

Overview - Expanding Horizons in AI Workshop, May 9-10 2025

This workshop, Expanding Horizons in AI (Artificial Intelligence) with HPC (High Performance Computing), aims to explore the dynamic intersection of AI and HPC, focusing on how advanced computing can accelerate AI research and applications. As AI models become more complex and data-intensive, traditional computing systems struggle to meet the demand for scalability, efficiency, and speed. HPC offers a solution by providing the necessary infrastructure for training large-scale models, enhancing AI algorithms, and enabling breakthroughs in fields such as deep learning, natural language processing, and autonomous systems.

Through a combination of expert presentations and panel discussions, participants will gain insights into the latest developments in AI-HPC integration. Attendees will also engage in discussions on the future trends, challenges, and ethical considerations surrounding the use of HPC in AI. The workshop is designed for AI researchers, data scientists, engineers, and HPC professionals seeking to enhance their understanding of how high-performance computing can drive innovation and expand the potential of AI in solving complex, real-world problems.

The workshop will be held in conjunction with the 2025 [Cray User Group Meeting](#), held at The Westin Jersey City Newport. Stony Brook is an active member of the Cray User Group. Since 2020 we operate and maintain the [Qokami](#) computing technology testbed on campus and are involved in the national and international high performance computing community. This year Stony Brook has the honor to serve as host of the 2025 annual meeting.

The Cray User Group is an independent, international corporation of member organizations that in the past owned Cray Inc. computer systems. With the acquisition of Cray by HPE in 2019 the list of participating organizations was expanded to include owners of both select HPE and Cray systems. Founded in 1978, CUG was established to facilitate collaboration and information exchange in the high-performance computing (HPC) community. We assist our members in achieving their business and research objectives by providing opportunities to share and discover ideas, solutions, and developments in the effective use of computational tools.

The opportunity to hold this workshop in conjunction with the annual meeting gives Stony Brook the opportunity to stabilize its position as a leading research institution. The annual meeting is usually attended by around 250 participants, and we expect a significant portion of them will come to Stony Brook for the additional workshop. Also leading researchers (from national labs and universities), not involved with Cray, already confirmed their participation in the workshop. We are also expecting significant participation from SBU faculty and staff. This gives us the unique opportunity to collaborate with national and international leaders in the fields of AI and HPC. We are expecting that through this workshop, connections and new projects will evolve. This workshop is a one-time event.

The PIs of this project are Prof. Robert Harrison (Director Institute of Advanced Computational Science), Joseph Schuchart, and Eva Siegmann (both senior personnel at IACS).