nm CMOS for D-Band Radar Transceiver	2491
<i>Yange Wang, Guanghao Fan, Boyi Dong, Zhongzhiguang Lu, Cao Wan, Yuanjin Zheng</i>	
A -44dB PSRR Analog Nested Digital Low Dropout Regulator for SoC Applications in CMOS 28nm	2496
<i>Stefano Bonomi, Werner Grollitsch, Sie Boo Chiang, Roberto Nonis</i>	

A 145-ns Response Time High-Side Current Sense for a 100-V Monolithic GaN Half Bridge	2500
<i>Tommaso Francesco Tardani, Andrea Gambero, Sandro Rossi, Antonio Aprile, Edoardo Bonizzoni, Piero Malcovati</i>	
Explicit Neural Network-Based Modeling of Time-Varying Circuits with a Single BJT in the Wave Digital Domain	2505
<i>Oliviero Massi, Shijie Yang, Riccardo Giampiccolo, Alberto Bernardini</i>	
Live Demonstration: IMU-Based Human Activity Recognition Towards Camptocormia Measurement at Home.....	2510
<i>Kamran Naderi Beni, Lukas Riesel, Robert Rieger</i>	
A Hierarchical Compilation Method for Programmable Analog-To-Digital Converter Arrays.....	2511
<i>Zhishuai Zhang, Siyu Huang, Yi Zhong, Nan Sun, Lu Jie</i>	
Live Demonstration: A Programmable A/D Converter Array with Interactive Compiler.....	2515
<i>Zhishuai Zhang, Chitian Yuan, Jiantao Li, Kun Lin, Yi Zhong, Nan Sun, Lu Jie</i>	
A Hardware Architecture for Efficient Adaptive Threshold-Based Sampling Using Weyl's Discrepancy	2516
<i>Anna Werzi, Simon Dorrer, Bernhard A. Moser, Michael Lunglmayr</i>	
ISFET Array In-Pixel Computation for Classification of Nucleic Acid Amplification	2521
<i>Costanza Gulli, Nicolas Moser, Pantelis Georgiou</i>	
Live Demonstration: A Scalable CNN Accelerator SoC with a Cost-Effective Chip-To-Chip Adapter.....	2526
<i>Jicheon Kim, Chunmyung Park, Eunjae Hyun, Xuan Truong Nguyen, Hyuk-Jae Lee</i>	
Open-Source Circuit Radiation Effects (OSCRE) Simulation Framework: Design and Applications	2527
<i>Collin Lambert, Jacob Anderson, David Nichols, Parker Allred, Sharisse Poff, Jeffrey Goeders, Michael Wirthlin, Shiuh-Hua Wood Chiang</i>	
Digitally Tunable CMOS Mixer Design for Adaptive RF Front-Ends	2532
<i>Diptashree Das, Minghan Liu, Mohammad Abdi, Francesco Restuccia, Marvin Onabajo</i>	
Kalman Filtering Based Target Tracking for Multistatic Sensing in ISAC Systems	2537
<i>Quan Yuan, Shun Zhuge, Zhiping Lin, Yugang Ma, Yonghong Zeng</i>	
Efficient Self-Adaptive Pseudo-Resistor with Rapid Settling and High Linearity for Neurorecording Front-End Circuits.....	2542
<i>Hui Wu, Ziqi Tan, Xing Liu, Jinbo Chen, Wenjun Zou, Qiming Hou, Siyu Lin, Yutao Mao, Xiaofei Kuang, Jie Yang, Mohamad Sawan</i>	
An Efficient NTT-Based Polynomial Multiplication Architecture for BFV Homomorphic Encryption	2547
<i>Rella Mareta, Ardianto Satriawan, Hanho Lee</i>	
Multiple Hypothesis Testing for SEM Image Processing: A Case Study on Standard Cell Partition	2552
<i>Xiaoyu Ma, Yizhen Li, Feng Ji, Tong Lin, Yiqiong Shi, Deruo Cheng, Bah Hwee Gwee</i>	
IMSSA: Deploying Modern State-Space Models on Memristive In-Memory Compute Hardware	2557
<i>Sebastian Siegel, Ming-Jay Yang, John-Paul Strachan</i>	

TNURML: Triple-Node-Upset-Recovery Magnetic Latch Design with Non-Volatility for Aerospace Applications	2562
<i>Aibin Yan, Zhiyuan Pei, Xing Guo, Jie Song, Cuiyun Jiang, Huaguo Liang, Xiaoqing Wen, Patrick Girard</i>	
128 × 128 Pixel CMOS Event Camera with Multi-Bit Temporal Difference Event Generation	2567
<i>Mika Grönroos, Ari Paasio, Mika Laiho</i>	
Live Demonstration: N2 Nanosheet Pathfinding-PDK.....	2572
<i>Chaohan Wang, Jack Cousins, Anita Farokhnejad, Marie Garcia Bardon, Julien Ryckaert</i>	
Inverter-Based Fully-Differential Amplifier with 150 mV Minimum Supply Voltage.....	2573
<i>Alessandro Catania, Giuseppe Manfredini, Paolo Bruschi, Massimo Piotto, Andrea Ria</i>	
Towards Improving Memory Access in Large-Scale NoC-Based Systems.....	2578
<i>Sneha Agarwal, Keshav Goel, Mitali Sinha, Sujay Deb</i>	
AGMixer: Age Estimation Using Gender Feature and Improved Ordinal Loss.....	2583
<i>Ching-Hsien Yen, Jian-Jiun Ding, Kai-Lin Hu</i>	
Using the Miller Theorem in LPTV Networks to Analyze Miller N-Path Filters.....	2588
<i>R. S. Ashwin Kumar</i>	
A 40V High-Speed Low-FoM Capacitive Level Shifter with Feedback Discharge Control for Floating Supply Gate Drivers on BCD Technology	2593
<i>Fahd Khan, Niccolo' Brambilla, Sandro Rossi, Calogero Ribellino, Stefano Corona, Edoardo Bonizzoni, Piero Malcovati</i>	
A 600-PW, 34.6 ppm/°C, -50 °C to 130 °C CMOS Voltage Reference with Leakage-Based Temperature Compensation and Supply Rejection Enhancement Techniques	2598
<i>I-Fan Lin, Yu-Hung Tung, Po-Hsun Chu, Yu-Te Liao</i>	
Fixed-Throughput GRAND with FIFO Scheduling	2602
<i>Filippo Christen, Darja Nonaca, Christoph Studer</i>	
On the Characterization of GraphML Frameworks: The Case of Semi-Supervised Node Classification	2607
<i>Alessandro La Conca, Leonardo De Grandis, Ian Di Dio Lavore, Beatrice Branchini, Marco Santambrogio</i>	
NeuroEye: A 54.59mW, 12200FPS Event-Driven Near-Sensor Eye-Tracking Processor with Pipelined Spatial-Temporal Spike-Streaming.....	2612
<i>Jiakun Zheng, Fengshi Tian, Jinbo Chen, Chaoming Fang, Yuan Yao, Jie Yang, Mohamad Sawan, Kwang-Ting Tim Cheng, Chi-Ying Tsui</i>	
RTSR: A Real-Time Super-Resolution Model for AV1 Compressed Content	2617
<i>Yuxuan Jiang, Jakub Nawala, Chen Feng, Fan Zhang, Xiaoqing Zhu, Joel Sole, David Bull</i>	
A 2.9mW Inverter-Based Quadrature Phase Clock Generator with ± 0.29° Phase Error	2622
<i>Mayank Kumar Singh, M. Bhuvanesh, R. Nagulapalli, Devarshi Mrinal Das, Mahendra Sakare</i>	
Design of a TRNG in 600-Nm IGZO-TFT FlexICs for Secure IoT Applications	2627
<i>João Cabacinho, Diogo Sousa, João Marcelino, Marco Fernandes, Pedro Barquinha, João Goes, João Casaleiro, Luis Bica Oliveira</i>	

Design and Implementation of a Miniaturized Spintronic-Based Proximity Sensor	2632
<i>Taha Alimohammadi, Yasser Rezaeiyan, Tim Böhnert, Milad Zamani, Sonal Shreya, Elvira Paz, Hooman Farkhani, Ricardo Ferreira, Farshad Moradi</i>	
A 0.22 pJ/bit Processing-In-Controller GEMV Macro with Weight Prefetch for Efficient Near-Memory Computing	2637
<i>Jie Yang, Jiawei Zheng, Siqi He, Lihou Wu, Chen Mu, Haozhe Zhu, Liyu Lin, Qi Liu, Chixiao Chen</i>	
Analog Test Bus Structure for Wide-Bandwidth High-Frequency Measurements	2642
<i>William D. Ledingham, Gordon W. Roberts</i>	
Analog-Digital Approximate DFT with Spatial Δ - Σ LNA Multi-Beam RF Apertures	2647
<i>A. Madanayake, H. Pilippange, K. Lawrance, A. Uddin, S. Mandal, J. Di, M. Tennant, C. Workman, R. J. Cintra</i>	
Approximate Multiplier Mapping for Unfairness Mitigation in Energy-Efficient DNNs	2652
<i>Ourania Spantidi, Georgios Zervakis, Jörg Henkel, Iraklis Anagnostopoulos</i>	
Leveraging Image Difficulty for Run-Time Adaptive DNN Inference on Embedded Devices	2657
<i>Vasileios Pentsos, Ourania Spantidi, Georgios Zervakis, Iraklis Anagnostopoulos</i>	
A Single-Inductor Multi-Ratio Resonant Ladder Dc-Dc Converter Achieving > 80% Efficiency Over 0.4-To-1.4V Output Voltage Range	2662
<i>Loai G. Salem</i>	
An Efficient Hardware Implementation of 2D Convolution Based on the Discrete Hirschman Transform	2667
<i>Weiwei Wang, Linda S. Debrunner, Victor Debrunner</i>	
MapLlama: A Two-Stage Approach for Map Question Answering Using a Fine-Tuned Large Language Model.....	2672
<i>Zong-Lin Li, Wei-Ta Chu</i>	
The Charge Pump as a Signal Amplifier: Enabling Small-Signal Gain Boosting	2677
<i>Andrea Ballo, Alfio Dario Grasso, Gaetano Palumbo</i>	
An NMOS-Sided Biased Rectifier with Enhanced Dynamic Range for Neural Stimulators	2682
<i>Cheng Han, Chuer Lin, Guangxin Ding, Shan Yu, Zhiwei Zhang, Jingna Mao</i>	
A 94.8% Peak-Efficiency 3-Level Buck Converter with Fast Flying Capacitor Charging Technique	2687
<i>Chi-Wei Chen, Jia-Yi Chen, Hsin-Shu Chen</i>	
Multilayer RF Dual-Band Bandpass Filters with Quasi-Flat Group-Delay Behavior and Multiple Stopband Transmission Zeros.....	2691
<i>Zekai Luo, Li Yang, Tao Su, Xi Zhu, Roberto Gómez-García</i>	
Wave Digital Modeling of Circuits with a Single Variable- μ Pentode Based on Neural Networks	2696
<i>Riccardo Giampiccolo, Genís Casanova, Oliviero Massi, Alberto Bernardini</i>	
A Comparison of Iterative Methods for the Solution of Nonlinear WDFs with Non-Lossless Junctions.....	2701
<i>Riccardo Giampiccolo, Stefano Ravasi, Alberto Bernardini</i>	
A mm-Wave Coupler-Based Dual-Band Power Amplifier for Advanced Driver Assistance Systems	2706
<i>Zhonghiguang Lu, Yanshu Guo, Yange Wang, Cao Wan, Guanghao Fan, Yuanjin Zheng</i>	

A 96-Gb/s PAM-8 Transmitter with Transition-Boosted Current-Mode Logic Driver in 40-Nm CMOS for Wireline Communication.....	2711
<i>Bona Lim, Hanhee Jo, Heedo Jeong, Jeonghyu Yang, Jaeduk Han</i>	
Cross-Platform Neural Video Coding: A Case Study	2715
<i>Ruhan Conceição, Marcelo Porto, Wen-Hsiao Peng, Luciano Agostini</i>	
ISPAZ: An Improved Switched-Capacitor Ping-Pong Voltage Generator with Auto-Zero for Ultra-Low-Power Internet of Everything Systems.....	2720
<i>M. D'Addato, A. M. Elgani, E. Franchi Scarselli, A. Gnudi</i>	
An Efficient Multicast Addressing Encoding Scheme for Multi-Core Neuromorphic Processors	2725
<i>Zhe Su, Aron Bencsik, Giacomo Indiveri, Davide Bertozzi</i>	
Carrier-Auxiliary if Feedback Crystal-Less LO Generator and Approximate Low-If Receiver Architecture for Energy-Efficient Radio	2730
<i>Yuxiao Zhao, Zheng Shen, Zhongyuan Ying, Jing Feng, Taotao Wu, Feng Gao, Shiyu Li, Hao Min</i>	
Inductive Sensing: A Phase Detector IC for Button Replacement in Mobile Devices	2735
<i>Siddharth Maru, Mike Kost, Eric King, Zhong You, Jason Wardlaw, Xin Zhao, Tejasvi Das</i>	
Dual-Mode Resonant Sensor for Depth Spectroscopy	2740
<i>Habibur Rahman, Adrian M. Llop Recha, Dag T. Wisland, Kristian G. Kjølgaard</i>	
An Ising Machine Based on Millimeter-Wave Coupled LC Oscillators.....	2745
<i>Adam Belkhadir, Aritra Banerjee</i>	
A 18.7-To-31.8GHz Wideband Low-Phase-Noise Hybrid-Coupled Quad-Core Millimeter-Wave VCO with 200.5dBc/Hz of FoMT.....	2750
<i>Ziyan Zhao, Kaige Wang, Chunqi Shi, Runxi Zhang, Hao Deng, Jinghong Chen</i>	
A 13.6-17.7 GHz Sub-Harmonic Injection-Locked SSPLL with 74-Fs RMS Jitter	2755
<i>Yuri Lu, Chunqi Shi, Leilei Huang, Runxi Zhang, Hao Deng, Jinghong Chen</i>	
ECDQC: Efficient Compilation for Distributed Quantum Computing with Linear Layout.....	2760
<i>Kecheng Liu, Yidong Zhou, Haochen Luo, Lingjun Xiong, Yuchen Zhu, Eilis Casey, Jinglei Cheng, Samuel Yen-Chi Chen, Zhiding Liang</i>	
Area-Efficient FPGA Architectures for Multidimensional DCT Using Approximate Transforms and Computing.....	2765
<i>P. Nanthakumar, C. Wijenayake, C. U. S. Edussooriya, A. Madanayake, R. J. Cintra</i>	
A FPGA-Based FSE Accelerator with Dynamic Table for ZSTD Compression	2770
<i>Yuna Lin, Kai Liu, Zibo Guo</i>	
Edge of Chaos Induces a Hopf Bifurcation in a Bio-Inspired Thermally-Activated Memristor Oscillator	2775
<i>A. Ascoli, E. Gemo, D. Rossetti, F. Corinto, M. Bonnin, M. Gilli, P. P. Civalleri, A. S. Demirkol, N. Schmitt, I. Messaris, V. Ntinis, D. Prousalis, R. Schroedter, R. Tetzlaff, S. Slesazeck, T. Mikolajick, L. Chua</i>	
Enhancing Computer Organization Education: A Reformative Teaching Approach	2780
<i>Cansong Zhou, Guofan Jiang, Peng Liu</i>	
Modern Hopfield-Heuristic Physical Computing Architecture for Diabetes Prediction.....	2785
<i>Ruoyu Wu, Guofan Jiang, Peng Liu</i>	

A Multi-Channel Auditory Signal Encoder with Adaptive Resolution Using Volatile Memristors.....	2790
<i>Dongxu Guo, Deepika Yadav, Spyros Stathopoulos, Mingyi Chen, Themis Prodromakis, Shiwei Wang</i>	
Smart Watchdog Mechanism for Fault Detection in RISC-V.....	2795
<i>David Simpson, Jim Harkin, Malachy McElholm, Liam McDaid</i>	
EEPNet: Efficient Edge Pixel-Based Matching Network for Cross-Modal Dynamic Registration Between LiDAR and Camera.....	2800
<i>Yuanchao Yue, Hui Yuan, Shuai Li, Qi Jiang</i>	
A 23.5 TOPS/W Depthwise Separable Convolution Accelerator for Event-Based Depth Estimation	2805
<i>Andres Brito, Tomomasa Yamasaki, Ulysse Rancon, Timothee Masquelier, Benoit R. Cottureau, Anh Tuan Do, Bo Wang</i>	
Live Demonstration: Smart Watchdog Mechanism for Real-Time Fault Detection in RISC-V	2810
<i>David Simpson, Jim Harkin, Malachy McElholm, Liam McDaid</i>	
CAMO: A High-Performance CIM-Based Lightweight CNN Accelerator for Mobile Devices	2811
<i>Xin Ju, Renyu Yang, Mei Wen, Junzhong Shen, Tianyu Wang, Zhaoyan Shen, Zili Shao, Bin Liang</i>	
Nanomechanical Relay-Based Switchblock for FPGA Interconnect.....	2816
<i>Victor Marot, Dinesh Pamunuwa</i>	
A Conversational Agent Based on Large Language Models for Fault Recovery Planning Generation.....	2821
<i>Wensi Zhang, Tiechui Yao, Fei Zhou, Hongyang Jin, Jinbo Liu, Zihao Wan, Chunyu Liu, Yishen Wang, Bo Chai, Xi Chen</i>	
On Securing SSN Architecture Using Test Vector Encryption	2826
<i>Anjum Riaz, Pardeep Kumar, Yamuna Prasad, Satyadev Ahlawat</i>	
Dynamically Reconfigurable Approximate Multiplier for Precision Control.....	2831
<i>João M. Bedin, Pedro T. L. Pereira, Eduardo Da Costa, Sergio Bampi</i>	
Event-Triggered Control and Interactive LQR Tuning for Improved Control Efficiency	2836
<i>Josefredo Gadelha Da Silva, José Fabiano Vellozo D'Alterio Moreira, Marcio J. Lacerda, Ariadne L. J. Bertolin, Erivelton Nepomuceno</i>	
HengNet: An Ultra-Lightweight Model with Two-Level Reuse Algorithm for Seizure Detection and Prediction	2841
<i>Heng Zhang, Linxiang Wang, Wenjie Fan, Zhenglin Gu, Youbin Luo, Xingjie Zou, Chang Gao, Qinyu Chen, Yuxiang Fu, Li Li</i>	
A Current-Driven Potentiostat Architecture for Achieving Stability Over a Wide Range.....	2846
<i>Joydeep Mahato, Eslavath Chandrababu, Ashis Maity, Karabi Biswas</i>	
An Innovative PUF-Based Mutual Authentication Key Exchange Protocol with Biometric Identification	2851
<i>Wei-Bang Ma, Yang Yang, Wai-Chi Fang</i>	
A Pipelined-SAR ADC with a Compensation-Free Two-Stage Amplifier	2856
<i>Chun-Tse Su, Chao-Yen Hsu, Shih-Jie Huang, Tai-Cheng Lee</i>	
DTQ-16T: Double Node Upset Tolerant Quadruple SRAM for Space Applications	2861
<i>Pramod Kumar Bharti, Govind Prasad, Mukku Pavan Kumar, Joycee Mekie</i>	

