

## First **Workshop on Near-threshold Computing (WNTC)** held in conjunction with **MICRO 2012, Vancouver, Canada**

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Near-threshold computing (NTC) has emerged as a promising approach to achieving an order of magnitude improvement in energy efficiency of microprocessors. The key feature of NTC is to lower the supply voltage of chips to a value only slightly higher than the threshold voltage. NTC lowers power consumption by an order of magnitude or more. The reduction in power however comes with associated costs and challenges that include low operating frequency, less reliable operation of both logic and memory and much higher sensitivity to parameter variability. Industry is actively investigating the technology and has produced prototypes that show promising initial results. However, many challenges remain before NTC becomes mainstream.

This workshop seeks original contributions on topics that include, but are not limited to:

- **Software/Architecture/Circuit solutions for addressing performance, reliability or variability challenges in NTC.**
- **Novel applications of NTC in mobile systems, high-performance/high-parallelism environments.**
- **Tradeoff analyses and performance/energy studies that help identify new application domains for NTC.**

In addition to regular presentations, the workshop will include half a day of invited talks, tutorial presentations and a panel discussion.

Organizers:

- Radu Teodorescu, The Ohio State University
- Nam Sung Kim, University of Wisconsin
- Ulya Karpuzcu, University of Minnesota

### **Important dates:**

**Abstract deadline: Monday, October 8<sup>th</sup>**  
**Submission deadline: Monday, October 15<sup>th</sup>**  
**Acceptance notification: Monday, October 29<sup>th</sup>**  
**Camera-ready: Friday, November 16<sup>th</sup>**  
**Workshop: December 2<sup>nd</sup>**

### **Program committee:**

**Amin Ansari, University of Illinois**  
**David Brooks, Harvard University**  
**Leland Chang, IBM**  
**Steven Hsu, Intel**  
**Ulya Karpuzcu, University of Minnesota**  
**Nam Sung Kim, University of Wisconsin**  
**Trevor Mudge, University of Michigan**  
**Radu Teodorescu, The Ohio State University**  
**Josep Torrellas, University of Illinois**

**Submission information on the WNTC website:**

**<http://arch.cse.ohio-state.edu/wntc>**