

COMPUTING@PNNL SEMINAR SERIES  
PRESENTS

JEFF HAMMOND, PRINCIPAL ENGINEER AT INTEL



## Parallel programming on heterogeneous platforms using oneAPI, DPC++ and SYCL

Modern computing systems from smartphones to supercomputers are heterogeneous collections of parallel processors. Intel's oneAPI is an initiative to develop an open ecosystem for heterogeneous parallel programming that supports CPUs, GPUs, FPGAs, and other processors. oneAPI includes Data Parallel C++ (DPC++) for direct programming and a set of domain-specific libraries. This talk will explain oneAPI and DPC++ and discuss multi-accelerator programming with DPC++. Dr. Jeff Hammond will conclude by identifying some open problems in this area.

Jeff Hammond is a Principal Engineer at Intel where he works on a wide range of HPC projects. His research interests include parallel programming models and system architecture. Previously, Jeff worked at the Argonne Leadership Computing Facility where he worked on Blue Gene and built things with MPI. Jeff received his PhD in chemistry from the University of Chicago for research performed under the guidance of Karol Kowalski.

**Tuesday, October 20**

**1:00 – 2:00**

**Zoom Webinar**

<https://pnnl.zoomgov.com/j/1600007563?pwd=VjZlNkpHT056NGo1ZFwWZXB3akRuQT09>

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