Low-Cost Deployment and Acceleration of Event-Based Spiking Convolutional Neural Networks.....	2866
<i>Qingyang Tian, Faquan Chen, Lisheng Xie, Yifan Zhou, Ziren Wu, Liangshun Wu, Rendong Ying, Peilin Liu</i>	
A Gait Data Compression and Reconstruction Framework for Edge Device Using Low-Dimensional Attention Model with Autoencoder	2871
<i>Shuailin Tao, Wang Ling Goh, Tiancheng Cao, Yuan Gao</i>	
New Self-Calibration Algorithm for Programmable Multi-Core memristor-CMOS Chip for Neuromorphic Computing.....	2876
<i>Iván Díez-De-Los-Ríos, Luis Camuñas-Mesa, Teresa Serrano-Gotarredona, Bernabé Linares-Barranco</i>	
Design of a Novel High-Efficiency Class-F/E Power Amplifier	2881
<i>Akram Sheikhi, Jiteng Ma, Mark Beach</i>	
C-Arch: Chained Architecture Towards Foundation Modeling of CMOS/FinFET Circuit Designs	2886
<i>Ritwik Basyas Goswami, Mohammad Rehan Akhtar, Andleeb Zahra, Zia Abbas</i>	
An OTA with Series-Cascode-Miller Compensation and Anti-Pole-Splitting for a 360-MHz BW Low-Distortion TIA in Sub-6G Broadband RF Receivers	2891
<i>Junyao Ji, Yan Xue, Xiaojie Fan, Ziyu Zhou, Bo Wang, Youxiang Chen, Peiyu Li, Ruibai You, Hong Zhang</i>	
An Ultra-Low Power 915 MHz LO with Adaptive Frequency Calibration for IoT Wake-Up Receivers	2896
<i>Xianhong Xiu, Tian Huang, Qianhui Li, Meng Liu, Hao Min, Xiaohua Yu, Ronghua Ni</i>	
Lightweight FPGA Implementation of the Shadow PUF Module for Generating Reconfigurable Proxy PUFs.....	2901
<i>Pablo Rojas, Sara Alahmadi, Magdy Bayoumi</i>	
Cost-Effective and Recycled Flexible Strain Sensor for Joint Stiffness Monitoring in Tele-Rehabilitation	2906
<i>Aqsa Javaid, Muhammad Farhan, Muhammad Qasim Mehmood, Muhammad Zubair, Muhammad Ali Imran, Qammer H. Abbasi</i>	
A K-Band CMOS High-Gain Power Amplifier Using Transformer-Feedback Cascode Topology.....	2910
<i>Yi-Fu Chen, Guan-Han Lin, Po-Yuan Chen, Hong-Yeh Chang</i>	
Robust Defect Detection for Phase-Locked Loops Using All-Digital Built-In Self-Test (BIST) Circuitry	2914
<i>Michael Sekyere, Marampally Saikiran, Rob Butler, Reed Adams, Degang Chen</i>	
A Real-Time Memory-Less In-Sensor Time-Domain Convolution Processor with Programmable Kernel for Feature Extraction.....	2919
<i>Harshit Naman, Gourab Barik, Shreyas Sen</i>	
Towards a New Dynamic Phasor Theory for Modeling IBG Penetrated Power Grids.....	2924
<i>Álvaro A. Volpato, Luís F. C. Alberto</i>	
26 GHz Solid State Power Amplifier in a 0.15- μ m GaN on SiC Technology	2929
<i>Abdul Ali, Syed Mudassir Hussain, Yichuang Sun, Franco Giannini, Paolo Colantonio</i>	
A high-PSRR and Low-Noise CMOS-Based Reference with Barrel Shifting and Notch Filtering	2933
<i>Amrith Sukumaran, Enrico Miotello, Chun-Min Zhang, Francesco Caruso, Paula Blanca Cruz, Stéphane Emery</i>	

Unified Implementation of Electrode and Coil for Inductive Coupling in Biomedical Applications.....	2938
<i>Pablo Pérez-Nicoli, Simon Hemour</i>	
Detection of Physiological Data Tampering Attacks with Quantum Machine Learning	2943
<i>Md. Saif Hassan Onim, Himanshu Thapliyal</i>	
Scaling Effects of Transistor Leakage Current and IR Drop on 1T1R Memory Arrays.....	2948
<i>Junren Chen, Giacomo Indiveri</i>	
Measurement and Analysis of System Parameter Effects on Noise in EEG Systems	2953
<i>Meghna Roy Chowdhury, Shreyas Sen</i>	
Bit-Width-Aware Design Environment for Few-Shot Learning on Edge AI Hardware	2958
<i>R. Kanda, H. L. Blevec, N. Onizawa, M. Leonardon, V. Gripon, T. Hanyu</i>	
Low-Power StrongARM Comparator Exploration for Sub-3nm Technology Node	2963
<i>Xuan Wu, Kristof Dens, Gioele Mirabelli, Francky Catthoor, Patrick Reynaert</i>	
Dynamic Quantization and Pruning for Efficient CNN-Based Road Sign Recognition on FPGA.....	2968
<i>Chiang Liang Kok, Bofan Zhao, Jovan Heng, Tee Hui Teo</i>	
Extended Operational Life for Wearable Health Devices: A Hybrid TinyML and Server-Side ML Approach	2973
<i>Najmeh Nazari, Vedant Patel, Chongzhou Fang, Setareh Rafatirad, Houman Homayoun</i>	
A Compact 3-Segment 15-Bit Capacitive DAC with Digital Calibration for Improved Linearity.....	2978
<i>Emmanuel Nti Darko, Isaac Bruce, Ekaniyere Oko-Odion, Saeid Karimpour, Kushagra Bhatheja, Degang Chen</i>	
Enhanced Tower Field Mask Scheme with Affine Transformation-Based Dynamic S-Box	2983
<i>Thai-Ha Tran, Duc-Thuan Dam, Van-Phuc Hoang, Trong-Thuc Hoang, Cong-Kha Pham</i>	
A Probability Routing Strategy Based on Sine Function Gravitational Centrality for Enhancing Network Traffic Capacity	2988
<i>Fuya Kumagai, Takafumi Matsuura, Takayuki Kimura</i>	
A 0.36 mm ² On-The-Fly I2C-To-SPI Converter for E-Textile Applications	2993
<i>Omar Faruqe, Zhenghong Chen, Suprio Bhattacharya, Md. Fahim Foysal, Samit Hasan, Daniel S. Truesdell, Benton H. Calhoun</i>	
Verilog-A Modeling of Floating-Gate (FG)-Based Multiple-Input Translinear Elements.....	2998
<i>Charana Sonnadara, Sahil Shah</i>	
Penta Interlocking Dual Ports 14T SRAM with Inside-Bit Interleaving Layout Isolation for Soft Error Recovery	3003
<i>Xu Luo, Yuanyuan Han, Xu Cheng, Xiaoyang Zeng</i>	
BVI-CR: A Multi-View Human Dataset for Volumetric Video Compression	3008
<i>Ge Gao, Adrian Azzarelli, Ho Man Kwan, Nantheera Anantrasirichai, Fan Zhang, Will Andrew, Oliver Moolan-Feroze, David Bull</i>	
Design of a Low-Energy MTJ-Based Nonvolatile Register Based on a Differential Information Storing Scheme.....	3013
<i>Tomoo Yoshida, Masanori Natsui, Takahiro Hanyu</i>	
Neuromorphic Computing Chips: Challenges and Trends	3018
<i>Jie Yang, Mohamad Sawan</i>	

A 365- μ W 915-MHz & 2.45-GHz Flexible Mixer-First Discrete-Time-Receiver Front-End	3023
<i>Sandro Binsfeld Ferreira, Amir Bozorg, Filipe Baumgratz, Sergio Bampi</i>	
Neural Network Based Digital Twin of Three-Phase Inverter	3028
<i>Yaofeng Liang, Hanchen Ge, Zhicong Huang</i>	
An Accelerated Block Searching Approach in A* for Autonomous Mobile Robots	3032
<i>Jinyoung Shin, Joungmin Park, Jinyeol Kim, Yue Ri Jeong, Seongmo An, Seung Eun Lee</i>	
A Crosstalk-Aware Application Mapping Algorithm for Hybrid Optical Network-On-Chip Architecture	3037
<i>Sucharita Samanta, Nandan Surani, Devarsh Patel, Kanchan Manna</i>	
A High-Precision Sub-10 nV/ $\sqrt{\text{Hz}}$ Variable Gain Chopper Amplifier for Phase Current Sensing in Adaptive High-Efficiency DC/DC Converters	3042
<i>Christian D. Matthus, Christian Hoyer, Frank Ellinger</i>	
Learning-Based Image Coding for Machine Intelligence with Variable-Rate	3047
<i>Ao Liu, Hualong Yu, Jiawang Liu, Qiqi He, Lu Yu</i>	
A Frequency-Domain Transfer Model for Predicting FM Error of FMCW Radar Chirp Generators	3052
<i>Yue Zhu, Kaige Wang, Dalin Li, Chunqi Shi, Leilei Huang, Runxi Zhang, Hao Deng, Jinghong Chen</i>	
A Dataset and Method for Assessing the Quality of Display Devices	3057
<i>Yijie Huang, Haoyang Ni, Kaiwei Zhang, Fangfang Lu, Xiongkuo Min, Guangtao Zhai</i>	
Zero-Shot Learning in Performance Prediction of Digital VLSI Circuits	3062
<i>Deepthi Amuru, Zia Abbas</i>	
A Low-Latency Polynomial Arithmetic Unit for ML-KEM and ML-DSA Standards	3067
<i>Trong-Hung Nguyen, Duc-Thuan Dam, Phuc-Phan Duong, Trong-Thuc Hoang, Cong-Kha Pham</i>	
On-Chip I/O ESD Protection for GaN-On-SOI Integrated Circuits	3072
<i>Katia Samperi, Urmimala Chatterjee, Salvatore Pennisi</i>	
Multi-Attribute Continual Learning for Blind Image Quality Assessment	3076
<i>Yunhao Luo, Jinming Liu, Wei Zhou, Xin Jin</i>	
HSCIM: A High Security Compute-In-Memory Architecture with PUF Based on TST-MRAM	3081
<i>Junyi Mai, Feilan Zhao, Zhanhong Huang, Yongkui Yang, Sheng Jiang, Enyi Yao</i>	
Modified Parabolic Synthesis for Hardware-Oriented Approximation of Unary Functions	3086
<i>Viktor Schneider, Sven Schönewald, Holger Blume</i>	
A 0.8V 8b-ENOB 80kS/s-20MS/s Passive Noise-Shaping SAR ADC for Ultra Low-Power Receivers	3091
<i>Jing Feng, Yuxiao Zhao, Yu Lu, Taotao Wu, Hao Min</i>	
Optimal SVG Configuration for Enhancing Transient Voltage Stability in Power Systems with High Penetrations of Renewable Energy	3096
<i>Wenshuang Liu, Jie Yang, Xi Zhang, Kui Luo, Tiezhu Wang, Liangyi Zhang, Shouxian Li, Maobin Lu</i>	

A Low-Complexity and Reconfigurable Design for Nonlinear Function Approximation in Transformers.....	3101
<i>Qi-Xian Wu, Shu-Sian Teng, Ming-Der Shieh, Chih-Tsun Huang, Juin-Ming Lu</i>	
Three-Level Output Side Gate Driver for 1 V Thin-Gate-Oxide NMOSFET Switch in a SIDO Converter.....	3106
<i>Abhijit Keshri, Pramit Banerjee, Gautam Dey Kanungo, Kallol Chatterjee, Paras Garg, Santanu Kapat, Debashis Mandal</i>	
A 0.4V Relaxation Oscillator Featuring Double Capacitor-Charging Headroom in CMOS 65nm	3111
<i>Kanghong Yu, Mingrui Wang, Ka-Meng Lei, Rui Martins, Pui-In Mak</i>	
3D-Domino: Ultra-Dense High-Accuracy 3D eDRAM-ROM Compute-In-Memory Based on CAA-IGZO TFT for Edge Large-Scale Model Inference	3116
<i>Zhuoya Wang, Wenjun Tang, Chen Jiang, Huazhong Yang, Vijaykrishnan Narayanan, Xueqing Li</i>	
Multimodal Fusion for Dementia Detection Using Voice and Facial Features.....	3121
<i>Jia-Yi Chen, Wei-Ta Chu</i>	
Spiking Auto-Encoder for Static and Spatio-Temporal Neuromorphic Pattern Reconstruction.....	3126
<i>Ben Walters, Yeshwanth Bethi, Hamid Rahimian Kalatehbal, Saeed Afshar, Amirali Amirsoleimani, Mostafa Rahimi Azghadi</i>	
FPGA Accelerated Adaptive LDPC-Based Quantum Error Correction by Bitwise Pipeline Parallelism.....	3131
<i>Bingze Ye, Jiyuan Liu, He Li</i>	
Optimized Memory System Architecture for VESA VDC-M Decoder with Multi-Slice Support	3136
<i>Hannah Yang, Sohyeon Kim, Saeyeon Kim, Jiyoung Lee, Huijin Roh, Ji-Hoon Kim</i>	
DPP-MP: An Area-Efficient Digital Predistortion Model for Quadrature Digital Transmitters.....	3141
<i>Yuan Xu, Kangjie Zhao, Wangdong Xie, Guozhen Wu, Leilei Huang, Chunqi Shi, Jinghong Chen, Runxi Zhang</i>	
TWavefusion: Wavelet-Based Diffusion with Transformer for Multivariate Time Series Anomaly Detection	3146
<i>Hongjun Sheng, Xinggan Peng, Van Kwan Zhi Koh, Bihan Wen, Zhiping Lin</i>	
WiVir: Exploiting WiFi-Based Virtual Antenna Array for Passive Stationary Human Localization.....	3151
<i>Qitong Wang, He Wang, Leilei Huang, Chunqi Shi, Jinghong Chen, Runxi Zhang</i>	
Qubit-State Discrimination Using Neural Networks with Rapid and Energy-Efficient Compute Arrays.....	3156
<i>Yuntian Liu, Yi Sheng Chong, Benjamin Lienhard, Minghao Fan, Wang Ling Goh, Vishnu P. Nambiar, Anh Tuan Do</i>	
Towards Spiking Analog Hardware Implementation of a Trajectory Interpolation Mechanism for Smooth Closed-Loop Control of a Spiking Robot Arm	3161
<i>Daniel Casanueva-Morato, Chenxi Wu, Giacomo Indiveri, Juan P. Dominguez-Morales, Alejandro Linares-Barranco</i>	
A High Bandwidth Capacitorless NMOS LDO with Pole-Tracking Scheme and Adaptive FFRC Achieving -65dB PSR Across Full Load Range.....	3166
<i>Jinshuo Xu, Xiaoyan Zhao, Xiangyu Mao, Jun Yin, Mo Huang, Yan Lu</i>	

Viewpoint-Adaptive Collage-Based Streaming for 4K Light Field Video	3171
<i>Kyungdae Park, Chae Eun Rhee</i>	
Low-Power Continuous Wavelet Transform Employing Stochastic Computing.....	3176
<i>Roshwin Sengupta, Ilia Polian, John P. Hayes</i>	
Optimal Strategy for Mapping Spiking Neural Networks onto Manycore Neuromorphic Processors	3181
<i>Changmin Ye, Doo Seok Jeong</i>	
Event-Based Audio Prediction with Spectro-Temporal Event-Graphs.....	3186
<i>Lars Rafeldt, Thomas Mesquida, Hiroshi Nakano, Manon Dampfhoffer, Filippo Moro, Pascal Vivet, Melika Payvand, Thomas Dalgaty</i>	
A Hybrid Peak Current Mode DC-DC Converter with Swift Response for Automotive Applications	3191
<i>Tianjiao Zhang, Bohang Zheng, Liang Zhou, Yong Zhou, Rui Yin</i>	
A Pseudo-Boolean Encoding Method for Rectilinear Steiner Arborescence in VLSI Routing	3195
<i>Zixuan Wang, Yunuo Cen, Xuanyao Fong</i>	
LLAD: A Low-Latency Active Detection Method for High-Frequency Periodic GPIO Signals in Linux	3200
<i>Jingtao Zhang, Long Gao</i>	
The Continuous-Time RC-Chain ADC.....	3205
<i>Hampus Malmberg, Fredrik Feyling</i>	
CC/CV ZVS WPT System Without Any Feedback from Receiver to Transmitter.....	3210
<i>Ayano Komanaka, Jiaxin Yan, Yutaro Komiyama, Yinchun Xie, Akihiro Konishi, Kien Nguyen, Hiroo Sekiya, Xiuqin Wei, Wenqi Zhu</i>	
An Adaptive Methodology for Mode Switching in Crystal Oscillators: Leveraging Amplitude Detection for Negative Resistance Boosting Quick Start-Up.....	3215
<i>Ning Fu, Yu Jin, Huan Li, Xuesong Chen, Duli Yu</i>	
Accelerating Comprehensive Specification Optimization of Analog Circuits Using Transient Assertions and Graph Neural Networks	3220
<i>Zhenxin Chen, Jintao Li, Lin Peng, Yongfu Li, Yu Wang, Yanhan Zeng</i>	
Innovative Elliptic Curve Multiplication Design for Preventing Side-Channel Attacks Based on Variable Radix System	3225
<i>Yang Yang, Bo-Shiyan Yang, Wei-Bang Ma, Xiang-Yuan Deng, Wai-Chi Fang</i>	
Monitoring Plant Growth: Using EM Waves with Memristive Echo State Networks.....	3230
<i>Vineeta V Nair, Jazim Ibrahim, Elizabeth George, Alex James</i>	
Towards Efficient IMC Accelerator Design Through Joint Hardware-Workload Co-Optimization.....	3235
<i>Olga Krestinskaya, Mohammed E. Fouda, Ahmed Eltawil, Khaled N. Salama</i>	
3D Bridge Super-Resolution Crossbars.....	3240
<i>Sruthi Pallathuvalappil, Alex James</i>	
An Area-Efficient Readout Circuit for a High-SNR Triple-Gain LOFIC CMOS Image Sensor.....	3245
<i>Ai Otani, Hiroaki Ogawa, Ken Miyauchi, Yuki Morikawa, Hideki Owada, Isao Takayanagi, Shunsuke Okura</i>	

