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9 **A Microcontroller with 96% Power-Conversion Efficiency using Stacked Voltage Domains,** Blutman, *NXP Semiconductors*

11 **A Bluetooth Low-Energy (BLE) Transceiver with TX/RX Switchable On-Chip Matching Network, 2.75mW High-IF Discrete-Time Receiver, and 3.6mW All-Digital Transmitter,** Kuo, *TSMC*

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14 **An Energy Harvesting Wireless Sensor Node for IoT Systems Featuring a Near-Threshold Voltage IA-32 Microcontroller in 14nm Tri-Gate CMOS,** Paul, *Intel Corporation*

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19 **SleepTalker: a 28nm FDSOI ULV 802.15.4a IR-UWB Transmitter SoC achieving 14pJ/bit at 27Mb/s with Adaptive-FBB-based Channel Selection and Programmable Pulse Shape,** de Streel, *ICTEAM Institute, Université catholique de Louvain, Louvain-la-Neuve, Belgium*

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81 A Chopping Switched-Capacitor RF Receiver with Integrated Blocker Detection, +31dBm OB-IIP3, and +15dBm OB-B1dB, Xu, *Columbia University*

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95 An 8.3M-pixel 480fps Global-Shutter CMOS Image Sensor with Gain-Adaptive Column ADCs and 2-on-1 Stacked Device Structure, Oike, *Sony*

96 3.5mW 1MHz AM Detector and Digitally-Controlled Tuner in a-IGZO TFT for Wireless Communications in a Fully Integrated Flexible System for Audio Bag, Meister, *Technische Universität Dresden*

97 A 50MHz 5V 3W 90% Efficiency 3-Level Buck Converter with Real-Time Calibration and Wide Output Range for Fast-DVS in 65nm CMOS, Liu, *Hong Kong University of Science and Technology*

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108 A 125 mW 8.5-11.5 Gb/s Serial Link Transceiver with a Dual Path 6-bit ADC/5-tap DFE Receiver and a 4-tap FFE Transmitter in 28 nm CMOS, Raghavan, *Broadcom Corp*

112 A 12-bit 1.6 GS/s Interleaved SAR ADC with Dual Reference Shifting and Interpolation Achieving 17.8 fJ/conv-step in 65nm CMOS, Nam, *University of Southern California*

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128 A 14.6mW 12b 800MS/s 4×Time-Interleaved Pipelined SAR ADC achieving 60.8dB SNDR with Nyquist input and sampling timing skew of 60fsrms without calibration, Lien, *MediaTek Inc.*

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136 A 28nm CMOS Ultra-Compact Thermal Sensor in Current-Mode Technique, Eberlein, *Intel Germany*

138 A 114-pW PMOS-Only, Trim-Free Voltage Reference with 0.26% within-Wafer Inaccuracy for nW Systems, Dong, *University of Michigan, Ann Arbor*

139 A 450mV Timing-Margin-Free Waveform Sorter based on Body Swapping Error Correction, Kim, *Columbia University*

141 A 2.4-GHz 6.4-mW Fractional-N Inductorless RF Synthesizer, Kong, *University of California, Los Angeles*

145 A Multiple-String Hybrid LED Driver with 97% Power Efficiency and 0.996 Power Factor, Li, *The Hong Kong University of Science and Technology*

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150 A Sine-Reference Band (SRB)-Controlled Average Current Technique for a Phase-Cut Dimmable AC-DC Buck LED Driver without an Electrolytic Capacitor, Shin, *KAIST, Daejeon, Korea*

157 A 0.44fJ/conversion-step 11b 600KS/s SAR ADC with Semi-Resting DAC, Hsieh, *National Tsing Hua University*

160 An Oscillator Collapse-Based Comparator with Application in a 74.1dB SNDR, 20kS/s 15b SAR ADC, Shim, *Korea University*

165 A 10Gb/s, 342fJ/bit Micro-Ring Modulator Transmitter with Switched-Capacitor Pre-Emphasis and Monolithic Temperature Sensor in 65nm CMOS, Saeedi, *Oracle Labs, Redwood Shores, CA*

