Keyword Index

3D printing 6, 11

Acceleration 112
active implant 319
Adaptive Memory 20
adaptive sampling 71
ADC 65, 227
affective computing 283, 295
Affective Computing 277
Affine Arithmetic 325
AI 192
Alzheimer's disease 307
Analog-to-digital conversion 216
antenna design 11
Approximate storage 20
artificial neural network 88

bandwidth reduction 100
Batery 266
Bi-DWA 237
Bioimpedance 106
Bit-width optimization 289
brain tumor 331

cell culture 106
Cell Identification 94
cell signature 331
Cellular automata 249
charge pump 60
Classification 145
CMOS 65
Common Mode Failures 151
compact modeling 88
compactness 6
Composite transistor 169
Computer Aided Design (CAD) 106
Controlled rectifiers 124
current attenuator 233
current splitter 233
current-reuse OTA 26
CUSUM 301

DAC mismatch 237
Data analysis 210

Data classification 271
data converters 65
dc-dc converter 60
Delta-Sigma 65
DEM 237
dental proprioception 319
Dependability 277
Depth Estimation 112
DERS 112
design methodology 42
Design Space Exploration 118, 163
design space exploration 283
Development environment 192
Digital circuits 249
digital system 42
Distributed Power Amplifier 129
Double error correction 1
DTW 301
DWA 237
Dynamic range 325

Early diagnosis 307
EDGE 192
education 15
electrical model 88
electronics 15
Elliptic Curve Cryptography 174
embedded integration 295
Embedded System 186
Energy harvesting 36
energy harvesting 60
Error correcting codes 1
Espresso 139
Ethernet 76
Extreme learning machines 249

failure region characterization 71
fast charging 266
Fast Fourier Transform 151
Fast Fourier transform 82
FGPA 174
Field Programmable Gate Arrays (FPGA) 255
FPGA 54, 221, 227, 289
Frailty 260
fully parallel 82

GaN 129
glioblastoma 331

GPU 112
Graph Cuts 112

Hardware Security 186
health information 174
heart rate 283
Hebbian rule 243
high dynamic range 26
high gain 26
high-resolution 65
High-swing amplifier 26
HSI 112, 133
HSR/PRP 30
hybrid coupler 6
hyperespectral image 331
Hyperspectral 133, 145
Hyperspectral imaging 204, 271
Hyperspectral microscopy 307
hypervisor 100

IEC 61850 76
IEC 62351 76
IEEE 1588 76
Imaging 133
Integrate-and-fire 227
integrated circuit verification 71
integrated circuits 180
Inter-Processor Interrupt 313
inverting CMOS cells 216
IoT 192, 227, 260
IP block 65

K-nearest neighborhood 204

Latin squares 1
Layered Quantum Computer Architectures 163
Legendre polynomials 325
Licenses 157
Linear regression 289
LoRaWAN 260
low overhead voltage 216
low power 198
low SEF 26
low-power 65, 283

Machine Learning 145
MDC 82
MDF 82

Medical 133, 145
memristive SNN 233
Memristor 20
memristor 88
Microarchitectural attacks 301
microelectrode 106
Mismatch Metric Estimation 94
Mismatch shaping 237
mixed-signal reconfigurable device 319
Modeling 48
MSC 82
Multi-core 139
multi-core quantum computers 163
multilevel 88
Multiple valued logic (MVL) 20
Mutexing 313

network connection 100
Neurocognitive disorders 204, 307
Neuromorphic engineering 221
neuromorphic engineering 233
Non uniform Quantizer 237
Non-Intrusive Load Monitoring (NILM) 54
NTP 30

OBT 106
OMMIC 129
On-line Testing 277
One-Step Majority Logic Decodable codes 1
open ISA 180
open source hardware 42, 180
open-hardware 157
OpenMP 139
Oscillatory Neural Network 243

pandemic 174
Parabolic regression 289
PCIe 30
Performance counters 301
photovoltaic 60
pipelined 82
pixel classification 331
Point-of-Care 36
Post-Quantum Cryptography 186
Power Added Efficiency (PAE) 129
Power factor 124
privacy 174
processor 42

processor design 180
PTP 30

QBF 139
Quantum benchmarks 118
Quantum circuit mapping 118
Quantum Communications 163
Quantum Computing 163, 255
Quantum Computing Scalability 163
Quantum Control 255
Quantum performance metrics 118
Quaternary logic 20

Random Forest 145, 204
Reduced Precision Redundancy 151
Reliable PUF Response 94
RISC-V 157, 180
Risc-V 42, 192
rocket 15
Round-off noise 325
RRAM 48
RTN 48

SAS 76
SAT 139
SC 82
SCADA 30
SDF 82
security 76
self biased circuit 169
Self-powered wearable device architecture Potentiostat 36
Sensor Networks 277
Short-circuit 139
Sigma Delta 237
single particle model 266
Skin cancer 271
Smart Meters 54
smart sensors 295
Smart-Grid 76
specific hardware 42
Spectral Unmixing 307
spice simulation 88
spiking neural network 233
Spiking Neural Networks 221
SRAM PUF 94
SRAM-based FPGA 151
Start up 169
Statistical Analysis 271

STDP 221
Stitching 133
STM32 260
supervised learning 243
Supervised Learning 204
Support Vector Machines 204
SVM 145
Switch-level 139
Switching AC/AC converters 124
Symmetrical switching 124
Synaptic plasticity 221
Synchronism 313
synchronization 243
System-on-Chip 186
System-on-Chip (SoC) 54
systems and circuits 295

TEE 301
Time-Sensitive Networking 76
Traces 210
Triple Modular Redundancy 151
TSN 76
tumor heterogeneity 331

UHF band 6
UHF RFID tag 11
Ultra High Frequency 198
UML 210
Uniform quantizer 237
unsupervised learning 243

voltage multiplier 198
voltage-controlled oscillator 216

wearable 295
wearable design 283
Wearable Devices 277

Xen 100

Zynq-UltraScale+ 313