An Efficient Hardware Implementation of Improved Plantard Mod-Multiplication for Lattice-Based Cryptography.....	3250
<i>Mengxue Li, Jiansheng Chen, Bei Wang, Fei Lyv, Weiqiang Liu, Yijun Cui</i>	
A 0.012mm ² Inverter-Based Ring-Oscillator with Power-Supply Voltage Noise Isolator for Quantum Applications in 22-Nm FD-SOI CMOS.....	3255
<i>Ali Esmailian, Teerachot Siriburanon, Dennis M. Andrade Miceli, Eugene Koskin, Dirk Leipold, David J. Redmond, Imran Bashir, Elena Blokhina, Robert Bogdan Staszewski</i>	
Current-Mirror Based Ambient Light Rejection Technique for VLC Receiver.....	3260
<i>Nasir A. Quadir, Muhammad Asfandiyar Awan, Bo Wang, Amine Bermak</i>	
Hardness and Texture Recognition Based on PVDF Sensors and Embedded Machine Learning: A Case Study on Hannes Prosthetic Hand.....	3264
<i>Razan Khalifeh, Yahya Abbass, Mohamad Yaacoub, Cosimo Gentile, Emanuele Gruppioni, Maurizio Valle</i>	
Compact FALCON FFT/NTT Accelerator for Post-Quantum Cryptography	3269
<i>Duc-Thuan Dam, Thai-Ha Tran, Trong-Hung Nguyen, Trong-Thuc Hoang, Cong-Kha Pham</i>	
Cross-Space Alignment-Based Attribute Artifact Removal for V-PCC.....	3274
<i>Yu Liu, Mingfei Hu, Qiang Zhu, Zeliang Li, Siu-Kei Au Yeung, Shuyuan Zhu, Lihuo He, Fan Zhang</i>	
Interlaced 6T-10T CMOS In-Memory Computing Circuit for Low Silicon Area Pipelined DNNs	3279
<i>Gines Domenech-Asensi, Francisco Javier Andreo-Oliver, Ramon Ruiz-Merino, Jose Angel Diaz-Madrid</i>	
Hacking Health: Unveiling Vulnerabilities in BLE-Enabled Wearable Sensor Nodes	3284
<i>Mohammad Alhussan, Francesca Boem, Sara S. Ghoreishizadeh, Anna Maria Mandalari</i>	
Differentiable VMAF: A Trainable Metric for Optimizing Video Compression Codec	3289
<i>Jiangchuan Li, Chuqin Zhou, Yunuo Chen, Guo Lu</i>	
Architectural Exploration of Hybrid Neural Decoders for Neuromorphic Implantable BMI.....	3294
<i>Vivek Mohan, Biyan Zhou, Zhou Wang, Anil Bharath, Emmanuel Drakakis, Arindam Basu</i>	
A Mixed-Precision RNS DNN Accelerator	3299
<i>Vasilis Sakellariou, Vassilis Paliouras, Ioannis Kouretas, Hani Saleh, Thanos Stouraitis</i>	
An Efficient Data Reuse with Tile-Based Adaptive Stationary for Transformer Accelerators	3304
<i>Tseng-Jen Li, Tian-Sheuan Chang</i>	
CapPUF: A Tamper-Resistant PUF Utilizing I/O Capacitances for IoT Nodes.....	3309
<i>Dilli Babu Porlapothula, Kurian Polachan</i>	
AMUSD: Asynchronous Multi-Device Speculative Decoding for LLM Acceleration	3314
<i>Bradley McDanel</i>	
Latency and Cost-Aware Resource Provisioning in Fog Computing: An Auction Theory-Based Approach	3319
<i>Muhammad Fahimullah, Shohreh Ahvar, Maria Trocan</i>	
An EF-CIFF Noise-Shaping SAR ADC with a Joint Dynamic Amplifier, Comparator and Lossless Passive Summer Structure.....	3324
<i>Yuzhi Ai, Yuekang Guo, Zhengyuan Lou, Hui Zhang, Jing Jin, Jianjun Zhou</i>	

FastViT: Real-Time Linear Attention Accelerator for Dense Predictions of Vision Transformer (ViT).....	3329
<i>Zhuoheng Ran, Zewen Ye, Chong Wu, Ray C. C. Cheung, Hong Yan</i>	
Leveraging Lightweight Neural Networks and Catastrophic Forgetting Mitigation for a Two-Wheeled Self-Balancing Robot	3334
<i>Chiang Liang Kok, Jiaqi Chen, Guangming Ren, Xinlong Zhang, Tee Hui Teo</i>	
Efficient Post-Quantum Cryptographic Hardware for Healthcare Applications.....	3339
<i>Samuel Coulon, Tianyou Bao, Jiafeng Xie</i>	
Energy-Efficient Reconfigurable Skyrmion-Based Counter for Nanoscale Applications	3344
<i>Kishore C, Santhosh Sivasubramani, Sarwath Sara, Arabinda Haldar, Chandrasekhar Murapaka, Rishad Shafik, Amit Acharyya</i>	
Spike Decoders for Regressing Arm Angle for Autonomous Stroke Rehabilitation System.....	3349
<i>Phani Pavan K, Agastya Thoppur, Nitheezkant R, Madhav Rao</i>	
An Asynchronous RISC-V Processor Utilizing a Chisel-Based Desynchronization Flow	3354
<i>Haoyang Huang, Jilin Zhang, Dexuan Huo, Qibang Sun, Woogeun Rhee, Hong Chen</i>	
Quaternion Neural Networks Towards Real-Time Image Processing	3359
<i>Matteo Di Mauro, Carlo Famoso, Gabriele Puglisi, Luigi Fortuna, Arturo Buscarino</i>	
A Low-Noise Dynamic Comparator with Charge-Pump Pre-Amplifier.....	3364
<i>Heewon Choe, Yegeun Kim, Sein Oh, Sohmyung Ha, Minkyu Je</i>	
Unsupervised Learning-Based Inner Control Loop Design for Uncertain Grid-Tied VSC Model.....	3369
<i>Mehdi Forouzanfar, Anna Pinnarelli, Hossein Safaeipour</i>	
A 2.53 fJ/Conversion Low-Power Hybrid ADC with Level-Crossing Assisted Sparsity Adaptivity for Implantable Neural Interface	3374
<i>Yutao Mao, Jinbo Chen, Hui Wu, Jie Yang, Xiaofei Kuang, Mohamad Sawan</i>	
Hierarchical Reinforcement Learning with Self-Distillation for Resource Scheduling in Complex Resource Networks.....	3378
<i>Kexin Zhang, Qing Gao</i>	
Mismatch Analysis of DDCC Rectifier for 2.4GHz-Band High-Sensitive RF Energy Harvesting System	3383
<i>Zushuai Xie, Yanyan Wang, Wenxu Zhang, Zixuan Wang, Jingjing Guo, Lu Liu, Zhikuang Cai</i>	
A 16.4pJ/bit Fully Integrated IR-UWB Transmitter with PSK+PPM Modulation and On-Chip Antenna	3388
<i>Mohan Li, Xuan Zhang, Changhua You, Liu Yang, Wenliang Yao, Tao Wu, Lei Yao</i>	
Machine Learning-Based Design of Load-Independent WPT Systems.....	3393
<i>Naoki Fukuda, Yutaro Komiyama, Wenqi Zhu, Yinchun Xie, Ayano Komanaka, Akihiro Konishi, Kien Nguyen, Hiroo Sekiya</i>	
Impact of Dataset Characteristics on Optimal Model Selection: A Comparative Analysis of Simulated and Real-World Data	3398
<i>Harald H. Rietdijk, Olayemi Shola Alabi, Patricia Conde-Cespedes, Talko B. Dijkhuis, Hilbrand K. E. Oldenhuis, Maria Trocan</i>	
Laconic Neuromorphic Vision.....	3403
<i>Yaping Zhao, Edmund Y. Lam</i>	

A 48V Input Merged Cross-Connected Double Step-Down Converter with Package-Integrated GaN Switches and Silicon Controller IC	3408
<i>Hua Chen, Young-Seok Noh, Minxiang Gong, Arijit Raychowdhury</i>	
Quantization Noise Cancellation Through Modelling of Non-Linearities in Sigma Delta Modulators	3413
<i>Stijn Ringeling, Marco Fattori, Shagun Bajoria, Robert Rutten, Lucien Breems, Eugenio Cantatore</i>	
A Digital Jitter Correction Technique for High-Speed ADC-Based Communication Links.....	3418
<i>Tim Borremans, Jun Feng, Jonah Van Assche, Georges Gielen, Filip Tavernier</i>	
A 9.13-To-15.31 GHz 205.1 dBc/Hz FOMT Dual-Core Dual-Mode VCO with Forward Body Bias Technique for Sub-7 GHz Applications.....	3423
<i>Wanqing Wu, Ruiyong Xiang, Xinyi Zhang, Xian Tang, Songping Mai, Haigang Feng</i>	
A 0.5V Programmable Voltage Reference with Integrated Differential-Pair Trimming Achieving 28.1ppm/°C Temperature Coefficient.....	3428
<i>Diogo Ralo, Valter Sádio, Fábio Passos, Tiago H. Moita, Marcelino Santos</i>	
Mage: A Decoupled Access-Execute CGRA Tailored for Static Control Applications	3433
<i>Alessio Naclerio, Fabrizio Riente, Giovanna Turvani, Marco Vacca, Maurizio Zamboni, Mariagrazia Graziano</i>	
Structured Sparsity Learning for Efficient Learned Image Compression.....	3438
<i>Wen Tan, Youneng Bao, Fanyang Meng, Chao Li, Lihan Zhu, Yongsheng Liang</i>	
A CMOS Low Dropout Voltage Regulator Suitable for Low-Power SoC Applications.....	3443
<i>Andre Vilas Boas, Miten Nagda, Bruno Carrilho</i>	
Multi-Level Analog Computing-In-Memory FeFET-Based Unit Cell for Deep Learning	3447
<i>Ó. Pereira-Rial, Hannes Dahlberg, D. García-Lesta, V. M. Brea, P. López, D. Cabello, Lars-Erik Wernersson</i>	
Live Demonstration: Iontronic Integrated Circuit	3452
<i>Noa Edri Fraiman, Barak Sabbagh, Gilad Yossifon, Alexander Fish</i>	
CMOS-Based Wheatstone Bridge Stress Sensors Sensitive and Insensitive to Mechanical Stress.....	3453
<i>Leo Gocan, Andro Žamboki, Josip Mikulic, Gregor Schatzberger, Tvrtko Mandic, Adrijan Baric</i>	
PMOS Vs NMOS ZTC References: A Process Technology-Dependent Analysis Framework	3458
<i>Shravan Sridhar, Manikandan R R</i>	
A 40 Gb/s Adaptive CTLE Using a Sub-Sampled PAM-4 Clock Recovery Circuit in 65nm CMOS	3463
<i>Alok Kumar, Ishan Mishra, Tejavanth Kothani, Rajshekhar Mukherjee, Midhun V, Shalabh Gupta</i>	
Translating Common Security Assertions Across Processor Designs: A RISC-V Case Study	3468
<i>Sharjeel Imtiaz, Uljana Reinsalu, Tara Ghasempouri</i>	
Band Pass NS-DEM for SAR Pipeline ADCs	3473
<i>Rafael Loução, Nuno Paulino</i>	
Low-Overhead Calibration Scheme for Segmented High-Resolution Current-Steering DACs	3478
<i>Olujide Adeniran</i>	

Wearable RF Sensing System with Edge AI Inference for In-Vivo Cognitive Load Classification	3483
<i>Usman Anwar, Yinhuan Dong, Tughrul Arslan, Amir Hussain, Peter Lomax</i>	
Live Demonstration: A Frame-Based CMOS Vision Sensor with High Dynamic Range for Events Generation	3488
<i>M. Jaklin, D. García-Lesta, P. López, V. M. Brea</i>	
A Pseudo-Random Number Generator for Multi-Sequence Generation with Programmable Statistics	3489
<i>Jianan Wu, Ahmet Yusuf Salim, Eslam Elmitwalli, Selçuk Köse, Zeljko Ignjatovic</i>	
Optimizing Coverage-Driven Verification Using Machine Learning and PyUVM: A Novel Approach	3493
<i>Suruchi Kumari, Deepak Narayan Gadde, Aman Kumar</i>	
FFT Acceleration in a NAND Flash Memory	3497
<i>Sungyoun Seo, Suin Yi, Sungho Kim</i>	
Adaptive Upscaling Filter Selection with Wiener Filter Compression Techniques in Reference Picture Resampling.....	3502
<i>Zeyu Deng, Wei Jia, Yuwen He, Li Zhang, Kenneth Rose</i>	
Three-Level Analysis of Switched-Capacitor Converters Using Ladder Diagrams	3507
<i>Wing-Hung Ki, Guozhen Chang</i>	
Reduced Domain Multiplication for Deep Neural Network Acceleration.....	3512
<i>Seyed Mehdi Hosseini, Mohammad Kolahdouzan, Mohammad Sharifkhani</i>	
A 1280 by 720 by 3, 12-Band Multispectral Imager for Dual Near-Infrared Fluorophore Differentiation	3517
<i>Brianna Hajek, Zhongmin Zhu, Yifei Jin, Haocheng Yang, Haoxiang Chang, Viktor Gruev</i>	
A Hybrid BJT/Subthreshold MOSFET-Based Voltage Reference with a Sub 1ppm/°C Temperature Coefficient.....	3522
<i>Emmanuel Amankrah, Patricia Tutuani, Randall Geiger</i>	
Trade-Offs in Cryptosystems by Boolean and Quantum Circuits.....	3527
<i>Leonardo Lavagna, Francesca De Falco, Andrea Ceschini, Antonello Rosato, Massimo Panella</i>	
UV-Visible-NIR Image Sensor for Labeled and Label-Free Intra-Operative Imaging with Human Clinical Validation.....	3532
<i>Yifei Jin, Zhongmin Zhu, Brianna Hajek, Haocheng Yang, Haoxiang Chang, Borislav Kondov, Magdalena Bogdanovska Todorovska, Goran Kondov, Shuming Nie, Viktor Gruev</i>	
An Eleven-Leads ECG Recording SoC for Ultralow-Power Wearable Applications.....	3537
<i>G. Gagnon-Turcotte, G. Gagné, J. Sulkowska, U. Côté-Allard, B. Gosselin</i>	
A Programmable Charge-Balanced Current Stimulation Circuit for Implantable Medical Devices	3542
<i>Leonardo Agis, Natalia Martínez, Augusto Sbarbaro-Benech, Alfredo Arnaud, Matías Miguez</i>	
A 70 pW Self-Compensated Subthreshold Voltage Reference Achieving 190 °C Temperature Range and 0.07%/V Line Sensitivity.....	3547
<i>Xiaoxian Feng, Yingping Chen, Qi Liu</i>	
Real-Time Motion Artifact Removal in fNIRS with Denoising Autoencoder at the Edge	3552
<i>Jinchen Li, Yunjia Xia, Jingyu Lei, Robert J. Cooper, Hubin Zhao</i>	

AlphaBlend: Hardware-Algorithm Co-Design with Mixed-Alphabet Set Multipliers for DNN Workloads.....	3557
<i>Arani Roy, Kaushik Roy</i>	
Perovskite Nanocrystal Enhanced Vertically Stacked-Photodiode Image Sensor for Wavelength Resolved UV Imaging	3562
<i>Haoxiang Chang, Zhongmin Zhu, Haocheng Yang, Yifei Jin, Brianna Hajek, Ziwen Wang, Qingyang Fei, Shuming Nie, Viktor Gruev</i>	
Efficient Multiple-Precision Floating-Point Multiply-Add Architecture for Deep Learning Applications.....	3567
<i>Songtai Liang, Bingjie Xia, Wen Wang, Xiaoxia Han, Peng Liu</i>	
Digital Compute-In-Memory Ising Annealer with Ferroelectric Capacitor-Based nvSRAM for Combinatorial Optimization Problems	3572
<i>Yuyao Kong, Jianwei Jia, Anni Lu, Faaiq Waqar, Yuan-Chun Luo, Hai Li, Ian Young, Shimeng Yu</i>	
SRIF: Energy- And Area-Efficient Soft Reset Integrate-And-Fire Neuron for High-Accuracy Spiking Neural Network.....	3577
<i>Tianci Cai, Qiqiao Wu, Yixuan Liu, Yue Cao, Yu Jiang, Keji Zhou, Jianguo Yang</i>	
CROSSCUT: A Multi-Core Neuromorphic Accelerator Improving Resource-Utilization	3582
<i>Youming Yang, Yi Zhong, Zilin Wang, Tao Zhang, Li Lun, Yingying Cui, Xiaoxin Cui, Song Jia, Yuan Wang</i>	
HRHuman: Tuning-Free Higher-Resolution Human Image Generation Via Template Knowledge.....	3587
<i>Ling Li, Lanqing Guo, Siyuan Yang, Qian Zheng, Yakun Ju, Weisi Lin, Alex C. Kot</i>	
A DVS-CIS Sensor Data Receiver on FPGA with a 10 Gbps MIPI Controller.....	3592
<i>Mincheol Cha, Keehyuk Lee, Bobaro Chang, Soosung Kim, Taeho Lee, Xuan Truong Nguyen, Tae Sung Kim, Hyunsurk Ryu</i>	
A Dual-Mode One-Stage R3 Rectifier with Wide Loading Range for Implantable Medical Devices.....	3597
<i>Tsz-Fai Kwok, Yuan Yao, Pok Man Leung, Wing-Hung Ki, Chi-Ying Tsui</i>	
MonoSparse-CAM: Efficient Tree Model Processing Via Monotonicity and Sparsity in CAMs	3602
<i>Tergel Molom-Ochir, Brady Taylor, Hai Helen Li, Yiran Chen</i>	
A 5.5-7.9 GHz Double Quadrature Cryo-CMOS Receiver Featuring a Wideband Noise Matching LNA for Quantum Applications	3607
<i>Zixun Gao, Chenglong Liang, Suyuan Gan, Bingjun Tang, Xingguo Dong, Ya Zhao, Youze Xin, Li Geng</i>	
An On-Chip Sensor Placement Strategy for Mitigation Framework Against Voltage-Drop Attack	3612
<i>Mashrafi Alam Kajol, Sandeep Sunkavilli, Qiaoyan Yu</i>	
Efficient Radar Signal Processing in ISAC: Optimizing FFT Operations with Circulant Matrix	3617
<i>Long Yao, Yan Li, Jianxin Li, Xinyuan Yu, Ning Wei</i>	
REVBiT 2.0: REVerse Engineering of BiTstream for LUT Extraction, Boolean Logic, and Pin Combination Identification.....	3622
<i>Anmol Singh Narwariya, Aniruddha Paradkar, Pabitra Das, Amit Acharyya</i>	