167 A 56Gb/s PAM4 Wireline Transceiver using a 32-way Time-Interleaved SAR ADC in 16nm FinFET, Frans, *Xilinx Inc*

168 A Fully Integrated 144 MHz Wireless-Power-Receiver-on-Chip with an Adaptive Buck-Boost Regulating Rectifier and Low-Loss H-Tree Signal Distribution, Kim, *University of California, San Diego*

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190 A 97.99 dB SNDR, 2 kHz BW, 37.1 uW Noise-Shaping SAR ADC with Dynamic Element Matching and Modulation Dither Effect, Obata, *Panasonic Corporation*

192 A 7-to-18.3GHz Compact Transformer based VCO in 16nm FinFET, Raj, *Xilinx Inc.*

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206 A 32 Gb/s Rx Only Equalization Transceiver with 1-tap Speculative FIR and 2-tap Direct IIR DFE, Hwang, *Korea University*

207 A 0.6mW 31MHz 4th-Order Low-Pass Filter with +29dBm IIP3 Using Self-Coupled Source Follower Based Biquads in 0.18µm CMOS, Xu, *Oregon State University*

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228 An Inductor-less Fractional-N Injection-Locked PLL with a Spur-and-Phase-Noise Filtering Technique, Li, *The Hong Kong University of Science and Technology*

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233 A 0.23 micro-g Bias Instability and 1.6 micro-g/rt(Hz) Resolution Silicon Oscillating Accelerometer with Build-in Sigma-Delta Frequency-to-Digital Converter, zhao, *Nanjing University of Science and Technology*

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268 A 14-bit 8.9GS/s RF DAC in 40nm CMOS achieving >71dBc LTE ACPR at 2.9GHz, Ravinuthula, *Texas Instruments Inc*

273 A 180 mW Multistandard TV Tuner in 28 nm CMOS, Xiao, *Broadcom*

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278 Adaptive Clocking with Dynamic Power Gating for Energy Efficiency Improvement in a 22nm Graphics Execution Core under Fast Voltage Droop, Cho, *Intel Corp.*

286 A 260µW Infrared Gesture Recognition System-on-Chip for Smart Devices, Oh, *University of Michigan*

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291 An High-Density CMOS Multi-Modality Joint Sensor/Stimulator Array with 1024 Pixels for Holistic Real-Time Cellular Characterization, Park, *Georgia Institute of Technology*

297 A 0.9um2 1T1R Bit Cell in 14nm SoC Process for Metal-Fuse OTP Array with Hierarchical Bitline, Bit Level Redundancy, and Power Gating, Chen, *Intel Corporation*

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314 A 380pW Dual Mode Optical Wake-up Receiver with Ambient Noise Cancellation, Lim, *University of Michigan*

317 A 66pW Discontinuous Switch-Capacitor Energy Harvester for Self-Sustaining Sensor Applications, Wu, *University of Michigan, Ann Arbor*

319 A 0.003 mm² 5.2 mW/tap 20 GBd Inductor-less 5-Tap Analog RX-FFE, Boesch, *Stanford University*

327 A 23mW 24GS/s 6b Time-Interleaved Hybrid Two-Step ADC in 28nm CMOS, Xu, *University of Texas at Dallas*

329 200-280GHz CMOS RF Front-End of Transmitter for Rotational Spectroscopy, Sharma, *University of Texas at Dallas*

332 A Front-end ASIC with Receive Sub-Array Beamforming Integrated with a 32 × 32 PZT Matrix Transducer for 3-D Transesophageal Echocardiography, Chen, *Electronic Instrumentation Lab., Delft University of Technology, Delft, The Netherlands*

337 A 6.05-Mb/mm2 16-nm FinFET Double Pumping 1W1R 2-port SRAM with 313 ps Read Access Time, Yabuuchi, *Renesas Electronics Corp.*

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350 **A 5.8 pJ/Op 115 Billion Ops/sec, to 1.78 Trillion Ops/sec 32nm 1000-Processor Array,** Bohnenstiehl, *University of California, Davis*

388 **Broadband THz Spectroscopic Imaging based on a Fully Integrated 4×2 Digital-to-Impulse Radiating Array with a Full-Spectrum of 0.03-1.03THz in Silicon,** Assefzadeh, *Rice University*