Ilene Carpenter, CRAY

Bio:

Cray | Earth Sciences Segment Director

Dr. Carpenter manages Cray's business in the Earth Sciences. She works closely with Cray's global sales organization, our performance team and our customers to understand requirements in this segment and with Cray’s product management team to ensure that Cray products have the features needed to meet these requirements. Ilene began her career at Cray Research in 1992 as a computational chemist and then worked in the environmental application groups at both SGI and Cray Inc. She was business development manager for the weather segment at SGI Federal and then managed SGI’s benchmarking team. Ilene rejoined Cray in 2018 after spending 9 years as a computational scientist first at Oak Ridge National Laboratory and then at the National Renewable Energy Laboratory.

Abstract:

**Cray’s vision for converged architectures and emerging HPC technologies**

Ilene Carpenter and Per Nyberg, Cray Inc.

High Performance Computing for Weather, Water and Climate is facing an increase in diversity, in workloads and computing solutions. The new Exascale and pre-Exascale systems at US DOE labs, which will host climate research, will reflect this diversity. Perlmutter (NERSC), Aurora (ANL) and Frontier (ORNL) will all be Cray Shasta systems with the new Slingshot interconnect, but each has a different mix of processors and accelerators.

At the same time, new analytics techniques are being used, new ways of interfacing with HPC systems have emerged (containers, Jupyter notebooks, cloud computing) and we see a rapid adoption of AI techniques to accelerate scientific discovery.

This talk will explore those trends and present Cray’s vision for a converged data-oriented system architecture that enables workflows associated with data analytics, artificial intelligence and physics-based simulation.