An Event-Driven Load Regulation Enhanced LDO IC with 9.2fs-Transient-FoM and 1.6μA-Quiescent Current for Low Voltage IoT Applications	3627
<i>Dehong Wang, Siyao Cao, Mengyu Li, Shiwei Wang, Xiaopeng Yu, Zhichao Tan, Menglian Zhao, Shuang Song</i>	
High-Order Associative Learning Based on Memristive Circuits for Efficient Learning	3632
<i>Shengbo Wang, Xuemeng Li, Jialin Ding, Weihao Ma, Ying Wang, Luigi Occhipinti, Arokia Nathan, Shuo Gao</i>	
A 13.8 TOPS/W Polynomial Implicit Neural Representation Accelerator with Tile Similarity Exploitation and LUT-Based Matrix Multiplication Reformation.....	3637
<i>Minsung Kim, Wonhoon Park, Sanghyuk An, Hoi-Jun Yoo, Donghyeon Han</i>	
Exploring Operation Parallelism Vs. Ion Movement in Ion-Trapped QCCD Architectures	3642
<i>Anabel Ovide, Carmen G. Almudever</i>	
A 16.42 TOPS/mm ² Reverse Rotating Charge Sharing DRAM Compute-In-Memory Design in 28nm Process.....	3647
<i>Tsung-Han Wu, Yu-Tse Shih, Hsin-Yung Fu, Chia Ling Ho, Wai-Chi Fang, Ke-Horng Chen, Kuo-Lin Zheng, Ying-Hsi Lin, Shian-Ru Lin, Tsung-Yen Tsai, Jui Jen Wu, Meng-Fan Marvin Chang</i>	
Fast and Accurate Analysis of Power Distribution Network Impedance for DRAM Design	3652
<i>Minseung Shin, Shilong Zhang, Youngsoo Shin</i>	
A New Active Learning Method Based on Uncertainty Sampling and Redundancy Alleviation Strategy.....	3656
<i>Li Chen, Ruihua Wen, Xiaojie Yang, Mingliang Xu, Wanqing Li</i>	
A 48V to 3V-5V Hybrid Converter with Inductor at Low-Q Stage Achieving 93.4% Peak Efficiency and 723W/In ³ Power Density for AI Servers	3661
<i>Yichao Ji, Lin Cheng</i>	
Accelerating Machine Learning with RISC-V Vector Extension and Auto-Vectorization Techniques	3666
<i>Willian Analdo Nunes, Antônio Vinicius Corrêa Dos Santos, Fernando Gehm Moraes</i>	
Ultra-Low-Power Low-Frequency CMOS Integrated Oscillators for Energy-Efficient IoT Devices	3671
<i>Srayan Sankar Chatterjee, Joydeep Basu</i>	
A Highly PVT Invariant Low Power Scalable Analog Dynamic Current-Mode Translinear Matrix-Vector Multiplier	3676
<i>Georgios Gennis, Bouchaib Cherif, Shashank Bansal, Jiahao Song, Johannes Leugering, Gert Cauwenberghs</i>	
Edge Training and Inference with Analog ReRAM Technology for Hand Gesture Recognition	3681
<i>Victoria Clerico, Anirvan Dutta, Donato Francesco Falcone, Wooseok Choi, Matteo Galetta, Tommaso Stecconi, András Horváth, Shokoofeh Varzandeh, Bert Jan Offrein, Mohsen Kaboli, Valeria Bragaglia</i>	
A 13-Bit ENOB Fully Asynchronous Noise-Shaping SAR ADC with Coarse-Fine Comparison, Mismatch Error Shaping and Digital Prediction.....	3686
<i>Chen Wang, Qiuyang Lin, Hanyue Li, Xiaolin Yang, Chaohan Wang, Carolina Mora Lopez, Nick Van Helleputte</i>	
RRAM-Based Analogue Artificial Neuron for Gaussian Activation Function Edge Classifier.....	3691
<i>Georgios Papandroulidakis, Shady Agwa, Themis Prodromakis</i>	

Approximate SRAM-Based Memory System for Intra-Frame Prediction in VVC Encoders	3696
<i>Yasmin Camargo, Matheus Isquierdo, Daniel Palomino, Bruno Zatt, Felipe Sampaio</i>	
An SSHI Rectifier with Energy-Investing Technique for Piezoelectric Energy Harvesting.....	3701
<i>Shunmin Jiang, Sijun Du</i>	
Low-Complexity Combined Approximate DFT and Adaptive Beamformer for Extremely Large Arrays.....	3706
<i>A. Madanayake, U. Kumarasiri, S. Sivasankar, C. U. S. Edussooriya, R. J. Cintra, C. Wijenayake</i>	
Towards a High Resolution Multimodal Neuromorphic Eventset.....	3711
<i>Luca Peres, Edward G. Jones, Oliver Rhodes</i>	
Reliability of Capacitive Read in Arrays of Ferroelectric Capacitors	3716
<i>Luca Fehlings, Muhtasim Alam Chowdhury, Banafsheh Saber Latibari, Soheil Salehi, Erika Covi</i>	
Enhanced Thermal-Resistant Fingerprint Model for Device Identification in OWC System	3721
<i>Xuanbang Chen, Ziqi Liu, Yuhao Wang, Chunlai Dai, Xun Zhang</i>	
A High Performance and Efficient Method for Enhancing Randomness in Linear Feedback Shift Registers(LFSR).....	3725
<i>Sonia Akter, Kasem Khalil, Magdy Bayoumi</i>	
A 4.21 TFLOPS/W Memory-Efficient LLM Inference Accelerator with Bit-Layered Non-Uniform Quantization	3730
<i>Byeongcheol Kim, Sangjin Kim, Sangwoo Ha, Soyeon Um, Kyomin Sohn, Hoi-Jun Yoo</i>	
A Comprehensive Parasitic Component Model for Spiral Air-Core Coils in MHz Load-Independent Single-Input Multiple-Output Wireless Power Transfer System	3735
<i>Tsukasa Yasuda, Xiuqin Wei, Weisen Luo, Hiroo Sekiya</i>	
MPQA: Mixed-Precision Quantization Accelerator for CNN Inference	3740
<i>Beining Zhao, Yu Li, Jiahao Zuo, Wei Zhang, Xinyu Chen, Shan Cao, Zhiyuan Jiang</i>	
A 40nm STT-MRAM Near-Memory Computing Macro for Memory-Augmented Neural Network Acceleration.....	3745
<i>Hongrui Meng, Yajun Wu, Shengchao Zhou, Zizhao Ma, Tai Min, Shaohao Wang, Yufeng Xie</i>	
Incremental Delta-Sigma ADC with Reduced Conversion Cycles Via Quantization-Skip	3750
<i>Amgad Ghonem, Amine Bermak, Bo Wang</i>	
Design Toolbox for sub-Nanoampere CMOS Programmable Voltage References.....	3754
<i>Andrea Boni, Giorgio Bersani, Michele Caselli</i>	
Neuromorphic FeRAM-Based Co-Design for Imaging Enhancement in Handheld Photoacoustic Systems.....	3759
<i>Tiancheng Cao, Zhengyuan Zhang, Shuailin Tao, Chen Liu, Wang Ling Goh, Yuanjing Zheng, Yuan Gao</i>	
Compact High-Voltage Switched-Capacitor Driver for MEMS Actuators.....	3764
<i>Qishen Fang, Feiyu Li, Man-Kay Law</i>	
A Digital Compute-In-Memory Macro Featuring Two's Complement Multiplication for LSTM- Based Biomedical Signal Classification.....	3769
<i>Jinhai Hu, Wang Ling Goh, Yuan Gao</i>	

Compilation Techniques for Spin Qubits in a Shuttling Bus Architecture	3774
<i>Pau Escofet, Andrii Semenov, Niall Murphy, Elena Blokhina, Sergi Abadal, Eduard Alarcón, Carmen G. Almudéver</i>	
Block-Based Optimization for Frequency-Selective One-Bit Quantization.....	3779
<i>Florian Mayer, Christian Vogel</i>	
A Failure Detection Technique for Au-Plated CMOS Microelectrode Arrays.....	3784
<i>Xin Zhang, Minghao Li, Sara S. Ghoreishizadeh</i>	
MaskCRT-B: Masked Conditional Residual Transformer for Learned B-Frame Coding.....	3789
<i>Zong-Lin Gao, Yi-Chen Yao, Kuan-Wei Ho, Yi-Hsin Chen, Wen-Hsiao Peng</i>	
Beyond Preferences: Enriching User Profiles for Effective E-Commerce Recommendations.....	3794
<i>Jingyu Xu, Zhengwei Yang, Zheng Wang</i>	
Live Demonstration: VVC Intra-Coding Visualizer	3799
<i>Joose Sainio, Alexandre Mercat, Jarno Vanne</i>	
N-MUX: Neighborhood-Based Logic Locking Against Machine Learning Attacks.....	3800
<i>Han Zhang, Xuenong Hong, Shirui Sheng, Juncheng Cheng, Nay Aung Kyaw, Kwen-Siong Chong, Zhiping Lin, Bah-Hwee Gwee</i>	
Reservoir Computing with VCO-Based Spiking Neurons for Regression and Classification.....	3805
<i>Kanta Yoshioka, Parker Allred, Taylor Barton, Bibhu Datta Sahoo, Yen-Cheng Kuan, Shiuh-Hua Wood Chiang, Hakaru Tamukoh</i>	
Classification of Individual Finger Movements from ECoG Signals Using a Spiking Neural Network.....	3810
<i>Yulong Wang, Sara Ghoreishizadeh</i>	
A 99.95% Current Efficient Temperature Invariant All-In-One Reference Circuit on Flexible Substrate	3815
<i>Zhenhan Wang, Dipesh C. Monga, Kari Halonen</i>	
Constant-Power Constant-Voltage Charging Protocol Based on a Four-Phase Interleaved Buck Converter for Electric Vehicle Batteries	3820
<i>El Nouha Mammeri, Oswaldo Lopez-Santos, Abdelali El Aroudi, Luis Martinez-Salamero</i>	
On the Development of a Fully Integrated Shuttling Controller System on Chip for Trapped-Ion Quantum Computing	3825
<i>Alexander Meyer, Vadim Issakov</i>	
A 1280×1920 Global Shutter CMOS Image Sensor with On-Chip Background Light Cancellation.....	3830
<i>Fei Wang, Che Qin, Zhigang Wu, Cheng Ma, Xinyang Wang, Zeyu Cai</i>	
PCBRouteNet: A Dynamic Quadrilateral Network Flow Model-Based Dataset Generation Tool for ML PCB Routing.....	3835
<i>Hao Liu, Jie Zheng, Hao Wang, Jun Tu, Shenglong Bai, Yuxi Liu, Jienan Chen</i>	
Mitigation of Range and Doppler Spoofing Attacks on Indoor FMCW Radars Using Dual-Slope FSK-FMCW Waveform.....	3840
<i>Soham Lakhote, Easha Easha, Sumit Kumar, Gaurab Banerjee</i>	
A K-/Ka-Band High-Power Single-Pole-Double-Throw Switch Featuring Absorptive Characteristic	3845
<i>Hao-Yu Luo, Heng-Tung Hsu, Yi-Fan Tsao</i>	

A 12-Bit 1-MS/s 2-Bit/Cycle Asynchronous SAR ADC for MEMS Inertial Sensors Readout	3850
<i>Alessandro Colombi, Antonio Aprile, Daniele Gardino, Michele Folz, Edoardo Bonizzoni, Piero Malcovati</i>	
An Area-Efficient VLSI Architecture for Parallel Jacobi-Based Eigenvalue Decomposition with Inherent Eigenvalue Sorting	3855
<i>Sandra Accamma George, Liz Maria George, Vishnu P S, Subrahmanyam Mula</i>	
A Fully Integrated, Custom End-To-End PPG Sensing System for Ultra-Low Power Wearables	3860
<i>Omar Faruqe, Peter Le, Daehyun Lee, Xinjian Liu, Omar Abdelatty, Daniel S. Truesdell, Benton H. Calhoun</i>	
Live Demonstration: Energy Autonomous Wireless Sensor Node for Oxygen Monitoring with LoRa Connectivity	3865
<i>Roberto La Rosa, Orazio Aiello</i>	
Where to Cut: Efficient ADC Quantization for Analog In-Memory Computing with Discrete Values	3866
<i>Johannes Leugering, Shashank Bansal, Zhaoyi Liu, Jiahao Song, Bouchaib Cherif, Gert Cauwenberghs</i>	
A Power-Efficient Architecture for LES Solving and Δ MV Calculation of VVC Affine Prediction.....	3871
<i>Denis Maass, Marcello Munoz, Murilo Perleberg, Luciano Agostini, Marcelo Porto</i>	
“It Must Be the Resistor!” a Pilot Study Unveiling Student Debugging Misconceptions and Biases.....	3876
<i>Andrew Ash, John Hu</i>	
Best Practices for Phase Noise Simulations of Free Running Ring Oscillators for Crystal-Free Narrowband FSK Communication Systems	3881
<i>Haziq Rohail, Stephen Chung, Titan Yuan, David C. Burnett</i>	
A 4-Phase Adaptive On-Time Controlled Buck Converter with Auto-Synchronized Dynamic Frequency and Transient-Enhancement Techniques.....	3886
<i>Zhiming He, Sai-Weng Sin, Rui P. Martins, Yan Lu</i>	
A Robust Data Compression Engine Dedicated for FMCW Radar RDM	3891
<i>Zhiluo Zhang, Kai Liu, Zhixin Yin, Leilei Huang, Chunqi Shi, Jinghong Chen, Runxi Zhang</i>	
Ceramic Fiber Interconnects Beyond 1000°C Enabled by Automatic Gain Compensated Millimeter-Wave CMOS Transceivers	3896
<i>Abhishek Sharma, Christopher Kniss, Ratanak Phon, Rod Kim</i>	
A K-Band Quadrature Oscillator with Ultra Low Amplitude/Phase Mismatches	3901
<i>Sih-Ying Li, Tzu-Yun Chuang, Jenny Yi-Chun Liu</i>	
WS-CIM: Enabling Fast and Simultaneous Update for Multi-Macro Compute-In-Memory Architecture Using Weight Sharing Technique	3905
<i>Yan-Ding Shieh, Ming-Guang Lin, Hung-Yu Wang, An-Yeu Andy Wu</i>	
Trifilar-Transformer-Coupled Series-Resonance Oscillator with Enhanced Tuning Range	3910
<i>Sumit Dash, Sayan Kumar, Teerachot Siriburanon, R. Bogdan Staszewski</i>	
A 4kb 4T eDRAM with Balanced Retention Time Adjustment.....	3915
<i>Sayan Kumar, Dennis Andrade-Miceli, Chawin Khongprasongsiri, Teerachot Siriburanon, R. Bogdan Staszewski</i>	

A1-GS/s 7-Bit 3-Then-1 Bit/Cycle SAR ADC with a Reconfigurable Reference-Embedded Comparator	3920
<i>Jinwei Wu, Yuekang Guo, Meng Xu, Lingyan Fan, Jing Jin, Jianjun Zhou</i>	
98.9% Efficiency Fully-Integrated GaN Driver for Underwater Wireless Charging Application	3925
<i>Tzung-Je Lee, Yi-Ting Deng, Jyu-Heng Chen</i>	
Analysis of Sub-Sampling PLL False Lock and Lock-In Range Estimation.....	3929
<i>Wenzhe Chen, Tian Xia</i>	
Machine Learning-Driven Multiple Transform Selection for Low-Complexity VVC Encoding.....	3934
<i>Caroline Camargo, Bianca Silveira, Bruno Zatt, Guilherme Correa</i>	
Exploiting Approximate SRAM for Energy-Efficient Integer Motion Estimation on VVC Encoders	3939
<i>Matheus Isquierdo, Felipe Sampaio, Bruno Zatt, Nikil Dutt, Daniel Palomino</i>	
Multiplierless MLP Using Successive Vector Approximation in Post-Training Quantization	3944
<i>Luiz F. Da S. Coelho, Paulo S. R. Diniz, Didier Le Ruyet, Lisandro Lovisolo</i>	
Impedance Modeling of Switched-Inductor Bias-Flip Piezoelectric Energy Harvesting Circuits.....	3949
<i>Loai G. Salem</i>	
Attention-Driven PCM-Based In-Memory Computing for Smart Vision Systems	3954
<i>Adnan Haidar, Amir Khan, Vasileios Ntinias, Jorge Fernández-Berni, Ricardo Carmona-Galán, Ronald Tetzlaff</i>	
Adaptive Multi-Scale Spatiogram (AMS): A Robust and Efficient Descriptor for Complex Visual Environments.....	3959
<i>Niloufar Salehi Dastjerdi, M. Omair Ahmad</i>	
A Rapid Binary Search-Based Capacitor Mismatch Calibration Algorithm.....	3964
<i>Yifei Bai, Huajun Yao, Fengyi Mei, Cuixia Wang, Yongzhen Chen, Jiangfeng Wu</i>	
Exploring Possibilities of BFV-Based Homomorphic Encryption for Privacy-Preserving Image Processing.....	3969
<i>Ardianto Satriawan, Rella Mareta, Hanho Lee</i>	
An All Analog Temporal Power-Supply Trojan to Subvert ECG Biometric Authentication	3974
<i>Ramana Ranganatham, Roberto Ramos-Brito, Michael Zuzak, Tejasvi Das</i>	
Data Rate Enhancement in Ultrasonic Data Telemetry Links: Surpassing Conventional Limits to Achieve Up to 2.2 Mbps Using a 1 MHz Transducer Pair	3979
<i>Yousef Khazaei, Amir M. Sodagar</i>	
A Body-Driven, 1.8 nW, 75 dB Gain, Single Stage OTA, for ULV and ULP Applications	3984
<i>Riccardo Della Sala, Giovanni Nicolini, Giuseppe Scotti</i>	
Development of Low-Power and High-Accuracy Wireless EEG Transmission System Using Compressed Sensing with an EEG Basis.....	3989
<i>Daisuke Kanemoto, Eichi Takimoto, Tetsuya Hirose</i>	
A 103.9-DB SNDR 5-KHz BW Continuous-Time Dynamic Zoom ADC with Switched Resistor Technique for Reducing Thermal Noise	3994
<i>Jaedo Kim, Taehun Kim, Yeonhong Kim, Jeongjin Roh</i>	

STAPC: A Sparse Training Accelerator for Efficient On-Device DNN Learning Via Position Constraints.....	3999
<i>Miao Wang, Shengbing Zhang, Meng Zhang</i>	
Efficient Image Compression Through Extreme Image Rescaling.....	4004
<i>Jiancong Chen, Yixuan Li, Peilin Chen, Shiqi Wang, Zhu Li</i>	
Live Demonstration: Heartbeat-Powered Biosensing Harvester for Intracardiac Monitoring.....	4009
<i>Noora Almarri, Fawaz Nahab, Dai Jiang, Wenhui Song, Andreas Demosthenous</i>	
Neuromorphic Perception and Local Multimodal Haptic Feedback Based Immersive Teleoperation	4010
<i>Cong Li, Junrong Pan, Shengbo Wang, Zihe Zhao, Shuo Gao</i>	
High-Speed VGSOT-MRAM Design for Non-Volatile Cache Memories	4015
<i>Xianzeng Guo, Chao Wang, Luman Xiang, Zhaohao Wang</i>	
ANNs-SaDE: A Machine-Learning-Based Design Automation Framework for Microwave Branch-Line Couplers	4020
<i>Tianqi Chen, Wei Huang, Qiang Wu, Li Yang, Roberto Gómez-García, Xi Zhu</i>	
A Programmable Systolic-Array AI Accelerator System with High-Performance Model Quantization and Heart Disease Classification Algorithm Design	4025
<i>Kuan-Cheng Wang, Ming-Yueh Ku, Shuenn-Yuh Lee, Ju-Yi Chen</i>	
A Bespoke Design Approach to Low-Power Printed Microprocessors for Machine Learning Applications.....	4030
<i>Panagiotis Chaidos, Giorgos Armeniakos, Sotirios Xydis, Dimitrios Soudris</i>	
A 94.1dB-DR 40kHz-BW Continuous-Time Delta-Sigma Modulator with Current-Reused Amplifiers.....	4035
<i>Zhaonan Lu, Menglian Zhao, Zhichao Tan</i>	
Feature Perturbation Agent Based Adversarial Attack Method for Weakly Supervised Video Anomaly Detection.....	4040
<i>Zhen Yang, Yuanfang Guo, Ruijie Yang, Di Huang, Jiantao Zhou</i>	
Fully Integrated Ultrasound Power Receiver for Multi-Piezo Implants with Random Phase Offset	4045
<i>Limitha Kumar, Sijun Du, Dante G. Muratore</i>	
A 22-Nm Surface Code Decoder Using Greedy Algorithm.....	4050
<i>Junichiro Kadomoto, Ren Aoyama, Kazutoshi Kobayashi</i>	
A 5V-To-0.8V Inductor-First 2L2C Multi-Path Hybrid DC-DC Converter.....	4055
<i>Yasi Hu, Junwei Huang, Chi-Seng Lam, Mo Huang, Rui P. Martins, Yan Lu</i>	
Design and Implementation of an Energy-Efficient Detector for Uplink Cell-Free MIMO Networks	4060
<i>Ti-Yu Chen, Tzi-Dar Chiueh</i>	
Low-Power and Low-Noise Amplifier with Intermittent Operation for Compressed Sensing in EEG Measurement Systems	4065
<i>Kenji Mii, Daisuke Kanemoto, Tetsuya Hirose</i>	
Your Demands Deserve More Bits: Referring Semantic Image Compression at Ultra-Low Bitrate.....	4070
<i>Chenhao Wu, Qingbo Wu, Haoran Wei, Shuai Chen, Mingzhou He, King Ng Ngan, Fanman Meng, Hongliang Li</i>	

