

CANTURK ISCI

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RESEARCH

- Power aware computer architecture, microprocessor power and thermal modeling and measurement
- Application power/performance phase behavior characterization, detection and prediction
- Microarchitectural and system level techniques for dynamic power and thermal management

EDUCATION

- | | |
|--------------|--|
| 2001-present | <i>Princeton University, Princeton, NJ</i>
Ph.D. Electrical Engineering
• Advised by Prof Margaret Martonosi (Expected graduation date: June 2007) |
| 2001-2003 | <i>Princeton University, Princeton, NJ</i>
M.A. Electrical Engineering
• Advised by Prof Margaret Martonosi |
| 2000 - 2001 | <i>University of Westminster, London, UK</i>
M.Sc. VLSI System Design
• Advised by Prof Izzet Kale & Prof R.C.S. Morling |
| 1996 - 2000 | <i>Bilkent University, Ankara, Turkey</i>
B.S. Electrical and Electronics Engineering |

EXPERIENCE

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|---------------------|--|
| 2001-present | <i>Princeton University, Department of Electrical Engineering</i>
Research Assistant in Parapet Research Group |
| June-September 2005 | <i>IBM T.J. Watson Research Center, Yorktown Heights, New York</i>
Intern in Reliability and Power Aware Microarchitecture Group
• Manager: Pradip Bose & Mentor: Alper Buyuktosunoglu |
| July-December 2004 | <i>IBM T.J. Watson Research Center, Yorktown Heights, New York</i>
Co-op in Reliability and Power Aware Microarchitecture Group
• Manager: Pradip Bose & Mentor: Alper Buyuktosunoglu |
| July-August 1999 | <i>ASELSAN Electronics, Ankara, Turkey</i>
Intern in Electronic Design Department |
| June-July 1999 | <i>Bilkent University, Electronics Engineering Department</i>
Intern in DSP programming for wireless communication project |

HONORS

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|-------------|---|
| 2001 - 2002 | <i>Graduate Fellowship</i> , Department of Electrical Engineering, Princeton University |
| 2001 | <i>M.Sc. with Distinction</i> , University of Westminster, Department of Electronic Systems |
| 2000 - 2001 | <i>Millennium Scholarship</i> , British Council |
| 1996 - 2000 | <i>Undergraduate Fellowship</i> , Bilkent University |

ACTIVITIES

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|----------------|---|
| 1999 - present | <i>Student Member</i> , IEEE |
| 2005 - present | <i>Chair of Academic Affairs</i> , Princeton University Graduate Student Government |
| 2002 - 2003 | <i>Organizer of Computer Engineering Graduate Workshop (CEW)</i> , Princeton University |

PUBLICATIONS

- Canturk Isci and Margaret Martonosi, *Phase Characterization for Power: Evaluating Control-Flow-Based and Event-Counter-Based Techniques*. In International Symposium on High-Performance Computer Architecture (HPCA-12), Feb 2006.
- Canturk Isci and Margaret Martonosi, *Detecting Recurrent Phase Behavior under Real-System Variability*. In IEEE International Symposium on Workload Characterization (IISWC'05), Oct 2005.
- Canturk Isci, Margaret Martonosi and Alper Buyuktosunoglu, *Long-term Workload Phases: Duration Predictions and Applications to DVFS*. In IEEE MICRO, Special Issue on Energy Efficient Design, Sep/Oct 2005.
- Canturk Isci, Zhigang Hu, Margaret Martonosi and Pradip Bose. *Building Microarchitectural Stressmarks for Thermal Testing* In Austin Conference on Energy-Efficient Design (ACEED-2005) – *Internal Session*, Mar 2005.
- Canturk Isci, Margaret Martonosi and Alper Buyuktosunoglu. *Workload Phase Duration Prediction and its Application to DVS*. In Austin Conference on Energy-Efficient Design (ACEED-2005) – *Internal Session*, Mar 2005.
- Canturk Isci, Gilberto Contreras and Margaret Martonosi. *Building Hardware Performance Counters for Detailed Runtime Power and Thermal Estimations: Experiences and Proposals*. In Workshop on Hardware Performance Monitor Design and Functionality (in HPCA-11), Feb 2005.
- Canturk Isci and Margaret Martonosi. *Runtime Power Monitoring in High-End Processors: Methodology and Empirical Data*. In 36th ACM/IEEE International Symposium on Microarchitecture (MICRO-36), Dec 2003.
- Canturk. Isci and Margaret Martonosi. *Identifying Program Power Phase Behavior Using Power Vectors*. In 6th IEEE International Workshop on Workload Characterization (WWC-6), Nov 2003.
- Canturk Isci, *Pseudo-Random Testing of Arithmetic Circuits*. M.Sc. Thesis, University of Westminster, London, UK, Oct 2001.