October 13, 2025 (DAY 1)

Track	Paper ID	Title	NO.
Analog and Mixed Signal Circuits and Systems	13	0.3V Specification-oriented Inverter-based OTAs with NAND-and-NOR CMFB using Different Standard Cells' Strength	PS-1
	34	A 14-Bit Two Steps 50MS/s SAR-ADC based on Time-Domain Quantization Utilizing High Linearity VTC Method	PS-2
	43	A Sturdy MASH Third-Order Noise-Shaping SAR ADC with Reuse of the SAR ADC	PS-3
	84	Sparsity and Autocorrelation Peak Difference Based Joint Noise Level and Blur Extent Estimation	PS-4
	114	Performance Evaluation and Optimization of the Sampling Process of an Neuropredictive SAR ADC	PS-5
	130	Analog Blocks for 8-bit SAR ADC: Rail-to-Rail Comparator and Two-Stage Operational Amplifier Designed with Open-Source Tools and Sky	PS-6
	192	Design Considerations for a Third Order Passive Loop Filter in a PLL	PS-7
	214	A Derivative-Sign Discrimination Based Calibration Scheme for Timing Skew in Dual-channel TIADCs	PS-8
	226	Design of Low-Spur Sub-Sampling PLL Employing a Passive Gain-Boosting Isolated SSPD	PS-9
	238	A Study on the Very Small Phase Difference Measurement Circuit Suitable for Integration of Multi-Point Phase Difference Measurement Sys	PS-10
	247	A Low-Voltage DTMOS-Based Grounded Synthetic Inductor Using MOS-C Technique	PS-11
	270	A Low-power Open-Loop Spread-Spectrum Clock Generator Design for Ref-Clk Applications	PS-12
	271	A Low-Power PLL with Supply Noise Insensitive VCO in 65nm CMOS	PS-13
	274	A Capacitor-less LDO with enhanced Wide Band Power Supply Rejection for Voltage-Controlled Oscillator	PS-14
	288	A Low-Power Bidirectional Clamping Circuit Using Current-Starved Inverter and Current Mirror	PS-15
Artificial Intelligence Circuits, Systems, and Applications	3	A Wide Bandwidth TIA with Low Power Consumption for PNN Prototyping	PS-16
	25	RoPE on the Fast Track: Latency-Optimized LLM Inference on GPUs with Low-Rank QKV factorization and Rotary Positional Embedding	PS-17
	27	Efficient MXINT4 Inference via Hardware Based Dynamic Sparsity Detection and Skip Activation	PS-18
	35	Neural-Network-Based Forward-Backward Equalizer for PAM4 Wireline Communication	PS-19
	40	A NOR8T SRAM Digital Compute-in-memory Macro for Sparse and Scalable edge-Al Processing	PS-20
	47	An Energy-Efficient Vision Language Model Inference with Importance-aware Token Pruning	PS-21
	78	A new narrowband active noise control system with improved applicability	PS-22
	144	ReNoC-ML: Reliability-Aware Network-on-Chip Performance Modeling using Machine Learning	PS-23
	170	Memory and Energy Savings in the FPGA Implementation of Keyword Spotting with Stream Processing	PS-24
	184	Pose-Based Video Sign Language Recognition on Edge Devices using Deep Neural Networks	PS-25
	191	RecFlash: Fast Recommendation Inference on NAND Flash-Based In-Storage Computing with Embedding-Optimized Data Mapping	PS-26
	225	Lightweight Distil-Whisper and Hardware-efficient FPGA Acceleration for Edge ASR	PS-27
	232	Cuffless Blood Pressure Estimation Using Wearable Devices Based on Attention Mechanisms and Synthetic Data from Generative Models	PS-28
	256	Improvement of A2C Training Efficiency with FSM-based Meta-Optimizer on CPU-FPGA Platform	PS-29
	287	FOSCU: Feasibility of Synthetic MRI Generation via Duo-Diffusion Models for Enhancement of 3D U-Nets in Hepatic Segmentation	PS-30
	289	System-on-Chip Implementation of Deep Learning RF Fingerprinting for Device Authentication	PS-31
	306	Progressive NAS for Efficient Structural Pruning of Pretrained Language Models	PS-32
Sensory Circuits and Systems	136	Battery-Less and Sensor-Less LoRa Node for Water Turbidity Monitoring	PS-33