A Programmable-Gain Floating Inverter Low-Noise Amplifier for Ultrasound Imaging Analog Frontends.....	4075
<i>Diogo Dias, Tiago Costa, João Goes</i>	
Design Automation and Optimization of Reflective Type Lumped Element Phase Shifters.....	4080
<i>Shashidhar G Hegde, Sankaran Aniruddhan</i>	
A Total Noise Power Based Digital Calibration Method for Continuous-Time Delta-Sigma Modulators.....	4085
<i>Zhuojian Yao, Haikun Jia, Lilan Yu, Junfeng Liu, Yu Fu, Wei Deng, Baoyong Chi</i>	
Mitigating Blackout Risk in Power Electronics Penetrated Power Systems Through Metrics-Driven Inverter-Based Generator Placement.....	4090
<i>Dong Liu, Biwei Li, Chi K. Tse, Shuo Li</i>	
A Survey on Recent Developments in SCOAP-Based Hardware Trojan Detection Strategies	4095
<i>Nilanjana Das, Friedrich Pauls, Mattis Hasler, Sebastian Haas</i>	
Towards Designing a Unified DNN Architecture for Analog and Mixed-Signal Circuit Characterization.....	4100
<i>Deepthi Amuru, Chetan Mittal, Zia Abbas</i>	
A Novel Efficient Stochastic Gradient Descent Based MIMO Detector with Noise-Free Initialization.....	4105
<i>Ya Gao, Yubin Zhu, Ruobing Yang, Kaining Han, Jianhao Hu</i>	
Live Demonstration: An Area and Energy Efficient Reconfigurable Cryptographic Accelerator Based SoC Design for Securing IoT Devices	4110
<i>Xypeng Zhang, Bingqiang Liu, Lingyun Hu, Zixuan Shen, Zaisheng He, Dengke Xu, Bah Hwee Gwee, Chao Wang</i>	
A Digital FLL-Based Adaptive Binary LDO for Implantable Medical Devices	4111
<i>Shubham Jain, Chakri Pyla, Rajesh Zele</i>	
Ultra Low Power Video Understanding Smart Vision SoC with On-Chip Sensing and Hybrid Similarity-Aware SRAM/ROM CIM Macro	4116
<i>Haoyang Sang, Zhao Wang, Ningchao Lin, Guangshu Zhao, Man-Kay Law</i>	
A Privacy-Aware Quantilisation Approach for Efficient Edge Deep Learning Accelerator	4121
<i>Huaizhi Zhang, Xuqi Zhu, Jiacheng Zhu, Klaus McDonald-Maier, Xiaojun Zhai</i>	
Live Demonstration: Sea Wave Energy Harvester for Environmental Monitoring Buoys	4126
<i>Filippo Nicora, Orazio Aiello, Corrado Boragno, Daniele D. Caviglia, Alessandro Lo Schiavo</i>	
A Low-Power Sparse Deep Learning Accelerator with Optimized Data Reuse	4127
<i>Kai-Chieh Hsu, Tian-Sheuan Chang</i>	
Design Considerations for a Closed-Loop Digital Class-D Audio Amplifier.....	4132
<i>Ananya Senapati, Nagendra Krishnapura</i>	
An LPTV Programmable Bandpass True-Time-Delay Line Without External Clock-Phase Shifter.....	4137
<i>Mohmad Aasif Bhat, Imon Mondal</i>	
Analyzing and Enhancing the Reliability of Vision Transformer Models Against Soft Errors	4142
<i>En-Yu Liao, Ting-Chi Wang</i>	

PRIM: Hybrid Array-Compressor Multipliers with Carry Disregard and OR-Based Approximation.....	4147
<i>Nima Amirafshar, Gulafshan Gulafshan, Hadi Shahriar Shahhoseini, Nima Taherinejad</i>	
A 0.3-V, nW-Power Bulk-Driven Rail-To-Rail 4-Stage OTA in a 180 nm CMOS Technology	4152
<i>Marco Privitera, Andrea Ballo, Alfio Dario Grasso</i>	
Design and FPGA Realization of QUBO Hardware Accelerator for MAX-CUT Problem.....	4157
<i>Maciej Lewandowski, Piotr Dudek</i>	
Analysis of Calibration Requirements in Image Recognition Tasks with Time-Encoded ANNs	4162
<i>Carlos Perez, Eric Gutierrez</i>	
A 83.7% Resource Reduced FPGA-Based Wired-Logic DNN Processor by Using Mixed-Precision Module Embedding into Non-Linear Function LUT	4167
<i>Yuxuan Pan, Mototsugu Hamada, Atsutake Kosuge</i>	
A Reinforcement Learning Based Multi-Objective Evolutionary Algorithm for High-Level Synthesis Design Space Exploration	4172
<i>Yuda Qian, Shanshan Wang, Chenglong Xiao</i>	
A Novel High-Accuracy Inductor-Current Estimator for Digitally-Controlled Synchronous DC-DC Buck Converters	4177
<i>Yanshan Xie, Victor Adrian, Jinhen Lee, Joseph S. Chang</i>	
A Wide-Band Low-Power ROIC for Optoelectronic Mixer-Based LiDAR System.....	4182
<i>Thinh Tran-Dinh, Huy Do-Quang, Thao Cao-Chau, Binh-Minh Nguyen, Sang-Gug Lee, Loan Pham-Nguyen</i>	
An Expandable Digital Delay Line Using Phase Interpolator with Duty Cycle Correction Capability	4187
<i>Shinya Nagasaki, Ryo Kishida, Takefumi Yoshikawa</i>	
A 112Gb/s Analog-MUX-Based PAM-4 Transmitter with Inherent 2-Tap FFE in 65nm CMOS	4192
<i>Ziyi Lin, Haikun Jia, Shitu He, Wei Deng, Chang Liu, Ruiheng Qiu, Chen Wang, Baoyong Chi</i>	
A 6.86mW 1.5 GS/s 9 B Pipelined SAR ADC with TDC-Assisted Residue Quantization	4196
<i>Chenghao Zhang, Maliang Liu, Yuan Chang, Yihang Yang, Jinhai Xiao, Yintang Yang, Yuanjin Zheng</i>	
An Adaptive Input Voltage Current-Balanced Analog Frontend System for Multiple Cell Li-Ion Battery Electrochemical Impedance Monitoring	4201
<i>Yutong Zhang, Dehong Wang, Jiankai Pan, Quan Chen, Chen Chen, Yulu Zhang, Kai Huang, Menglian Zhao, Shuang Song</i>	
A High-Efficient DC-DC Buck Converter with Adaptive Constant On-Time Control.....	4206
<i>Jiaxiu Xu, Yun Fang, Shengjian Zhang, Chun Zhao, Hao Gao</i>	
Integration of Thermal Inkjet into Over-Molded Substrates for Lab-On-CMOS Pumping Applications.....	4211
<i>Jacob Dawes, Alyssa Estenson, Louis Marun, George Corrigan, Alexander Govyadinov, Anand Jebakumar, Pavel Kornilovich, Erik Torniainen, Matthew L. Johnston</i>	
Design of a Single-Event Upset Tolerant Low-Power Double-Tail Comparator.....	4216
<i>Ahmet Cirakoglu, Alex Serb, Khaled Humood, Mark Zwolinski, Themis Prodromakis</i>	
Characterization of Stacked PV Cell Configurations in a Deep N-Well 65nm CMOS Technology	4221
<i>Anjali Agrawal, Xinjian Liu, Daniel S. Truesdell, Benton H. Calhoun</i>	

ROFD: Event-Based 5k-Fps Real-Time Optical Flow Detector for Transient Radiant Expanding Flares	4226
<i>Shen Zhang, Boyi Wei, Jing Jin, Yibo Zhang, Wenzhe Zheng, Yan Shen, Weixiong Jiang, Chenyang Shi, Yajun Ha</i>	
A Hybrid SST-CML Full Duplex Simultaneous Bi-Directional Signaling Link	4231
<i>Sree Kumar R. G, V. K. Surya, Nijwm Wary, Bibhu Datta Sahoo</i>	
Band to Band Tunneling-Based Low Power and Low Area Tunable Spike Delay Element	4236
<i>Abhishek A. Kadam, Shreyas Deshmukh, Laxmeesha Somappa, Maryam Shojaei Baghini, Udayan Ganguly</i>	
Delta-Rule-Based Weight Calibration Method for Low-Power SNN System	4241
<i>Seungjoon Lee, Minkyu Song, Soo Youn Kim</i>	
A Flash LiDAR with SA-Based Pulse Position Modulation for Multi-User Interference Cancellation.....	4246
<i>Jundong Yeo, Seonghyeok Park, Yunji Hong, Jaehyuk Choi, Jung-Hoon Chun, Seong-Jin Kim</i>	
Two-Step ADC with Self-Successive Doubling Algorithm for High-Speed CIS	4251
<i>Kyungmin Lee, Minkyu Song, Soo Youn Kim</i>	
RS-CIM: Area-Efficient Compute-In-Memory with R-DAC & SAR Hybrid ADC.....	4256
<i>Kyu Hyun Lee, Minkyu Song, Soo Youn Kim</i>	
A Reconfigurable Regulating Rectifier with a Maximum VCR of 3.66 for 402MHz Wireless Power Transfer System.....	4261
<i>Guoao Liu, Lai Jiang, Jinge Ma, Yuanqi Hu</i>	
Implantable Galvanic-Coupled Body Channel Communication Transceiver with Serpentine-Interconnection Electrode Pair for Post-Operative Monitoring of Joint Replacement	4266
<i>Yunchul Chung, Hyunyeop Lee, Dongyoon Lee, Sohmyung Ha, Minkyu Je</i>	
An In-Memory Computing Circuit with Carry-Over Thermometer Coding for a Hippocampus-Inspired Model	4271
<i>Yuka Shishido, Tomoro Marcus Jones, Hakaru Tamukoh, Takashi Morie</i>	
Analog Softmax with Wide Input Current Range for In-Memory Computing	4276
<i>Aradhana Dube, Paul Manea, Paolo Gibertini, Erika Covi, John Paul Strachan</i>	
A Framework for Analog-Digital Mixed-Precision Neural Network Training and Inference	4281
<i>Athanasios Vasilopoulos, Emma Boulharts, Corey Lammie, Julian Büchel, Hadjer Benmeziane, Manuel Le Gallo, Abu Sebastian</i>	
The Curious Case of Seed-Related Fractional Spurs.....	4286
<i>Michael Peter Kennedy, Xu Lu, Haoyang Shen, Sonia Srinivas</i>	
Irregular Operation-Unit-Based Compression for Non-Volatile Computation-In-Memory Accelerator	4291
<i>Liang-Te Huang, Wei Lu, Hung-Ming Chen, Po-Tsang Huang</i>	
Dynamical Analysis of Novel Memristor Cellular Nonlinear Network Cell Topologies	4296
<i>Chenyang Yu, Vasileios Ntinis, Dimitrios Prousalis, Ioannis Messaris, Ahmet Samil Demirkol, Alon Ascoli, Ronald Tetzlaff</i>	
An SRAM-Based Stochastic Number Generator for Stochastic Computing.....	4301
<i>Heng Shi, Zhengkun Yu, Tingting Zhang, Jie Han, Yumeng Yang, Siting Liu</i>	

Analysis of Dynamic Errors in Tri-Level DACs for Continuous-Time Delta-Sigma Modulators	4306
<i>Ahmed Abdelaal, Björn Driemeyer, Joschua Conrad, John G. Kauffman, Maurits Ortmanns</i>	
Using Greedy-Enhanced Heuristic to Optimize Instruction Scheduling for RISC-V DSP	4311
<i>Chen Xu, Yuanyang Xiang, Qingchen Zhai, Ruozhou Xiao, Zhiwei Zhang</i>	
Integrating Bird's Eye View Fusion and Reinforcement Learning for Efficient Autonomous Intersection Navigation	4316
<i>Ayoub Sassi, Emna Zedini, Hakim Ghazzai, Gianluca Setti, Marouane Kessentini</i>	
A 0.473 μ J/Class Seizure Detection Processor with LSVM Classifier and LPF-Based Feature Extraction	4321
<i>Wenxian Gu, Xudong Hao, Hengchang Bi, Xing Wu, C.-J. Richard Shi, Liangjian Lyu</i>	
A Low-Power Wireless Optical SoC for Fluorescence Monitoring.....	4326
<i>Maryam Rafati, Seyed Ruhallah Qasemi, Wei Cao, Alireza Saberkari, Atila Alvandpour</i>	
SSRNet: Few-Shot IC Segmentation in Automated PCB Image Processing.....	4331
<i>Yuhang Wang, Xinrui Wang, Deruo Cheng, Tong Lin, Feng Ji, Yiqiong Shi, Bah-Hwee Gwee</i>	
Design of Cascade and One-Shot Mixed-Mode Recursive Multipliers for GF(2N) Polynomials.....	4336
<i>Vasanthi D R, Daksh Sharma, Sanampudi Gopala Krishna Reddy, Madhav Rao</i>	
Live Demonstration: ASIC Implementation of ASCON Lightweight Cryptography for IoT Applications.....	4341
<i>Khai-Duy Nguyen, Tuan-Kiet Dang, Binh Kieu-Do-Nguyen, Cong-Kha Pham, Trong-Thuc Hoang</i>	
Secret Sharing Enabling Multi-Operations on FPGA Design for Multi-Party Computation in Storage Systems	4342
<i>Yinfan Zhao, Makoto Ikeda</i>	
A Behavioral Model for High-Speed 4:1 Analog Multiplexers, Utilizing Stochastic Modelfitting.....	4347
<i>Jonathan Andree, Giresse T. Belinga Tamokeu, Samuel Wazynski, Markus Grözing, Christian Schmidt, Markus Nölle, Volker Jungnickel, Georg Rademacher, Ronald Freund</i>	
Non-Linearity Cancellation of Gm-C Based DSM.....	4352
<i>Bishoy M. Zaky, John G. Kauffman, Francesco Conzatti, Maurits Ortmanns</i>	
Data Hiding Algorithm for Nuclear Magnetic Resonance Spectroscopy Data Based on Complex Graph Fourier Transform.....	4357
<i>Yuho Tanaka, Kazunori Uruma</i>	
A High Performance Dual-Wordline RRAM Macro with Replica Bitline Delay Control Circuit.....	4361
<i>Honghu Yang, Yongkang Han, Tianci Cai, Chengshuo Yu, Keji Zhou, Jianguo Yang</i>	
A 10Gb/s PI-Based Quarter Rate All Digital CDR with Improved Linearity	4366
<i>Erick J. Arenas Mendoza, Guillermo Espinosa Flores-Verdad, Gisela De La Fuente Cortes, Víctor Rodolfo González</i>	
Event-Driven Inference with Spiking Neural Networks Enhanced by Non-Volatile Analog Spin-Orbit Torque Devices.....	4371
<i>Satoshi Moriya, Yosuke Iida, Aurélien Lagarrigue, K. Vihanga De Zoysa, Masaya Ishikawa, Hideaki Yamamoto, Sunsuke Fukami, Shigeo Sato</i>	
Multi-Agent Proximal Policy Optimization Applications in Low-Dropout Regulator Design.....	4376
<i>Thang Quoc Nguyen, Lihong Zhang, Octavia A. Dobre, Trang Hoang, Trung Q. Duong</i>	

Dynamic-Window DAC Switching in SAR ADCs and Its Mismatch Modelling for High Peak-To-Average Ratio Input Signals	4381
<i>A. K. Rajendra, J. Freriksen, H. S. Bindra</i>	
Improving the Efficiency of VVC Using Partitioning of Reference Frames	4386
<i>Kamran Qureshi, Hadi Amirpour, Christian Timmerer</i>	
A Multi-Bit PUF Architecture Using a 2T Sub-Threshold Voltage Divider	4391
<i>Massimo Vatalaro, Raffaele De Rose, Vincenzo Maccaronio, Marco Lanuzza, Felice Crupi</i>	
An Adaptive AI-Based Approach to Detect and Protect COTS Systems Against Micro-Single-Event-Latchups (μ -SELs) and SELs	4396
<i>Junkai Zhao, Yin Sun, Tony Zhang, Kwen-Siong Chong, Wei Shu, Joseph S. Chang</i>	
Reference Spur Estimation in Integer-N Loop-Based Multi-Output Fractional-N Phase Locked Loops Due to Charge Pump Mismatch	4401
<i>Dhanesh D Prabhu, Vijaya Kumar Kanchetla, Rajesh Zele</i>	
Analysis and Design of Bias-Current-Free Hybrid Phase-Locked Loops with Multi-Phase Time-Interleaved Phase Detector	4406
<i>Qibang Sun, Liqun Feng, Woogeun Rhee, Zhihua Wang</i>	
Post-Quantum and Blockchain-Based Attestation for Trusted FPGAs in B5G Networks	4410
<i>Ilias Papalamprou, Nikolaos Fotos, Nikolaos Chatzivasileiadis, Anna Angelogianni, Dimosthenis Masouros, Dimitrios Soudris</i>	
A 64-Channel Time-Multiplexed Neural Recording IC with Dual Positive Feedback Loop ZIN-Boosting	4415
<i>Christopher Santos, Dong-Hwi Choi, Sohmyung Ha, Minkyu Je</i>	
Stacked Ring Oscillators with Fractional Injection Lock	4420
<i>Gonçalo Rodrigues, Ricardo Borralho, Taimur Rabuske, Jorge Fernandes</i>	
Design of a Real-Time Multi-Individual Boxing Classification System Using Multiple Mode Sensing	4425
<i>Ziyao Zhao, Lingfeng Wu, Kaiwen Wang, Yifei Wang, Chenyi Guo, Ji Wu, Milin Zhang</i>	
Energy-Efficient Non-Neural Face Recognition on the Multi-Core RISC-V System	4430
<i>Mitul Sudhirkumar Nagar, Pinalkumar Engineer</i>	
350-FJ/Spike, 30-Hz Bio-Inspired Silicon Neuron Circuit in 0.2 V, 65 nm CMOS	4435
<i>Sivaiah Naali, Srikanth Vuppunuthala, Vijay Shankar Pasupureddi</i>	
A Band Interleaved by Line (BIL) Architecture of a Simple Lossless Algorithm (SLA) for On-Board Satellite Hyperspectral Data Compression	4440
<i>Vijay Joshi, Sheeba Rani J</i>	
Asynchronous Architecture Design and Implementation of Physical Memory Protection for RISC-V	4445
<i>Anping He, Yunpeng Xing, Jingye Zhong, Weimin Wang, Yinglong Li, Jun Ma</i>	
Annotated 3D Point Cloud Dataset for Traffic Management in Simulated Urban Intersections	4450
<i>Elham Binshafout, Chaima Zaghouani, Nawfal Guefrachi, Charalampos Antoniadis, Hakim Ghazzai, Ahmad Alsharoa, Gianluca Setti</i>	
Assessing the Reusability of Cloud-Received Feature Streams on Advanced Networks	4455
<i>Jiawang Liu, Ao Liu, Hualong Yu, Heming Sun, Lu Yu</i>	

