ASPLOS 2018

23rd International Conference on Architectural Support for Programming Languages and **Operating Systems**

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General Chairs Xipeng Shen and James Tuck (North Carolina State University) **Program Chairs** Ricardo Bianchini (Microsoft Research) and Vivek Sarkar (Rice University)

ASPLOS is the premier forum for multidisciplinary systems research spanning computer architecture and hardware, programming languages and compilers, operating systems and networking. The ASPLOS 2018 will be held in Williamsburg, Virginia, a town that combines a rich slice of American Colonial and Revolutionary history with a modern college atmosphere.

Like its predecessors, ASPLOS 2018 invites papers on ground-breaking research at the intersection of at least two ASPLOS disciplines: architecture, programming languages, operating systems, and related areas. Nontraditional topics are especially encouraged. The importance of cross-cutting research continues to grow as we grapple with the end of Dennard scaling, the explosion of big data, scales ranging from ultra-low power wearable devices to exascale parallel and cloud computers, the need for sustainability, and increasingly human-centered applications. ASPLOS embraces systems research that directly targets these new problems in innovative ways. The research may target diverse goals, such as performance, energy and thermal efficiency, resiliency, security, and sustainability. The review process will be sensitive to the challenges of multidisciplinary work in emerging areas.

Areas of interest include, but are not limited to:

- Existing and emerging platforms at all scales, from embedded to cloud
- Internet services, cloud computing, and datacenters
- · Multicore architectures and systems
- · Heterogeneous architectures and accelerators
- Systems for enabling parallelism at an extreme scale
- Programming models, languages, and compilation for all platforms
- Managing, storing, and computing on big data
- Virtualization and virtualized systems
- Memory and storage technologies and architectures
- Power, energy, and thermal management
- Security, reliability, and availability
- Verification and testing, and their impact on design
- Support for approximations and approximate computing
- Non-traditional computing systems









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