

Postdoctoral researcher opportunity

Sarita Adve's research group
University of Illinois at Urbana-Champaign

We are looking for a postdoctoral researcher for our broad research program in hardware and software for heterogeneous systems. We seek strong research skills that can contribute to one or more of the following projects:

- Memory systems for heterogeneous systems, including coherence, consistency, and communication interfaces, architecture design, and implementation.
- Architectures and benchmarks for augmented and virtual reality, requiring multidisciplinary work with collaborators in AR/VR, graphics, robotics, optics, networking, and others.
- Co-designing HPVM intermediate representation [Kotsifakou et al. PPOPP'18] extensions with the above memory system architecture and implementation in the associated compiler and runtime tools.

We work closely with several researchers, both at Illinois and outside in industry and academia, providing many opportunities for collaborations and impact within a broad research agenda. The responsibilities for this position include setting research directions, mentoring graduate and undergraduate students, leading collaborations, and disseminating the research through publications, presentations, artifacts, and other means.

To apply, please send your CV, including the names of three references and the earliest possible start date to sadve@illinois.edu. Please indicate which projects are of specific interest and highlight relevant experience.

Research programmer opportunity

Sarita Adve's research group
University of Illinois at Urbana-Champaign

We are looking for a programmer to support our broad research program in hardware and software for heterogeneous systems. We seek skills that can contribute to one or more of the following projects:

- RTL level implementation of our Spandex accelerator coherence interface [Alsop et al. ISCA'18] using an agile hardware implementation workflow being developed with collaborators, for a heterogeneous chip to be implemented on an FPGA and in silicon.
- Development and support of our gem5 based architecture simulator extended to support novel accelerators and memory systems.
- Development and maintenance of a benchmark suite for augmented and virtual reality, designed to drive novel architecture research on domain-specific and heterogeneous systems.
- Integration of our architecture tools with our compilation and runtime system based on HPVM [Kotsifakou et al. PPOPP'18].

All of the above projects also have the potential to lead to and contribute to research topics for those interested in research.

To apply, please send your CV, including the names of two references and the earliest possible start date to sadve@illinois.edu. Please indicate which projects are of specific interest and highlight relevant experience. A PhD is preferable for this position, but candidates with relevant experience with an M.S. or B.S. will also be favorably considered.