A Simplified Analysis of Threshold Switch Based Neuron Circuits	4460
<i>Ahmet Samil Demirkol, Richard Schroedter, Ioannis Messaris, Vasileios Ntinis, Dimitrios Prousalis, Ronald Tetzlaff, Alon Ascoli</i>	
Towards Efficient Structural Health Monitoring: Spike-Encoding in Real-Time Electromechanical Impedance Systems	4465
<i>Mads Kofod Dahl, Jaamac Hassan Hire, Milad Zamani, Farshad Moradi</i>	
Kyber-KEM-Ascon: Benchmarking a Lightweight Post-Quantum KEM on IoT Devices.....	4470
<i>Sahar Shehzadi, Nathan Whaley, Ayesha Khalid, Abdul Ghafoor, Sadiqa Arshad, Faiz Ul Islam, Máire O'Neill</i>	
PSumSim: A Simulator for Partial-Sum Quantization in Analog Matrix-Vector Multipliers	4475
<i>Joschua Conrad, Simon Wilhelmstätter, Holger Mandry, Paul Kässer, Ahmed Abdelaal, Rohan Asthana, Vasileios Belagiannis, Maurits Ortmanns</i>	
A Unified SpatioTemporal Network with Structural Pruning for Video Action Recognition.....	4480
<i>Yang-Jie Chen, Rashid Ali, Hsu-Feng Hsiao</i>	
Complex Network of Chaotic Circuits with Memristors Switching Oscillation States	4485
<i>Taishi Segawa, Yoko Uwate, Yoshifumi Nishio</i>	
Optimized Hardware Architecture for Respiration Rate Classification Using Quadratic SVM and mmWave Radar Sensor	4490
<i>Mujeev Khan, R. Shamim, Mohd Wajid, Abhishek Srivastava</i>	
LTPS-TFT-Based In-Sensor Compression with Spatiotemporal Differencing Optimization	4495
<i>Deyun Chen, Wenjun Tang, Jialong Liu, Xueqing Li, Sheng Zhang, Huazhong Yang</i>	
Ultra-Compact and Side-Channel Resistant Design of FIFO-Based NTT Core for PQCs	4500
<i>Jiatong Tian, Yijun Cui, Ziyang Ni, Bei Wang, Fei Lyv, Chenghua Wang, Weiqiang Liu</i>	
Use Or Produce - Carbon Impact of a Video Streaming Device	4505
<i>Pierre Le Gargasson, Olivier Weppe, Thibaut Marty, Maxime Pelcat, Daniel Ménard, Christian Herglotz</i>	
Multi-Resolution Encoding for HTTP Adaptive Streaming Using VVenC	4510
<i>Kamran Qureshi, Hadi Amirpour, Christian Timmerer</i>	
Fine-Grained Relationship Alignment Network for Video-Text Retrieval	4515
<i>Min Zheng, Yue Wang, Chunpeng Wu, Zhaogang Han, Weiwei Liu, Ke Chang</i>	
An Energy-Efficient 21Gb/s Duobinary Transceiver for High-Speed Serial Interfaces	4520
<i>Seul-Ki Han, Won-Young Lee</i>	
Breaking the Trade-Off Between Input Impedance and Mixer Paths in Sub-Harmonic N-Path Mixer-First RF Front-End	4524
<i>Raviteja Kammari, Vijay Shankar Pasupureddi</i>	
A PVT-Insensitive 7-Bit Coarse-Fine Ratio-Metric Digital-To-Time Converter for Fractional-N Phase-Locked Loops in 65-Nm CMOS.....	4529
<i>Shenjian Zhang, Chenming Zhang, Hao Luo, Shengtao Yi, Xuwei Ding, Zhirui Zong</i>	
A Parallel Acceleration Strategy for Large Aperture Radar Imaging and Its Hardware Implementation.....	4534
<i>Zhenyu Zhang, Yukun Cheng, Kai Liu, Chunqi Shi, Leilei Huang, Jinghong Chen, Runxi Zhang</i>	

Exploring Teaching Methods for Courses on Radiation Hardening Technology in ICs	4539
<i>You Wang, Erya Deng, Yu Gong, Zhongkun Shen, Chenghua Wang, Yijun Cui, Weiqiang Liu</i>	
Cooperative Robust Parallel Operation of Electric Drive Shaft Systems	4544
<i>Haizhou Yang, Maobin Lu, Fang Deng</i>	
Approximate SOT-MRAM for Neural Network Acceleration with Superior Read Performance	4549
<i>Yulong Qiu, Chao Wang, Zhongzhen Tong, Siyuan Cheng, Yueting Li, Zhaohao Wang</i>	
A 100.2-DB SNDR Active-Passive Continuous-Time $\Delta\Sigma$ Modulator with Calibrated Negative-R	4554
<i>Musen Lin, Han Wang, Ruikai Fan, Hongyan Fu, Quanzhen Duan, Xinpeng Xing</i>	
Screaming Channels Revisited: Encryption Key Recovery from AES-CCM Accelerator	4559
<i>Yanning Ji, Elena Dubrova, Ruize Wang</i>	
A 43 $\mu\text{m} \times 269 \mu\text{m}$, Light-Tolerant and Power-Adaptive Forward-Bulk Optoelectrical Microsystem for Tetherless Neural Recording	4564
<i>Rui Jiao, Yumin Zheng, Shahaboddin Ghajari, Sanaz Sadeghi, Alejandro J. Cortese, Paul L. McEuen, Alyosha C. Molnar, Sunwoo Lee</i>	
Memristor-Assisted CDAC Background Calibration Scheme for SAR ADCs.....	4569
<i>Zhaoguang Si, Chaohan Wang, Xiongfei Jiang, Yufei Wang, Themis Prodromakis, Shiwei Wang, Christos Papavassiliou</i>	
An Area-Efficient, Differential Resonant Ultrasound Pulser with 69% fCV2 Dynamic Power Reduction	4574
<i>Yaohua Zhang, Andreas Demosthenous</i>	
An FPGA-Based Real-Time Optical Flow Accelerator for Recurrent All-Pairs Field Transforms	4578
<i>Xiaoliang Jia, Hong Tang, Xiqin Zheng, Yingke Gao, Longjun Liu</i>	
A Digital Reference-Less CDR Achieving Bandwidth Down to 4 Hz and Locking Time Less than 1000 Cycles Based on a Self-Adaptive PFD for Medical Implant Applications	4583
<i>Dingfu He, Yi Ding, Hongming Lyu</i>	
A 0.93 nW/Node Ultra-Low Power Oscillatory Neural Network Using BTBT-Based Oscillators	4588
<i>Abhinav Thaduri, Abhishek A. Kadam, Laxmeesha Somappa, Udayan Ganguly, Maryam Shojaei Baghini</i>	
A SHA-Less Front-End Stage Structure Suitable for Time-Interleaved Pipeline ADC	4593
<i>Meng Ni, Peng Wang, Fule Li, Hanjun Jiang, Zhihua Wang</i>	
A Calibration Free 8-To-12 B, 1-To-20 MSPS Reconfigurable SAR ADC with Optimized Window- Switching Scheme	4598
<i>Zhong Zhang, Fan Xiong, Ganping Li, Qihui Zhang, Jing Li, Kejun Wu, Qi Yu, Ning Ning</i>	
A Two-Phase, Single-Comparator, Comparison-Reference-Free Level Crossing ADC for Time- Sparse Applications	4603
<i>Mohsen Namavar, Amir M. Sodagar</i>	
Precision-Factored Systolic Arrays: Balancing Accuracy and Efficiency in Floating-Point Computations for CNNs	4608
<i>Dantu Nandini Devi, Madhav Rao</i>	
Stack-Based Ensemble Learning for Performance Indirect Testing of Analog Integrated Circuits.....	4613
<i>Jiawei Cao, Houjun Wang, Zhigang Wang, Hao Li</i>	

Emulation of Mycelium's Electrical Activity with Reconfigurable Memristive Spiking Grid.....	4618
<i>Ioannis K. Chatzipaschalis, Ioannis Tompris, Georgios Kleitsiotis, Theodoros Panagiotis Chatzinikolaou, Iosif-Angelos Fyrigos, Michail-Antisthenis Tsompanas, Andrew Adamatzky, Phil Ayres, Antonio Rubio, Georgios Ch. Sirakoulis</i>	
Design of a Hybrid High Resolution Digital PWM for a Smart Power Point-Of-Load Power Converter.....	4623
<i>Neha Dalal, Matteo Landini, Paolo Vilmercati, Francesco Musolino, Paolo Stefano Croveti</i>	
A Ring-Oscillator-Based Odometer to Unveil the Actual IC Usage Time.....	4628
<i>F. De Los Santos-Prieto, Javier Diaz-Fortuny, R. Castro-Lopez, E. Roca, F. V. Fernandez</i>	
Multi-Bit Flip-Flop Based Timing and Power Optimization Under Advanced Technology Nodes	4633
<i>Tingxuan Gong, Wenxu Ruan, Dongwei Tan, Zhendong He, Zhifeng Lin, Jianli Chen</i>	
Approximating Nonlinear Activation Function Using Genetic Programming	4638
<i>Mahendra Kumar Gurve, Gaurav Kumar, Anuj Kumar, Satyadev Ahlawat, Yamuna Prasad</i>	
Energy Efficient Voltage-Mode Simultaneous Bidirectional Transceiver for Serial Links	4643
<i>Ankit Yadav, V. K. Surya, Sree Kumar R. G., Bibhu Datta Sahoo, Nijwm Wary</i>	
High Accuracy RF Modulation Recognition Using Low-Dimensional Encoder-Based SNN.....	4648
<i>Sai Sanjeet, Bibhu Datta Sahoo</i>	
A 12V-Input 1.8V-0.8V-Output Multiple-Output Hybrid Buck DC-DC Converter with a Shared Flying Capacitor	4653
<i>Fucong Luo, Junwei Huang, Mo Huang, Rui P. Martins, Yan Lu</i>	
A Replica Driverless Common/Differential Mode Hybrid for Full-Duplex Signaling in Serial Links	4658
<i>Pankaj Kumar, V. K. Surya, Sree Kumar. R. G, Bibhu Datta Sahoo, Nijwm Wary</i>	
A Black-Box Approach for Generating Surrogate Data for an Amorphous-Core Inductor Working Up to Magnetic Saturation.....	4663
<i>Alessandro Ravera, Sofien Baazaoui, Matteo Lodi, Alberto Oliveri, Marco Storace</i>	
Advanced Learning-Based Coding Tools for ECM: Intra Prediction and In-Loop Filtering.....	4668
<i>Yanchen Zhao, Jiaye Fu, Zhaoyu Li, Qizhe Wang, Zhimeng Huang, Jiaqi Zhang, Chuanmin Jia, Siwei Ma</i>	
A Multimodal Impedance and Optical CMOS Sensor with Integrated On-Chip Energy Harvesting.....	4673
<i>Farin Rahman, Nicole McFarlane</i>	
GraphDiffusion: A Graph-Conditioned Diffusion Model for Chip Placement	4678
<i>Siyuan Fang, Liuyu Xiang, Wei Li, Zhao Feng He</i>	
A Token-Passing-Based Trigger-Prediction Methodology for Event-Driven ToF Sensors.....	4683
<i>Yifei Xiang, Zhao Wang, Haoyang Sang, Man-Kay Law</i>	
Rate-Aware Learned Speech Compression.....	4688
<i>Jun Xu, Zhengxue Cheng, Guangchuan Chi, Yuhan Liu, Yuelin Hu, Li Song</i>	
Live Demonstration: Bioimpedance-Based Interaction for Virtual Reality.....	4693
<i>Tianyang Yao, Yaohua Zhang, Yu Wu, Dai Jiang, Richard Bayford, Andreas Demosthenous</i>	
Comprehensive Compliance Framework for RISC-V Architectures Using the RISCOF Test Platform.....	4694
<i>Mohamed A. Elshiemy, Ahmed Soltan</i>	

Motion Artifact Compensation in Contactless Heartbeat Monitoring Using FMCW Radar	4699
<i>Ashi Singhal, Mohd Wajid, Abhishek Srivastava</i>	
A 67.51 dB SNDR 137.8 μ W SAR-Assisted Slope ADC with High-Linearity Analog Slope and Low Switching Energy	4704
<i>Xiaofeng Chu, Can Liang, Zeyu Cai</i>	
A Bidirectional Frequency Detector Independent of Input Transition Density for a Wide-Tuning Range Applications.....	4709
<i>Abhinav Vajrala, Rajesh Mahadev, Santosh Yachareni, Zia Abbas</i>	
A One-Off-Chip-Capacitor Wireless High-Voltage Power Management Unit Generating Regulated Supplies with 80.6-DB-PSRR in Low-Voltage CMOS	4714
<i>Anxi Hu, Yi Ding, Hongming Lyu</i>	
MTVSM-CIM: A Magnified-TMR VC-SOT-MRAM Computing-In-Memory Macro for Edge AI	4719
<i>Bingqian Song, Cancheng Xiao, Fantao Gao, Jiahao Zhao, Mengzhu Li, Ziwei Han, Jianshi Tang, Huaqiang Wu, Tianxiang Nan</i>	
An Event-Based Digital Compute-In-Memory Accelerator with Flexible Operand Resolution and Layer-Wise Weight/Output Stationarity	4724
<i>Nicolas Chauvaux, Adrian Kneip, Christoph Posch, Kofi Makinwa, Charlotte Frenkel</i>	
Analysis and Prevention of Coupling-Dependent Data Flipping in Series-Series Resonant Wireless Power Transfer Systems	4729
<i>Yuan Yao, Sayan Sarkar, Fengshi Tian, Wing-Hung Ki, Chi-Ying Tsui, Yang Liu</i>	
Enabling Classical-Quantum Interface Using Digital SFQ for Pulse-Phase Driven Control for Superconducting Qubits	4733
<i>Meriam Gay Bautista-Jurney, Patricia Gonzalez-Guerrero, George Michelogiannakis, Anastasiia Butko</i>	
Comparative Analysis of AI-Driven Feature Selection and Machine Learning Framework for Efficient Radar Fall Detection	4738
<i>Nazia Gillani, Tughrul Arslan</i>	
A 4T4R Compact Wide-Band Low Power UWB Beamforming Transceiver for Efficiency and Sensitivity Improvement	4743
<i>Jiazheng Zhou, Haoyu Bai, Ling Hao, Junhua Liu, Huailin Liao</i>	
A 6.78-MHz Soft-Switching Push-Pull Amplifier Achieving 60.9-%-Efficiency Wireless Power Transfer for Medical Implant Applications.....	4748
<i>Zi-Ang Cheng, Xinqin Guo, Hongming Lyu</i>	
6G FR3 Band-Limited Based DPD Using Low-Resolution $\Sigma\Delta$ Feedback Receiver.....	4753
<i>Haoyang Zeng, Ahmed A. Ghoniem, Dang-Kiên Germain Pham, Michel Vasilevski, Reda Mohellebi, Hassan Aboushady, Chadi Jabbour</i>	
Hardware Implementation of Convolutional Neural Network for High-Precision Machining at the Sensor Edge.....	4758
<i>Ali Mohammadi, Harry Kneale-Roby, Shamin Sadrafshari, Myles Bienek, Joseph Betts, Alborz Shokrani</i>	
Live Demonstration: AI-Based System Latchup Detection and Protection for COTS Systems.....	4763
<i>Yin Sun, Junkai Zhao, Rouli Fang, Tony Zhang, Kwen-Siong Chong, Wei Shu, Joseph S. Chang</i>	

A 9.62 mW LMV Cell for mm-Wave Applications	4764
<i>Krishnan Rengarajan, Pulkit Kathuria, Soumya Rank, Sourav Nandi, Saroj Mondal</i>	
Real-Time Object Recognition Based on Parallel Ultra-Low-Power Microcontroller: A Case Study on Multisensory Glove	4769
<i>Riccardo Testa, Mohamad Yaacoub, Christian Gianoglio, Maurizio Valle</i>	
A Chip-Based Miniature MRI Platform with Integrated PDMS-PCB Coil Frontend for Microlitre- Volume Sample Analysis	4774
<i>Qi Zhou, Shuhao Fan, Ka-Meng Lei, Rui P. Martins, Pui-In Mak</i>	
A 49.7-Fs, 10.29-To-12.75 GHz Fractional-N ADPLL with a New Quad-Core Class-F3 Oscillator.....	4779
<i>Sihao Zhang, Ningyuan Zhang, Chuancheng Wu, Ling Hao, Haoyu Bai, Junua Liu, Huailin Liao</i>	
Breakdown in Polysilicon Resistors Operating in the Deep Cryogenic Regime	4784
<i>Jorge Pérez-Bailón, Jorge Marqués-García, Gabriel López-Pinar, Santiago Celma, Carlos Sánchez-Azqueta</i>	
MATSORT: Fast and Efficient Approximate Matrix Sorting Algorithm for DNN Applications.....	4789
<i>Xuanhao Lu, Alireza Ahrar, Mostafa Rahimi Azghadi, Roman Genov, Amirali Amirsoleimani</i>	
3D SRAM Disaggregation in Advanced CMOS Nodes Using Hybrid Bonding Technology	4794
<i>Bhawana Kumari, Anurag Swarnkar, Dawit Abdi, Fernando Garcia Redondo, James Myers, Julien Ryckaert, Jaydeep Kulkarni, Dwaipayan Biswas</i>	
A 0.9 V Configurable Dual Mode Comparator Using a Supply Boosting Technique	4799
<i>Sourabh Mestry, Siddharth R. K, Nithin Kumar Y. B, Vasantha M. H, Edoardo Bonizzoni</i>	
SPIKA: 200-TOPS/W RRAM-Based Neural Network Accelerator Chip	4804
<i>Khaled Humood, Patrick Foster, Shiwei Wang, Alexander Serb, Themis Prodromakis</i>	
Live Demonstration: A High-Resolution Plantar Insole System for Lower Body Estimation.....	4809
<i>Junjian Chi, Qingyu Zhang, Zibo Zhang, Andreas Demosthenous, Yu Wu</i>	
Drift Correction Algorithms for Lifetime-Based Transcutaneous Oxygen Measurements.....	4810
<i>Gokalp Cevik, Burak Kahraman, Vladimir Vakhter, Ulkuhan Guler</i>	
Time Domain Multiplexing for Equalized Vibration in Miniaturized Electromagnetic Tactile Pixels.....	4815
<i>Shamin Sadrafshari, Hussein Musa, Pejman Mohammadi, Ali Mohammadi</i>	
A 2.43 mW Multi-Frequency Electrical Impedance Tomography ASIC with Dual-Mode Impedance Readout.....	4820
<i>Jiayang Li, Dai Jiang, Andreas Demosthenous</i>	
A Capacitor-Saver Redundant SAR ADC to Optimize Readout in Compute In-Memory Systems	4824
<i>Alireza Ahrar, Aliasghar Makhlooghpoor, Xuanhao Lu, Jianxiong Xu, Mostafa Rahimi Azghadi, Hossein Kassiri, Amirali Amirsoleimani</i>	
A 400V Monolithic GaN-On-SOI Half-Bridge with On-Chip Accurate Current Detection for Isolated Power Converters.....	4829
<i>Yue Wang, Yuchuan Han, Xiangyu He, Yuan Gao</i>	
Compact, Low-Power Pulse Generator Sphenoid Implant for Minimally Invasive Electrical Stimulation of Deep Brain Regions.....	4833
<i>Mats Forssell, Boyle Cheng, Dorian M. Kusyk, Alexander C. Whiting, Eric W. Wang, Pulkit Grover</i>	

