

Photonics

Energy-Efficient III-V on Silicon Photonics for Next-Generation AI Accelerators

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Time: 1:30pm – 3:00pm

In-person: MCB102

Abstract: Deep learning and the availability of large datasets have created a large drive towards new types of hardware capable of executing these algorithms with higher energy-efficiency. Recently, silicon photonics has emerged as a promising hardware platform for neuromorphic computing due to its inherent capability to process linear and non-linear operations and transmit a high bandwidth of data in parallel. At Hewlett Packard Labs, an energy-efficient III-V-on-Silicon photonics platform has been developed as the underlying foundation for innovative neuromorphic computing architectures. The latest research on our silicon photonic computing platform will be presented and discussed.

Biography: Bassem Tossoun received his PhD in Electrical Engineering at the University of Virginia in 2019 with his research interests including silicon photonics and the design, fabrication, and characterization of optoelectronic devices for data communications. Currently, he is a Senior Research Scientist at Hewlett Packard Labs working on heterogeneously integrated III-V on silicon photonic devices and architectures for next-generation optical computing and communications.