

**Hrishikesh Amur**  
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## Areas of Interest

Operating Systems, Distributed Systems, Power Management

## Education

- Ph.D., Computer Science, Georgia Institute of Technology. Aug 2007 - Present. Advised by Prof. Karsten Schwan.
- B.Tech., Computer Engineering, National Institute of Technology Karnataka, India. Aug 2003 - May 2007.

## Current Research

I am interested in the design of conventional and cluster operating systems with the specific goal of achieving system-level power-proportionality. At the platform level, this translates to OS techniques that save power in modern many-core systems without compromising performance. At the cluster level, I am interested in ways to optimize performance in distributed systems that operate under power and thermal constraints such as those present in modern datacenters.

## Refereed Publications

- Hrishikesh Amur, James Cipar, Varun Gupta, Gregory R. Ganger, Michael A. Kozuch, Karsten Schwan, “Robust and flexible power-proportional storage”, *Proceedings of ACM Symposium on Cloud Computing 2010 (SOCC 2010)*.
- Emad Samadiani, Hrishikesh Amur, Bhavani Krishnan, Yogendra Joshi, Karsten Schwan, “Coordinated Optimization of Cooling and IT Power in Data Centers”, *ASME Journal of Electronics Packaging, Volume 132, Issue 3, 2010*.
- Hrishikesh Amur, Karsten Schwan, “Achieving Power-Efficiency in Clusters without Distributed File System Complexity”, *Second Workshop on Energy-Efficient Design (WEED 2010)*. Reprinted in *Lecture Notes in Computer Science (LNCS), Number 6161, 2010*.
- Bhavani Krishnan, Hrishikesh Amur, Ada Gavrilovska, Karsten Schwan, “VM Power Metering: Feasibility and Challenges”, *GreenMetrics, in conjunction with SIGMETRICS’10* (Best Student Paper). Reprinted in *ACM SIGMETRICS Performance Evaluation Review, Volume 38, Issue 3, 2010*.
- Hrishikesh Amur, Ripal Nathuji, Mrinmoy Ghosh, Karsten Schwan, Hsien-Hsin S. Lee, “IdlePower: Application-Aware Management of Processor Idle States”, *Proceedings of the Workshop on Managed Many-Core Systems (MMCS, in conjunction with HPDC)*, Boston, MA, June 2008.
- Pranam Janney, Hrishikesh Amur, Sridhar G., Sridhar V., “MV Number: Effective Key to Represent Images”, *The 14th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision’2006* Plzen, Czech Republic.

## Research Experience

- **Georgia Institute of Technology, Atlanta** Aug 2007 - Present
  - Graduate Research Assistant, CERCs
  - Research on platform and cluster-level power management

- **Intel Research, Pittsburgh** Jun 2010 - Aug 2010  
*Summer Intern*  
 Energy-efficient MapReduce
- **Carnegie Mellon University, Pittsburgh** Jun 2009 - Aug 2009  
*Summer Intern, Parallel Data Laboratory*  
 Design and implementation of a power-proportional distributed file system
- **IBM Research, Austin** May 2008 - Aug 2008  
*Summer Intern, ARL*  
 Scheduling and workload consolidation in the operating system and hypervisor for power management
- **IBM India Software Labs, Bangalore** May 2006 - Aug 2006  
*Summer Intern, Linux Technology Center*  
 Dynamic Voltage Scaling (DVS) algorithms in Linux for per-process power management

## Computer Skills

- **Platforms**  
 Linux, Xen.
- **Programming**  
 C/C++, Java, Python, Matlab.

## Awards

- Yahoo! Key Scientific Challenges Winner, 2010.
- CMU/Intel Summer Research Fellowship, 2010.
- Selected for the CS7001 Graduate Research Award in 2007.

## Extracurricular Activities

- Winner of national level crosswords in 2004, 2005, 2006.
- Biking and soccer.