Live Demonstration: Improving Efficiency of Speech Recognition with Neuro-Inspired Units on AIU Spyre	4838
<i>Yannick Schnider, Thomas Ortner, Stanislaw Wozniak, Alberto Mannari, Angeliki Pantazi</i>	
ViT Coupled Efficient CMOS Image Sensor with Sparse Acquisition and Patch Selection	4839
<i>Wilfred Kisku, Azad Singh, Amandeep Kaur, Deepak Mishra</i>	
Live Demonstration: DVS-CIS Sensor Fusion System for Real-Time DNN-Based Object Detection	4844
<i>Mincheol Cha, Keehyuk Lee, Bobaro Chang, Soosung Kim, Taeho Lee, Xuan Truong Nguyen, Tae Sung Kim, Hyuk-Jae Lee, Hyunsurk Ryu</i>	
High-Resolution Plantar Pressure Insole System for Enhanced Lower Body Biomechanical Analysis	4846
<i>Junjian Chi, Qingyu Zhang, Zibo Zhang, Andreas Demosthenous, Yu Wu</i>	
Calibration-Enhanced 16-Channel On-Chip Seizure Classifier Using Gated Recurrent Network	4851
<i>Lakshmi Iyer, Arpit Bal, Laxmeesha Somappa</i>	
CAP-HDC: A CAM-Based Processor for Hyperdimensional Computing	4856
<i>Yuhan He, Anqin Xiao, Tianxi Hu, Fanxi Yang, Hengtan Zhang, Li-Rong Zheng, Zhuo Zou</i>	
Robust Semantic Communication for UAV Control with Integrated Trajectory Prediction	4861
<i>Hai-Yan Huang, Yu-Jia Chen, Chia-Chun Hsu</i>	
A Method for Improving the Wearability of Capsule Positioning System Using Particle Filter	4866
<i>Jiaxing Zhang, Qingyu Zhang, Yu Wu, Dai Jiang, Andreas Demosthenous</i>	
Ultra-Compact Low-Power 1st Order Quasi-Passive Sigma-Delta Modulator for Organ-On-Chip Systems	4870
<i>Fábio M. Dias, Henrique A. Pocinho, Gonçalo Rodrigues, Jorge Fernandes, Diogo M. Caetano</i>	
A Preset-Free Energy-Efficient Bidirectional Zero-Crossing-Based Integrator	4875
<i>Jiasheng Chen, Qin Lei, Can Liang, Dan Wang, Jinyu Wang, Long Xu, Chao Chen, Zeyu Cai</i>	
On the ESD Protection for 10V-Compliant Neural Stimulator in 65nm CMOS Technology	4880
<i>Naef Ahmad, Sandip Lashkare, Laxmeesha Somappa</i>	
Haptic-Enhanced Bioimpedance Needle for Precision Navigation in Central Venous Catheterisation with Millimetre Accuracy	4885
<i>Qingyu Zhang, Ahmed Al-Hindawi, Andreas Demosthenous, Yu Wu</i>	
A Unified Oscillator-Based TRNG and PUF with a Gate-Tunneling Entropy Source	4890
<i>Matthew Douthwaite, Abdullah Varici, Ranga Desikachari</i>	
Assessing the Performance of Analog Training for Transfer Learning	4895
<i>Omobayode Fagbohunbe, Corey Lammie, Malte J. Rasch, Takashi Ando, Tayfun Gokmen, Vijay Narayanan</i>	
Evaluating the Feasibility of Electrical Impedance Tomography for Monitoring Knee Angle and Muscle Strength: Towards Application in Total Knee Replacement Rehabilitation	4900
<i>Lishan Liang, Tianyang Yao, Rokhsaneh Tehrani, Darren Player, Tom Carlson, Andreas Demosthenous, Yu Wu</i>	
VeriBench: Benchmarking Large Language Models for Verilog Code Generation and Design Synthesis	4905
<i>Mihir Agarwal, Zaqi Momin, Kailash Prasad, Joycee Mekie</i>	

Live Demonstration: Haptic-Enhanced Bioimpedance Needle for Assisting Central Venous Catheterisation.....	4910
<i>Qingyu Zhang, Ahmed Al-Hindawi, Jiaxing Zhang, Andreas Demosthenous, Yu Wu</i>	
In-Vitro Assessment of the Adaptive Howland Current Source for Bioimpedance Haemolysis Measurements.....	4911
<i>Mamun Rabbani, Ifeabunike I Nwokoye, Enayetur Rahman, Michael B Powner, Iasonas F Triantis</i>	
A ± 0.6 dB, 256- μ W Digital-Intensive RSSI with 80-DB Dynamic-Range in 65-Nm CMOS.....	4916
<i>Sivaiah Naali, Ravi Prakash Bisen, Raviteja Kammari, Vijay Shankar Pasupureddi</i>	
Hadamard-Walsh Channelized Receivers: Theory, Implementation, and Applications.....	4921
<i>Adyant Balaji, Zhaoyi Liu, Siddharth Joshi, Gert Cauwenberghs</i>	
Memristive Implementation of Variable Pixel MRI Imaging Using Skywater 130nm PDK.....	4926
<i>Anitha Gopi, Somayeh Davar, Vineeta Vasudevan Nair, Aleena Kabeer, Thomas Fevens, Alex James</i>	
A Low-Power Cyclic ADC with Capacitive Degeneration Amplifier and Charge Mode Operation.....	4931
<i>Anxin Mao, Shuyu Mo, Zeyu Cai</i>	
A Low-Power 12-Phase Single Capacitively Coupled Ring VCO for Wideband N-Path Systems	4936
<i>Santiago Bernardez, Ignacio Valettute, Ilan Sabaj, Sylvain Bourdel, Nicolás Gammarano, Fernando Silveira, Florence Podevin, Mariana Siniscalchi</i>	
A VCO-Based EPR Sensor Featuring a Large 400 μ m Coil to Enhance MW B1 Homogeneity and Concentration Sensitivity	4941
<i>Hadi Lotfi, Qing Yang, Michal Kern, Jens Anders</i>	
Digital Twin Assisted Performance Aware Power Management for FPGA MPSoC Using High Speed Reinforcement Learning	4946
<i>Kartik Laad, Ratnala Vinay, Parveen Nisha, Vidhumouli Hunsigida, Appa Rao Nali, Amit Acharyya</i>	
Digital Twin-Based Architecture for Run-Time Power Modeling for Sensorless Edge Devices.....	4951
<i>Parveen Nisha, Ratnala Vinay, Kartik Laad, Amit Acharyya</i>	
Topology and Parameter Optimization of High-Order Δ - Σ Modulators Towards Superior Efficiency and Stability with Multi-Agent Reinforcement Learning	4956
<i>Thinh Quang Do, Lihong Zhang, Octavia A. Dobre, Trang Hoang, Trung Q. Duong</i>	
Unsupervised Learning of Fall Incidents Using Radar-Based Sensing	4961
<i>Hamidreza Sadreazami, Marzieh Amini, Miodrag Bolic, Sreeraman Rajan</i>	
Low-Precision Normalization Algorithm and Accelerator for Neural Network Training.....	4966
<i>Han-Sok Suh, Jian Meng, Jae-Sun Seo</i>	
PowerPrint: Harnessing Machine Learning for Accurate and Scalable Device Fingerprinting Via Power Consumption	4971
<i>Zhangying He, Hossein Sayadi</i>	
Self-Learning Neuromorphic Robot Based on Reward-Driven Spiking Neural Network.....	4976
<i>Nicola Russo, Thomas Madsen, Konstantin Nikolic</i>	
A Neuromodulation-Based Spiking Neural Network Using ReRAM Array	4981
<i>Nirmal Shah, Jayatika Sakhuja, Udayan Ganguly, Sandip Lashkare, Laxmeesha Somappa</i>	

Sparsity-Aware Optimization of In-Memory Bayesian Binary Neural Network Accelerators	4986
<i>Prabodh Katti, Bashir M. Al-Hashimi, Bipin Rajendran</i>	
A Real-Time Point Cloud Segmentation System with Optimized Ground Estimation Algorithm and Selective Neural Network.....	4991
<i>Jihyeon Hwang, Sangho Lee, Jueun Jung, Kyuho Lee</i>	
A Hardware-Software Co-Design Platform to Evaluate SNN Workloads for ReRAM-Based IMC	4996
<i>Nirmal Shah, Jayatika Sakhuja, Udayan Ganguly, Sandip Lashkare, Laxmeesha Somappa</i>	
Asynchronous Threshold Voltage Defined Logic Family Resistant to LLSI Attacks.....	5001
<i>Morgan Thomas, Domenic Forte, Nima Maghari</i>	
Wearable Device for Real-Time Assessment of Facing Time in Small Group Social Interactions	5006
<i>Tanay Reddy, Samuel Lobert, Nathan Quadras, Andrew J. Mason</i>	
Simultaneous Series-Parallel High-Speed and Accurate Active Cell Balancing for Improved Battery Life	5011
<i>Arghadeep Sarkar, Rashi Dutt, Amit Acharyya</i>	
Analysis and Modeling of Helical Ladder Switched-Capacitor DC-DC Converters for Fractional VCRs	5016
<i>Mohith Amara, Gajendranath Chowdary</i>	
A Wideband Open-Loop Residue Amplifier for a 7-Bit 10GS/s Two-Step Flash ADC in 22nm SOI CMOS Process	5021
<i>Jenny Lichtenstein, Āantas Kesten, Friedel Gerfers</i>	
A Novel Deep-Learning Method for Obstructive Sleep Apnea Detection from Single Channel Photoplethysmography	5026
<i>Prateek Agrawal, Rashmi Kumari, Pabitra Das, Surita Sarkar, Amit Acharyya</i>	
Analysis and Design of Broadband Transitions from Microstrip-To-CV-WSIW for mm-Wave Applications.....	5031
<i>Anil Kumar Nayak, Igor M Filanovsky, Kambiz Moez, Amalendu Patnaik</i>	
XVPE-Net: A Novel Methodology for Interpretable Vital Parameter and Cuffless Blood Pressure Estimation from PPG Signal	5036
<i>Rahul Verma, Pabitra Das, Surita Sarkar, Prateek Agrawal, Rashmi Kumari, Amit Acharyya</i>	
Communication Characterization of AI Workloads for Large-Scale Multi-Chiplet Accelerators	5041
<i>Mariam Musavi, Emmanuel Irabor, Abhijit Das, Eduard Alarcón, Sergi Abadal</i>	
PMIL: A Topology Module to Improve MIL-Based WSI Classification.....	5046
<i>Ahmad Obeid, Anabia Sohail, Said Boumaraf, Xiabi Liu, Sajid Javed, Hasan Almarzouqi, Jorge Dias, Mohammed Bennamoun, Naoufel Werghi, Ibrahim Abe Elfadel</i>	
Cryptographic Hash Function Using Current-Induced Magnetization Switching in Nano-Magnetic Devices	5051
<i>Divyanshu Divyanshu, Aijaz H. Lone, Meng Tang, Daniel N. Rahimi, Selma Amara, Gianluca Setti</i>	
All-Digital Open-Loop 2nd-Order Pulse Shaping Filter VCO-Based ADC	5056
<i>Nordin Zbida, Susana Paton, Eric Gutierrez</i>	

Waveguide QED Analysis of Quantum-Coherent Links for Modular Quantum Computing	5061
<i>Junaid Khan, Sergio Navarro Reyes, Sahar Ben Rached, Eduard Alarcón, Peter Haring Bolívar, Carmen G. Almudéver, Sergi Abadal</i>	
A Fast Transitioning Power Supply Modulator of Stepped Envelope Tracking for 5G/6G Millimeter-Wave Applications in 65nm CMOS	5066
<i>Vishnu S Varma, Tharun K, Varun T R, Shashank Sagar, Immanuel Raja</i>	
Eigen-Component Analysis: A Quantum Theory-Inspired Linear Model	5071
<i>Rongzhou Chen, Yaping Zhao, Hanghang Liu, Haohan Xu, Shaohua Ma, Edmund Y. Lam</i>	
HybridFlow-DNA: A Deep Generative Compression Framework for DNA Storage of Images	5076
<i>Cihan Ruan, Rongduo Han, Shan Gao, Lei Lu, Wei Jiang, Wei Wang, Haoyu Wu, Nam Ling</i>	
A Novel Methodology for Obstructive Sleep Apnea Detection from ECG Using Deep Learning Approach	5081
<i>Rashmi Kumari, Prateek Agrawal, Surita Sarkar, Pabitra Das, Amit Acharyya</i>	
Minimizing Bit-Error-Rate by Optimizing Power Amplifier's Output Power in Wireless Links.....	5086
<i>Seungwoo Chae, Mohammad Oveisi, Payam Heydari</i>	
Broadband Tapered Microstrip Line-To-SIW Transition for C/X-Band Applications.....	5091
<i>Anil Kumar Nayak, Igor M. Filanovsky, Kambiz Moez, Amalendu Patnaik</i>	
Crosstalk Attack Resilient RNS Quantum Addition	5095
<i>Bhaskar Gaur, Himanshu Thapliyal</i>	
An Optimized Controlled Current Source for Cancer Detection Using Bioimpedance Spectroscopy	5100
<i>Danilo A. Carnevale Castillo, Bruno C. S. Sanches, Wilhelmus Adrianus M. Van Noije</i>	
An Ultra Low Power Circuits M.Sc. Course Proposal for the GreenChips-EDU Platform.....	5105
<i>Jorge Fernandes, Ricardo Martins, Gongalo Rodrigues, Marcelino Santos</i>	
Live Demonstration: Compressive Subsampling for High-Speed Large-Area Tactile Sensing	5110
<i>Ariel Slepnyan, Dian Li, Trac Tran, Nitish Thakor</i>	
Towards Optimizing Physical Reservoir Computing: A Hybrid PCPO-ESN Framework for Time Series Forecasting.....	5111
<i>Dinda Pramanta, Ninnart Fuengfusin, Arie Rachmad Syulistyo, Hakaru Tamukoh</i>	
Sensing Temporal Codes and Probing System Responses with Spikes: An Active Pixel Approach	5116
<i>Akwasi Akwaboah, Johannes Leugering, Lauren Phillips, Gert Cauwenberghs, Ralph Etienne- Cummings</i>	
A High-Density RRAM-Based Ising Machine with Analog In-Memory Operation for Solving Combinatorial Optimization Problems	5121
<i>Jingxin Deng, Keji Zhou, Honghu Yang, Chengshuo Yu, Jianguo Yang</i>	
A Lightweight RISC-V Multi-Core Interaction Framework for Embedded Real-Time Applications	5126
<i>Yuanyang Xiang, Chen Xu, Yueyue Wang, Weiying Wang, Qingchen Zhai, Kunyu Zong, Ruozhou Xiao, Zhiwei Zhang</i>	
Silicon Spin Qubits: A Scalable Solution for Quantum Computing	5131
<i>Ioanna Kriekouki, Conor Power, Imran Bashir, Elena Blokhina</i>	

Ionoacoustic Dosimetry for FLASH Electron Beams: Design of Sensor Arrays and Reconstruction Algorithms Through Computational Simulations.....	5136
<i>Alessandro Michele Ferrara, Elia Arturo Vallicelli, Maurizio Marrale, Fabio Di Martino, Giuliana Milluzzo, Francesco Romano, Mattia Romeo, Mattia Tambaro, Marcello De Matteis</i>	
QuickTrace: An Efficient Contour Tracing Algorithm for Defect Robustness Simulation of Silicon Dangling Bond Logic	5141
<i>Jan Drewniok, Marcel Walter, Robert Wille</i>	
Toward Analog Implementation of Recurrent Neural Networks in the RF Domain for Proactive Anomaly Detection in B5G Wireless Networks.....	5146
<i>Fariborz Lohrabi Pour, Dong Sam Ha</i>	
A Pre-Charge Based Data Cell Dynamic Reference Sensing Scheme for Reliable Read Operations in STT-MRAM	5151
<i>Kyongsoo Kim, Taehwan Kim, Jongsun Park</i>	
Investigating the Robustness of Dynamically Tunable Logic Gates with Tantalum Oxide Memristors.....	5156
<i>András Horváth, Alon Ascoli, Ronald Tetzlaff</i>	
A Systematic Methodology for Time-Multiplexing Algorithms on a Reconfigurable System-On-Chip	5161
<i>Duc Dung Vu, Sanat K. Biswas, Alan Kan, Ediz Cetin</i>	
Analysis of Non-Idealities in CMOS RX Front-End for Linear Phased Arrays.....	5166
<i>Francisco Aznar, Uxua Esteban-Eraso, Antonio D. Martínez-Pérez, C. Sánchez-Azqueta, Santiago Celma</i>	
Mitigation of Camouflaged Adversarial Attacks in Autonomous Vehicles—A Case Study Using CARLA Simulator.....	5171
<i>Yago Romano Martinez, Carter Brady, Abhijeet Solanki, Wesam Al Amiri, Syed Rafay Hasan, Terry N. Guo</i>	
Graphene-Based, Frequency-Domain Self-Trigger for Low SNR Air Showers-Induced Pulses.....	5176
<i>Nicoleta Cucu Laurenciu, Charles Timmermans, Sorin D. Cotofana</i>	
HLS Learning Approach: Efficient Optimization with Instruction Block Diagram	5181
<i>Duc Dung Vu, Alexander Kroh, Alan Kan, Ediz Cetin</i>	
Ultra-Low Power Current Mode Distance Calculation Circuit for K-Means Clustering	5186
<i>Nishant Biyani, Dimitar Dimitrov, Aatmesh Shrivastava</i>	
FrameVoting: A Robust and Fast Method of Using Gaze Estimations to Identify Objects of Interest	5191
<i>Kao Den Chang, He-Yen Hsieh, H. T. Kung, Ziyun Li, Sai Qian Zhang</i>	
Enabling Mycelium-Inspired Reservoir Computing with Memristive Oscillating Cellular Automata.....	5196
<i>Theodoros Panagiotis Chatzinikolaou, Alexandros Mavropoulos, Ioannis Tompris, Georgios Kleitsiotis, Ioannis K. Chatzipaschalis, Karolos-Alexandros Tsakalos, Iosif-Angelos Fyrigos, Michail-Antisthenis Tsompanas, Andrew Adamatzky, Panagiotis Dimitrakis, Georgios Ch. Sirakoulis</i>	
Multichannel Potentiostat with Shared Reference Electrode for Simultaneous Multitechnique Measurements in Microfluidic Sensor Arrays	5201
<i>Ehsan Ashoori, Samuel Lobert, Derek Goderis, Andrew J. Mason</i>	

