



Catherine Schuman

Research Scientist

Oak Ridge National Laboratory

schumancd@ornl.gov

catherineschuman.com

WHPC
WOMEN IN HIGH
PERFORMANCE
COMPUTING

womeninhpc.org

Use Cases of Neuromorphic Co-Processors in Future HPC Environments

Objectives

- Investigate the use cases of neuromorphic or brain-inspired co-processors in future HPC

Impact

- Neuromorphic systems can run certain workloads with significantly less power than traditional processors, resulting in more efficient future HPCs

Accomplishments

- We have demonstrated machine learning applications for both inference and training and graph algorithms on neuromorphic systems
- We have demonstrated a training algorithm that can use off-the-shelf neuromorphic hardware in large-scale HPC systems
- Inference systems can run in parallel with traditional workloads for in situ data analysis

