

Facilities, Equipment, and Other Resources

Beyond normal academic office space and computer equipment, the specific requirement to carry out the proposed research is access to suitable physical fabrication and testing facilities.

Laboratory

This project will be conducted in the Stream Based Supercomputing (SBS) laboratory, which has laboratory facilities on the 5th floor of Jolley Hall, and in the Graduate School of Architecture, which has laboratory facilities in Givens and Steinberg Halls. All of these facilities are on the Danforth Campus of Washington University in St. Louis.

Office Space

The Dept. of Computer Science and Engineering and the College of Architecture provide office space to all faculty, staff, postdocs, and graduate students. The PIs have office space in Jolley Hall and in Givens Hall, while the graduate students will be housed in student offices within Jolley Hall and Steinberg Hall.

Computer Equipment

All computer equipment associated with the Dept. of Computer Science and Engineering is supported by Engineering Information Technology (EIT), an organization of the School of Engineering and Applied Science. The EIT staff includes full-time software system administrators and hardware technicians.

Laboratory Equipment and Software

The SBS laboratory has bench power supplies, oscilloscopes, logic analyzers, multimeters, and function generators. Available CAD software includes Mentor Graphics FPGAdvantage, Synplicity Synplify Pro, Xilinx ISE and Vivado Design Suite, Altera Quartus, Cadence, HSPICE, Virtuoso, and Alegro. For GPU operations, we have the latest versions of the NVIDIA Linux kernel drivers and development toolkits.

The Graduate School of Architecture has a full metalworking and woodworking shop, including a number of 3D printers, an XYZ 3-axis CNC router, and 4 CNC laser cutting machines. Available software includes Rhino3D and Grasshopper.

Specialized Equipment

We have agreements with two local firms to install prototype catoptric surfaces at their locations. See attached letters of collaboration.