Live Demonstration: An Application for Layout Resilience Analysis of Silicon Dangling Bond Logic.....	5206
<i>Marcel Walter, Jan Drewniok, Robert Wille</i>	
A Highly-Integrated 64-QAM Ku-Band Transceiver in SiGe BiCMOS for 6G Cell-Free MIMO	5207
<i>Axel Engelhardt, Finn Stapelfeldt, Meghana Kadam, Paulo Oliveira, Hans-Dieter Wohlmuth, Vadim Issakov</i>	
AI-Enabled RF-To-THz IC Design Space Discovery and Inverse Design Flow	5212
<i>Kaushik Sengupta, Emir Ali Karahan, Jonathan Zhou, Zheng Liu</i>	
Self-Tuning RIS Controller for Vehicular Communications: A Hardware Perspective	5216
<i>Shahriar Shahabuddin, Md. Salman Sakib, Hassan Malik, Mahmoud A. Albreem</i>	
LineShield - A Generalized LiDAR Pipeline for Automated Vegetation Encroachment Detection on Powerlines	5221
<i>Aziz Al-Najjar, Marzieh Amini, James R. Green, Felix Kwamena</i>	
Image Analysis-Synthesis Using the Quantum Fourier Transform	5226
<i>Tanay Kamlesh Patel, Danielle Knutson, Glen Uehara, Frank Marfai, Carly Jazwin, Jean Larson, Andreas Spanias</i>	
Low-Complexity and Low-Power Receiver for Solar-Cell-Based Optical Communications	5231
<i>Walter D. Leon-Salas, Philo Kaulkin, Keetyn Burnett, Mauricio Postigo Malaga, Miguel Vizcardo</i>	
A Low-Power, Versatile Capacitance Interface ASIC Based on Pulse-Width Modulation with Real-Time Dynamic Range Matching.....	5236
<i>Maryam Habibollahi, Arthur Jaccottet, Antonio Gomez, Nader Saffari, Andreas Demosthenous</i>	
Digital Implementation of a Spiking/Bursting Neuron Model with Low Resources.....	5240
<i>Ziyao Zhang, Piotr Dudek, Jayawan H. B. Wijekoon</i>	
Current Regulated LED Driver with Fast Switch-Off Behavior for Integrated Optoelectronic Implants	5245
<i>Anton Geläschus, Julian A. Singer, Matthias Kuhl, Andreas Bahr</i>	
A Fully Flexible Temperature Sensor for Wearable Applications.....	5250
<i>Maxx A. Seminario, Ayden Uerling, Sina Balkir, Michael W. Hoffman, Joseph A. Schmitz, Eric J. Markvicka</i>	
A Novel Energy-Efficient Continuous-Time Hysteretic VCO-Based Comparator.....	5255
<i>Jinhen Lee, Victor Adrian, Kinglouis Steven Tantra, Bah-Hwee Gwee, Joseph S. Chang</i>	
A Systematic Comparison of D-Band Power Amplifiers Using MOM- And MOS-Neutralization Capacitors in 22nm FDSOI CMOS	5260
<i>Finn-Niclas Stapelfeldt, Vadim Issakov</i>	
Alternating Greedy Schedules: Enabling Low-Bitwidth Accumulation of Dot Products in Neural Network Computations.....	5265
<i>Vikas Natesh, H. T. Kung</i>	
SRAM-Based Ring Oscillators as Nonlinear Compute-In-Memory for Low-Power Communication	5270
<i>Kshama Lakshmi Ranganatha, Md. Shahrul Islam, Sudipto Chakraborty, Siddharth Joshi</i>	

A Comparative Study of Advanced Techniques for Wireless Power Transfer to Miniature Medical Implants.....	5275
<i>Sujay Hosur, Khamzat Nugmanuly, Mehdi Kiani</i>	
Efficient Reprogramming of Memristive Crossbars for DNNs: Weight Sorting and Bit Sticking	5280
<i>Matheus Farias, H. T. Kung</i>	
Characterisation and Data-Driven Modelling of Memimpedance.....	5285
<i>Guoyang Huang, Yijia Zhang, Deepika Yadav, Yanzhen He, Alexander Serb, Shiwei Wang, Themis Prodromakis</i>	
Efficient End-To-End 6-Dof Grasp Detection Framework for Edge Devices with Hierarchical Heatmaps and Feature Propagation	5290
<i>Kaiqin Yang, Yixiang Dai, Guijin Wang, Siang Chen</i>	
Individual Optimization of FOV for Vertices and Side PDs of Angle Diversity Receiver for Underwater Visible Light Communication.....	5295
<i>Yusuke Kozawa, Keigo Matsunaga, Hiromasa Habuchi</i>	
Load-Independent Class-E Rectifier with Variable Gain and Fixed Input Reactance	5300
<i>Wenqi Zhu, Hirotaka Koizumi, Ayano Komanaka, Yutaro Komiyama, Hiroo Sekiya</i>	
A 9.6 TOPS/W Vision Transformer Processor with Hierarchical Token Merging for Similarity-Driven Difference Computing	5305
<i>Jungjun Oh, Sangjin Kim, Jiwon Choi, Byeongcheol Kim, Hoi-Jun Yoo</i>	
A Flexible Precision Scaling Deep Neural Network Accelerator with Efficient Weight Combination	5310
<i>Liang Zhao, Kunming Shao, Fengshi Tian, Tim Kwang-Ting Cheng, Chi-Ying Tsui, Yi Zou</i>	
Event-Based Neural Spike Detection Using Spiking Neural Networks for Neuromorphic iBMI Systems.....	5315
<i>Chanwook Hwang, Biyan Zhou, Ye Ke, Vivek Mohan, Jong Hwan Ko, Arindam Basu</i>	
AxRA: Approximate Rowhammer Attack for Modern DRAM Systems.....	5320
<i>Yuhang Hao, Yun Wu, Ziying Ni, Jack Miskelly, Máire O'Neill, Chongyan Gu</i>	
Closed-Loop Neuromorphic Deep Brain Stimulation Using Deep Spiking Q-Networks	5325
<i>Binh Nguyen, Edward Mighetto, Dylan Louie, Chunxiu Yu, Jason Eshraghian</i>	
A Multi-Load Capacitive Power Transfer System Using Class-E Inverter.....	5330
<i>Kurumi Chika, Wenqi Zhu, Hirotaka Koizumi</i>	
Deep Learning Based Equalization for CSK Optical Camera Communication	5335
<i>Yuta Furukawa, Keisuke Takikawa, Daisuke Hisano, Yu Nakayama, Kazuki Maruta</i>	
An Efficient Number Theoretic Transform Implementation for FIPS-203 on FPGA	5340
<i>Sherif Elewa, Eslam Tawfik</i>	
CAMEL: Capacitive Analog In-Memory Equalization for RF Signal Processing	5345
<i>Md. Shahrul Islam, Kshama Lakshmi Ranganatha, Richard Dorrance, Siddharth Joshi</i>	
Outdoor Check Stop HAZMAT Placard Detection Using Synthetic Images and YOLOv5-Small	5350
<i>Riel Castro-Zunti, Juan Yépez, Seokbum Ko</i>	

HyNITA: A Neuromorphic Inference and Training Accelerator for Hybrid ANN-SNN Fusion Models.....	5355
<i>Yi Zhong, Li Lun, Zilin Wang, Jinhao Ruan, Yipeng Gao, Xiaoxin Cui, Xing Zhang, Yuan Wang</i>	
Neural Precision Polarization: Simplifying Neural Network Inference with Dual-Level Precision	5360
<i>Dinithi Jayasuriya, Nastaran Darabi, Maeesha Binte Hashem, Amit Ranjan Trivedi</i>	
A Photo-Luminescence Modulator with Improved Linearity for Solar Cell-Based Optical Communications.....	5365
<i>Walter D. Leon-Salas, Mauricio Postigo Malaga, Miguel Vizcardo</i>	
Digital Back-End Design Considerations of a Laser Heterodyne Radiometer	5370
<i>Vu Hoang Thang Chau, Yadvender Singh Dhillon, James Bevington, Ediz Cetin</i>	
Spatiotemporally Modulated Dual-MLP Architecture for Neural Video Representation and Compression.....	5375
<i>Gong-Yao Wu, Cih-Wei Wong, Hsu-Feng Hsiao</i>	
Leakage Optimization Using Mixed-Vth Cells: Vth Swapping and Cell Relocation.....	5380
<i>Younggwang Jung, Daijoon Hyun</i>	
Stream-Driven Acceleration for Embedded RISC-V SoCs	5385
<i>João Maia, Ana Silveira, Gonçalo Midões, Nuno Neves, Pedro Tomás, Nuno Roma</i>	
An Instrumentation Amplifier with High-Flexibility, High-CMRR and Low-Power Consumption for Electrical Impedance Tomography Applications	5390
<i>Fengchao Zhang, Xiao Liu</i>	
A Fully Hardware Implemented Accelerator Design in ReRAM Analog Computing Without ADCs	5395
<i>Peng Dang, Huawei Li, Wei Wang</i>	
Base Conversion RNS Using Hybrid Barret-Karatsuba-Based Modulus Prime Cores for Homomorphic Multiplication.....	5400
<i>Muhammad Ogin Hasanuddin, Rafael Aditya Cahyo W, Infall Syafalni, Nana Sutisna, Hanho Lee, Trio Adiono</i>	
Leveraging ReRAM Crossbar for Octave Convolution in Deep Neural Networks.....	5405
<i>Abrar Abdurrob, Emre Salman</i>	
A 1Mb RRAM Macro with Bipolar Forming for Improved Programming Yield and Cell-By-Cell Write Verification Scheme.....	5410
<i>Byungkwon An, Junjie Mu, Putu Andhita Dananjaya, Weng Hong Lai, Wen Siang Lew, Tony Tae-Hyoung Kim</i>	
A Neuromorphic Controller with On-Chip Learning for Robot Motion Control	5415
<i>Hengtian Zhang, Zeyu Wang, Jinqiao Yang, Yuhuan He, Fanxi Yang, Li-Rong Zheng, Zhuo Zou</i>	
A Quantitative Analysis of Catastrophic Forgetting in Quantized Spiking Neural Networks	5420
<i>Assel Kembay, Karina Aguilar, Jason Eshraghian</i>	
Flexible PVDF-ZnO Composite Sensor with High Sensitivity and Piezoelectric Response for Enhanced Acoustic Emission Detection	5425
<i>Akshaya Muraleedharan, Swati Ghosh Acharyya, Amit Acharyya</i>	

Instruction Level Parallelism Optimizations in a High-Performance Dual-Issue RISC-V Processor for Real-Time Control Systems	5430
<i>Qingchen Zhai, Weiying Wang, Yueyue Wang, Yuanyang Xiang, Chen Xu, Kunyu Zong, Ruozhou Xiao, Zhiwei Zhang</i>	
Towards Battery-Less Internet of Bodies: Energy Harvester with Reconfigurable Stages Enabled by Galvanic Body-Coupled Powering for Bio-Implants	5435
<i>Asif Iftekhar Omi, Adrija Mukherjee, Anyu Jiang, Baibhab Chatterjee</i>	
Sub-50-MV Static Flip-Flop Consisting of Recursive Stacking Body-Bias Logic Gates for Extremely Low-Voltage VLSIs	5440
<i>Shintaro Sumi, Hikaru Sebe, Daisuke Kanemoto, Tetsuya Hirose</i>	
SR-NCL: An Area-/Energy Efficient Resilient NCL Architecture Based on Selective Redundancy	5445
<i>Hasnain A. Ziad, Alexander C. Bodoh, Ashiq A. Sakib</i>	
ReRAM-Based Process-In-Memory Accelerator for Iterative Solvers: A Systematic Survey	5450
<i>Boyu Geng, Mingjia Fan, Zhou Jin, Weifeng Liu</i>	
Optimizing Sparse/Dense VEGETA Accelerator Performance with Microscaling Quantization.....	5455
<i>Kazi Barria Nine, Connor Talley, Ajay Sharma Mandadi, Tushar Krishna, Arijit Raychowdhury</i>	
A 95% Efficiency Buck-Boost Converter with Full-Cycle Continuous Current Sensing and Adaptive Mode Control.....	5460
<i>Yutong Ying, Shenshaoju Chen, Jinhen Lee, Tong Ge</i>	
Topology-Guided Optimization Methodology for High-Efficiency Power Amplifier Design	5465
<i>Jingyun Bi, Yanze Wang, Xinyu Zhou, Yuandan Dong</i>	
Differentiable Graph Neural Networks for Wirelength Estimation.....	5470
<i>Zhengfeng Wu, Pratik Shrestha, Saran Phatharodom, Ioannis Savidis</i>	
Mixed INT4-INT8 LLM Quantization Via Progressive Layerwise Assignment with Dynamic Sensitivity Estimation.....	5475
<i>Jihoon Kim, Minseok Seo, Xuan Truong Nguyen</i>	
BACF-Net: An Attention-Convolution Fusion Architecture for Learned Image Compression.....	5480
<i>Chen-Lin Chang, Hsu-Feng Hsiao</i>	
Reconfigurable Radix-2/4/8 of Unified 2N Points NTT-INTT for Homomorphic Encryption	5485
<i>Infall Syafalni, Nicholas Teffandi, Fauzan Ibrahim, Indira Pramudita, Nana Sutisna, Trio Adiono</i>	
Machine Vision Quality Assessment for Image Restoration	5490
<i>Yiming Shi, Xiongkuo Min, Yixuan Gao, Guangtao Zhai</i>	
Global-Local Similarity for Efficient Fine-Grained Image Recognition with Vision Transformers	5495
<i>Edwin Arkel Rios, Min-Chun Hu, Bo-Cheng Lai</i>	
ASP: A Daptive Sparse LUT-Based Bit-Slice Accelerator for Efficient CNN Inference	5500
<i>Yueting Li, Yulong Qiu, Amara Amara</i>	
DPE-CIM: Compute-In-Memory Accelerator Using Dynamic Posit Encoding and Speculative Alignment.....	5504
<i>Jingyu He, Kwang-Ting Cheng, Chi-Ying Tsui</i>	

An 102dB DR Current Mode Readout Frontend with Level-Crossing Based Ambient Light Monitoring and DC Cancellation	5509
<i>Fengge Liu, Mengyu Li, Siyao Cao, Xingze Xue, Kexin Xie, Feijun Zheng, Shiwei Wang, Shuang Song</i>	
A Fast Transient FVF LDO with Improved Gate Buffer and Level Triggered Transient Enhancement Circuit in 22 nm Process	5514
<i>Jianjun Zhu, Wanqing Wu, Haigang Feng, Songping Mai, Xian Tang</i>	
STPE: An Energy-Efficient Edge-Device Transformer Inference Processor with Multi-Mode Data-Compression Scheme	5518
<i>Zhou Wang, Haochen Du, Vivek Mohan, Jiuren Zhou, Zhou Shu, Yanqing Xu, Baoyi Han, Xiaonan Tang, Shushan Qiao, Shouyi Yin, Anil A. Bharath, E. M. Drakakis</i>	
A Hybrid-Domain Floating-Point Compute-In-Memory Architecture for Efficient Acceleration of High-Precision Deep Neural Networks	5523
<i>Zhiqiang Yi, Yiwen Liang, Weidong Cao</i>	
A Method for Selecting the Wiring Direction from Terminals Using a Planar Graph Drawing Method	5528
<i>Takuto Amari, Heihachirou Hasumi, Kunihiro Fujiyoshi</i>	
Efficient Real-Time Fine-Grained Action Recognition Over a Progressive and Hierarchical Classification Framework.....	5532
<i>Shuwen Niu, Junkun Jiang, Jie Chen</i>	
A High-Temperature Resistant Railway Vibration Monitoring System Based on Piezoelectric Ceramics and Silicon Carbide Devices.....	5537
<i>Yanze Wang, Jingyun Bi, Ye Yuan, Xinyu Zhou</i>	
GPE: A High-Performance Edge GNN Inference Processor with Multi-Parallelism Format-Variation Mechanism.....	5542
<i>Zhou Wang, Haochen Du, Jiuren Zhou, Zhou Shu, Yanqing Xu, Vivek Mohan, Baoyi Han, Xiaonan Tang, Shushan Qiao, Shouyi Yin, Anil A. Bharath, E. M. Drakakis</i>	
AnalogSim: A Modeling Framework for SRAM-Based Analog In-Memory Computing	5547
<i>Talha Bin Aslam, Anuj Grover, Harsh Rawat</i>	
A Reconfigurable 5-Mode Inductively Assisted Switched-Capacitor DC-DC Converter with 0.5-To-2.5V Output Voltage Range	5552
<i>Sandeep Reddy Kukunuru, Loai G. Salem</i>	
A 0.58mW dB-Linear Time Gain Compensation Amplifier with ± 0.5 -DB Gain Error for Imaging Applications.....	5557
<i>Zhaoyang Cao, Jinhai Hu, Wang Ling Goh, Yuan Gao</i>	
Signal Flow Graph Analysis of Analog Circuits Using Principles of Control Theory : Tutorial Review.....	5562
<i>Michael Sekyere, Marampally Saikiran, Degang Chen</i>	
Analog Computing: From Fundamentals to Applications	5568
<i>Luca Buonanno, Marco Carminati</i>	
Artificial Intelligence for Wearable Devices : With the Case Study of the Control Interface for a Myoelectric Hand Prosthesis	5574
<i>Mounir Boukadoum</i>	

Algorithm-Hardware Co-Design for Ultra-Low-Power Large Language Models.....	5580
<i>Steven Abreu, Jason Eshraghian</i>	
Electronic Photonic Integrated Circuits (EPICs): Fundamentals and Applications.....	5586
<i>Vishal Saxena</i>	
Introduction to Quantum Machine Learning and Quantum Architecture Search	5592
<i>Samuel Yen-Chi Chen, Zhiding Liang</i>	

Author Index