October 14, 2025 (DAY 2)

Track Paper ID Title NO. **Beyond CMOS:** 260 2D Material Characterisation Using In-Memory Predictive Analytics PS-34 Nanoelectronics and Novel 4T-2C ferroelectric non-volatile memory cell featuring non-destructive read 285 PS-35 **Hybrid Systems** 102 An Ultra-High-Frequency Neural Stimulator Design Compatible for both 3.3-V and 30-V Output PS-36 Flow-based Compact Droplet Routing Algorithm for MEDA-Based DMFB PS-37 107 **Biomedical Circuits and Systems** 284 PS-38 A Comparative Study of Adaptive Channel Selection for Resource-Constrained On-Chip Seizure Detection 295 Poincaré Embeddings for Brain Age Estimation and Hierarchical Biomarker Discovery PS-39 10 FCP-LLM: Functional Coverpoint Plan Generation Using LLM in Early Design Verification Stage PS-40 53 Alt-FF: A Logic-Level Design of Flip-Flop Control for Side-Channel Protection PS-41 63 Highly-Efficient Unified Polynomial Arithmetic Module Architecture for Falcon PQC Scheme PS-42 92 PS-43 High-Speed Matrix-Thread Co-Optimized NTT Design for ML-KEM 100 An IREE Compiler-Based SoC Design for Efficient On-Device AI Inference Acceleration PS-44 101 Efficient FPGA Implementation of Compressor Trees Based on Generalized Paralell Counter Chains PS-45 A 28nm Floating-Point SRAM-based CIM Macro With Shifting-in-memory Exponent Normalization and Mantissa Alignment PS-46 111 175 PS-47 RNS Base Conversion Using Optimized Multiword Multipliers for Approximate Modulus Switching **Digital Integrated** 181 PS-48 Comparison of Barrett Modular Reduction with Various Multipliers in the Context of BFV/BGV Homomorphic Encryption **Circuits and Systems** 196 PS-49 FPGA-Based Real-Time ISP Accelerator Using Low-Cost Line Buffers and Non-Linear Functions 212 A Simulation-based Study on Impact of DVS for Side-channel Attacks PS-50 PS-51 227 Experimental Analysis of Quantum Annealing for Satisfiability Problems PS-52 240 On the Hardware Efficiency of Short-Length Polarization-Adjusted Convolutional Polar Decoders 255 Dual-Clock Optimization for Multi-Core Base Conversion in Fully Homomorphic CKKS Scheme PS-53 269 PS-54 CIPHERX: A Unified High-Efficiency AES Encryption and CMAC Authentication Accelerator for Edge Applications 305 PS-55 Performance Evaluation of Adaptive Stochastic Computing Based Image Processing Approaches 307 Sparsity-Gated FP16 MAC Pipeline for Energy-Efficient eDRAM-Based Neural Inference PS-56 51 Rigorous Verification of implicit Poincare Map Generated by a Sinusoidally forced Continuous Piecewise Linear Circuit PS-57 **Neural and Nonlinear Circuits and Systems** 272 N-coupled Differential CMOS Relaxation Oscillators PS-58 20 Nanomechanical Self-Timed Power Management Circuit for Low-Power IoT Devices PS-59 233 A Fully-Integrated LDO with High PSR and Fast Transient Response Using Adaptive Feed-Forward Ripple Cancellation Technique PS-60 Power and Energy Circuits and Systems 268 Comparison of Switched-Capacitor and low-Q Resonant Switched-Capacitor with High-Density Capacitor in 3-D Packaging PS-61 298 A Single-Mode Three-Phase Dual-Path Hybrid Buck-Boost Converter with Extended VCR Range and Always-Reduced Conduction Loss PS-62 An L-Band Dual-Low-Noise-Amplifier Bank IC in 65-nm SOI CMOS With < 0.8-dB NF and > 20-dB Gain for Advanced GNSS Receiver Front E 12 PS-63 A 16 Gb/s 48.9 fJ/b PVT-Tolerant Standard-Cell-Based Receiver for AC-Coupled Chiplet Interconnects PS-64 **RF/Communications** 36 **Circuits and Systems** 194 A 15–20 GHz CMOS Variable-Gain Phase Shifter for UAV Detection Radar Systems PS-65 Design Automation and Optimization of Frequency Dividers 275 PS-66