List of Publications

Book Chapter

- **S. Diware**, K. Chilakala, and R. Bishnoi, *"Computation-In-Memory for Reliable and Energy-Efficient Diabetic Retinopathy Screening"*, Smart and Connected Health: AI, IoT, and Trustworthy Technologies, Springer Nature Switzerland — 2025

Journals

- **S. Diware**, Y. Biyani, A. Gebregiorgis, S. Hamdioui, and R. Bishnoi, *"Energy-Efficient Computation-In-Memory Prototype for Hierarchical ECG Classification"* - in preparation (to be submitted to Nature) — 2026

- J. Vermeulen, G. Krivoshein, **S. Diware**, M. A. Siddiqi, A. Maagdenberg, E. Tolner, S. Hamdioui, and R. Bishnoi, *"Classification of Epileptiform Activity in an Intrahippocampal Kainic Acid Mouse Model"*, Springer Nature: Discover Applied Sciences — 2025

- M. A. Yaldagard, A. Bende, **S. Diware**, V. Rana, S. Hamdioui, and R. Bishnoi, *"Detection of Read-disturb Effects in RRAM-based Computation-In-Memory Architectures for Neural Networks"*, IEEE Transactions on Circuits and Systems I (TCAS-I) - under review — 2025

- **S. Diware**, K. Chilakala, R. V. Joshi, S. Hamdioui, and R. Bishnoi, *"Reliable and Energy-Efficient Diabetic Retinopathy Screening using Memristor-based Neural Networks"*, IEEE Access — 2024

- **S. Diware**, S. Dash, A. Gebregiorgis, R. V. Joshi, C. Strydis, S. Hamdioui, and R. Bishnoi, *"Severity-Based Hierarchical ECG Classification Using Neural Networks"*, IEEE Transactions on Biomedical Circuits and Systems (TBioCAS) — 2023

- **S. Diware**, A. Singh, A. Gebregiorgis, R. V. Joshi, S. Hamdioui, and R. Bishnoi, *"Accurate and Energy-Efficient Bit-Slicing for RRAM-Based Neural Networks"*, IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI) — 2022

Conferences

- M. A. Yaldagard, **S. Diware**, S. Hamdioui, and R. Bishnoi, *"Energy-Efficient Computation-In-Memory Macro for Spiking Neural Networks"*, under review (double blind) — 2026

- A. Sehgal, S. Soni, **S. Diware**, S. Roy, and R. Bishnoi, *"SOT-MRAM Configurations for Energy-Efficient On-Chip Learning in CIM Architectures "*, under review (double blind) — 2026

- **S. Diware**, Y. Dong, M. A. Yaldagard, S. Hamdioui, and R. Bishnoi, *"Adaptive Multi-Threshold Encoding for Energy-Efficient ECG Classification Architecture using Spiking Neural Network"*, IEEE Design, Automation & Test in Europe Conference (DATE) — 2025

- A. Sehgal, S. Soni, **S. Diware**, A. K. Shukla, S. Roy, and R. Bishnoi, *"Continuous On-Chip Learning in Neural Networks using SOT-MRAM based CIM Architectures"*, IEEE/ACM International Conference on Computer-Aided Design (ICCAD) — 2025

- A. Sehgal, A. K. Shukla, **S. Diware**, S. Soni, S. Dhull, S. Shreya, S. Roy, and R. Bishnoi, *"Enhancing Parallelism and Energy-Efficiency in SOT-MRAM based CIM Architecture for On-Chip Learning"*, ACM/IEEE Design Automation Conference (DAC) — 2025

- **S. Diware**, M. A. Yaldagard, and R. Bishnoi, *"Hardware-Aware Quantization for Accurate Memristor-Based Neural Networks"*, IEEE/ACM International Conference on Computer-Aided Design (ICCAD) — 2024

- **S. Diware**, M. A. Yaldagard, A. Gebregiorgis, R. V. Joshi, S. Hamdioui, and R. Bishnoi, *"Dynamic Detection and Mitigation of Read-disturb for Accurate Memristor-based Neural Networks"*, IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS) — 2024

- **S. Diware**, A. Gebregiorgis, R. V. Joshi, S. Hamdioui, and R. Bishnoi, *"Mapping-aware Biased Training for Accurate Memristor-based Neural Networks"*, IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS) — 2023

- A. Singh, R. Bishnoi, A. Kaichouhi, **S. Diware**, R. V. Joshi, and S. Hamdioui, *"A 115.1 TOPS/W, 12.1 TOPS/mm^2 Computation-in-Memory using Ring-Oscillator based ADC for Edge AI"*, IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS) — 2023

- M. A. Yaldagard, **S. Diware**, R. V. Joshi, S. Hamdioui, and R. Bishnoi, *"Read-disturb Detection Methodology for RRAM-based Computation-in-Memory Architecture"*, IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS) — 2023

- **S. Diware**, A. Gebregiorgis, R. V. Joshi, S. Hamdioui, and R. Bishnoi, *"Unbalanced Bit-slicing Scheme for Accurate Memristor-based Neural Network Architecture"*, IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS) — 2021

- A. Singh, **S. Diware**, A. Gebregiorgis, R. Bishnoi, F. Catthoor, R. V. Joshi, and S. Hamdioui, *"Low-Power Memristor-Based Computing for Edge-AI Applications"*, IEEE International Symposium on Circuits and Systems (ISCAS) — 2021