

Snehasish Kumar

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Objective

To obtain an internship position in the area(s) of heterogenous computing, memory systems, computer architecture, parallel systems, high performance computing and gpu computing.

Research Interest

Multicore Architectures, Cache Memory Systems, Heterogenous Architectures, GPGPU.

Education

- Spring 2011–Spring 2013 (Expected) **MS in Computing Science**, *Simon Fraser University*, British Columbia, Canada, 3.8/4.0.
Under the guidance of Dr. Arrvinth Shriraman, I have been working on adaptive granularity cache lines for memory systems to eliminate bandwidth and energy waste. The proposed system varies the cache line size dynamically based on the nature of the application to only bring in useful data. This increases cache utilisation and improves miss rate by increasing the effective cache size.
- 2006–2010 **B. Tech in Computer Engineering**, *Biju Patnaik University of Technology*, Orissa, India, 8.3/10.0.
Under the guidance of Dr. Satyananda Champati Rai, I was responsible for the design and implementation of a modified vector genetic algorithm to solve the problem of selecting an optimal borrowing scheme for the channel allocation problem in wireless mobile networks.

Publications

- MICRO 2012 Snehasish Kumar, Hongzhou Zhao, Arrvinth Shriraman, Eric Matthews, Sandhya Dwarkadas, Lesley Shannon, *Amoeba Cache: Adaptive Blocks for Eliminating Waste in the Memory Hierarchy*
- InterJRI, Aug 2010 Snehasish Kumar, Satyananda Champati Rai, Rajib Mall and Sateesh Kumar Pradhan, *MiCi: A Novel Micro-Level Temporal Channel Imploration for Mobile Hosts*

Projects

- Fall 2011 Interactive demo for the Linear Cell Complex (Computational Geometry Algorithms Library)
Mentor: Dr. Guillaume Damiand, CNRS at LIRIS, Université Claude Bernard
Language: C++/Qt
- Spring 2011 Implementing Non-Negative Matrix Factorisation for very large datasets
Mentor: Dr. Oliver Schulte, Computational Logic Group, SFU
Language: Python

Work Experience

- Fall 2011 - Present Research Assistant : SYNAR Group, SFU
- Fall 2011 Teaching Assistant : CMPT 880 - Programming Parallel and Distributed Systems
- Summer 2011 Teaching Assistant : CMPT 165 - Introduction to the Internet and World Wide Web
- Spring 2011 Teaching Assistant : CMPT 120 - Introduction to Computing Science and Programming

Technical Skills

- Languages C, C++, Java, Python, Matlab, PHP, SQL, Javascript, HTML
- Certification Sun Certified Java Professional
Oracle 9i: SQL Certification 1Z0-007

Leadership

- May 2012 - Present Councillor, Graduate Student Society, SFU
- Nov 2008 - Jul 2010 Microsoft Student Partner
- Sep 2009 - Jul 2010 Treasurer, IEEE Student Chapter

References

Available upon request