# Vijay Janapa Reddi

List of Publications by Year
in descending order

| 49 papers | 5,296 citations | 687363<br>13<br>h-index | 713466<br>21<br>g-index |
|---|---|---|---|
| 49 all docs | 49 docs citations | 49 times ranked | 2431 citing authors |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 1 | Deep Reinforcement Learning for Cyber Security. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 3779-3795. | 11.3 | 100 |
| 2 | FARSI: An Early-stage Design Space Exploration Framework to Tame the Domain-specific System-on-chip Complexity. Transactions on Embedded Computing Systems, 2023, 22, 1-35. | 2.9 | 4 |
| 3 | A Survey on Machine Learning Accelerators and Evolutionary Hardware Platforms. IEEE Design and Test, 2022, 39, 91-116. | 1.2 | 17 |
| 4 | GRiD: GPU-Accelerated Rigid Body Dynamics with Analytical Gradients. , 2022, , . | | 5 |
| 5 | Roofline Model for UAVs: A Bottleneck Analysis Tool for Onboard Compute Characterization of Autonomous Unmanned Aerial Vehicles. , 2022, , . | | 6 |
| 6 | Predictive Guardbanding: Program-Driven Timing Margin Reduction for GPUs. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 171-184. | 2.7 | 5 |
| 7 | Robomorphic computing: a design methodology for domain-specific accelerators parameterized by robot morphology. , 2021, , . | | 11 |
| 8 | Accelerating Robot Dynamics Gradients on a CPU, GPU, and FPGA. IEEE Robotics and Automation Letters, 2021, 6, 2335-2342. | 5.1 | 16 |
| 9 | Erratum to â€œPredictive Guardbanding: Program-Driven Timing Margin Reduction for GPUsâ€• IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 1272-1272. | 2.7 | 0 |
| 10 | Air Learning: a deep reinforcement learning gym for autonomous aerial robot visual navigation. Machine Learning, 2021, 110, 2501-2540. | 5.4 | 15 |
| 11 | Analyzing and Improving Fault Tolerance of Learning-Based Navigation Systems. , 2021, , . | | 6 |
| 12 | Accelerator-level parallelism. Communications of the ACM, 2021, 64, 36-38. | 4.5 | 10 |
| 13 | MLPerf Inference Benchmark. , 2020, , . | | 180 |
| 14 | MLPerf: An Industry Standard Benchmark Suite for Machine Learning Performance. IEEE Micro, 2020, 40, 8-16. | 1.8 | 76 |
| 15 | The Sky Is Not the Limit: A Visual Performance Model for Cyber-Physical Co-Design in Autonomous Machines. IEEE Computer Architecture Letters, 2020, 19, 38-42. | 1.5 | 19 |
| 16 | Voltage-Stacked Power Delivery Systems: Reliability, Efficiency, and Power Management. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 5142-5155. | 2.7 | 8 |
| 17 | Exceeding Conservative Limits: A Consolidated Analysis on Modern Hardware Margins. IEEE Transactions on Device and Materials Reliability, 2020, 20, 341-350. | 2.0 | 21 |
| 18 | Asymmetric Resilience for Accelerator-Rich Systems. IEEE Computer Architecture Letters, 2019, 18, 83-86. | 1.5 | 2 |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 19 | Gables: A Roofline Model for Mobile SoCs. , 2019, , . | | 28 |
| 20 | Two Billion Devices and Counting. IEEE Micro, 2018, 38, 6-21. | 1.8 | 22 |
| 21 | Voltage-Stacked GPUs: A Control Theory Driven Cross-Layer Solution for Practical Voltage Stacking in GPUs. , 2018, , . | | 18 |
| 22 | Efficient and Reliable Power Delivery in Voltage-Stacked Manycore System with Hybrid Charge-Recycling Regulators. , 2018, , . | | 1 |
| 23 | Ivory. , 2017, , . | | 16 |
| 24 | Simulation and Analysis Engine for Scale-Out Workloads. , 2016, , . | | 11 |
| 25 | Mobile CPU's rise to power: Quantifying the impact of generational mobile CPU design trends on performance, energy, and user satisfaction. , 2016, , . | | 102 |
| 26 | Safe limits on voltage reduction efficiency in GPUs. , 2015, , . | | 60 |
| 27 | Adaptive guardband scheduling to improve system-level efficiency of the POWER7+. , 2015, , . | | 39 |
| 28 | Event-based scheduling for energy-efficient QoS (eQoS) in mobile Web applications. , 2015, , . | | 82 |
| 29 | GPU voltage noise: Characterization and hierarchical smoothing of spatial and temporal voltage noise interference in GPU architectures. , 2015, , . | | 37 |
| 30 | GPUVolt. , 2014, , . | | 29 |
| 31 | WebCore: Architectural support for mobile Web browsing. , 2014, , . | | 20 |
| 32 | WebCore. Computer Architecture News, 2014, 42, 541-552. | 2.5 | 13 |
| 33 | GPUWattch. Computer Architecture News, 2013, 41, 487-498. | 2.5 | 134 |
| 34 | GPUWattch. , 2013, , . | | 358 |
| 35 | High-performance and energy-efficient mobile web browsing on big/little systems. , 2013, , . | | 62 |
| 36 | Resilient Architecture Design for Voltage Variation. Synthesis Lectures on Computer Architecture, 2013, 8, 1-138. | 1.3 | 164 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 37 | Robust and resilient designs from the bottom-up: Technology, CAD, circuit, and system issues. , 2012, , . | | 12 |
| 38 | Hardware and software co-design for robust and resilient execution. , 2012, , . | | 1 |
| 39 | Resilient Architectures via Collaborative Design: Maximizing Commodity Processor Performance in the Presence of Variations. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2011, 30, 1429-1445. | 2.7 | 9 |
| 40 | Predicting Voltage Droops Using Recurring Program and Microarchitectural Event Activity. IEEE Micro, 2010, 30, 110-110. | 1.8 | 21 |
| 41 | Eliminating voltage emergencies via software-guided code transformations. Transactions on Architecture and Code Optimization, 2010, 7, 1-28. | 2.0 | 22 |
| 42 | Voltage Smoothing: Characterizing and Mitigating Voltage Noise in Production Processors via Software-Guided Thread Scheduling. , 2010, , . | | 73 |
| 43 | Voltage emergency prediction: Using signatures to reduce operating margins. , 2009, , . | | 86 |
| 44 | Software-assisted hardware reliability. , 2009, , . | | 20 |
| 45 | An event-guided approach to reducing voltage noise in processors. , 2009, , . | | 25 |
| 46 | Pin. , 2005, , . | | 2,213 |
| 47 | Pin. ACM SIGPLAN Notices, 2005, 40, 190-200. | 0.2 | 1,105 |
| 48 | Persistence in dynamic code transformation systems. Computer Architecture News, 2005, 33, 69-74. | 2.5 | 4 |
| 49 | Widening Access to Applied Machine Learning with TinyML. , 0, , . | | 8 |