

# Computing@PNNL

## SEMINAR

### *Bambu: FPGA Programming for Complex Parallel Applications*



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This talk presents [Bambu](#), an open-source framework for research in high-level synthesis. It leverages existing software compilers (GCC and CLANG/LLVM) to automatically generate Field Programmable Gate Arrays (FPGA)-based accelerators directly from C/C++ language. The Bambu high-level synthesis approach will be discussed and put into perspective by comparing its peculiarities with recent and ongoing research in the HLS community. Bambu is integrated with many logic synthesis and simulations flows and is able to generate parallel accelerators for a variety of FPGA vendors. It also optimizes the memory architectures starting from complex parallel specifications annotated with OpenMP.