

## Vivek Vishal Shrivastava

Graduate Student  
Computer Science Department  
University of Wisconsin-Madison

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### OBJECTIVE

Seeking computer science internship in the fields of wireless and mobile ad hoc networks.

### EDUCATION

#### University of Wisconsin-Madison, WI USA

Currently enrolled in *PhD, Computer Science* Overall GPA: 4.0/4.0

*Course Work:* Advanced Computer Networks, Advanced Operating Systems, Advanced Computer Architecture and Topics in Advanced Database Systems, Computer System Performance and Modeling, Non Linear Optimization

#### Indian Institute of Technology Guwahati, India

*B.Tech Computer Science*, Graduation Date: 05/04 Major GPA: 3.85 Overall GPA: 3.75

Ranked 2<sup>nd</sup> in the department and was awarded Institute Merit Scholarship by Government of India. IIT Guwahati is one of the seven prestigious IITs of India and has evolved to be a premier research institute of India.

*Course Work:* Wireless Networks, Network Security & Cryptography, Computer Networks, Operating Systems, Distributed Systems, Database Management Systems, Speech Recognition, VLSI systems design, Software Engineering, Computer Architecture, Digital Design, Software Engineering, Nanotechnology.

### PUBLICATIONS

Arunesh Mishra, Vivek Shrivastava, Suman Banerjee, William Arbaugh, "**Partially Overlapped Channels Not Considered Harmful**" in *ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS Performance)*, Saint Malo, France, 2006 (To Appear).

Vivek Shrivastava and Suman Banerjee, "**Natural Selection in Peer-to-Peer Streaming: From the Cathedral to the Bazaar**", in ACM NOSSDAV'05

Karthik Jayaraman, Vivek Shrivastava, Brian Pellin, Martin Hock, Mikko H. Lipasti, "**Phase-based adaptive branch predictor: Seeing the forest for the trees**", in IEEE HPCA Workshop on Introspective Architecture.

Under Submission

Qunfeng Dong, Vivek Shrivastava, Ashutosh Shukla, Dheeraj Agarwal, Suman Banerjee, Kaushik Karr, "**Load Balancing Large Scale RFID Systems**". Under conference submission

### EXPERIENCE

#### University of Wisconsin-Madison, Computer Science Department, USA

*Research Assistant*, 8/27/2005 - Present

Research Assistant in Wisconsin Wireless and NetworkinG Systems (WiNGS) Laboratory

#### Microsoft Corporation, Redmond, USA

Software Design Engineer, Windows Fundamental Group

Worked on a prototype implementation CAVE (Compatibility of Applications using Virtual Environments) of application compatibility strategies using virtual machines.

## **University of Wisconsin-Madison, Computer Science Department, USA**

*Teaching Assistant, 1/18/2005 – 5/15/2005*

Teaching Assistant for Introduction to Computer Networks

## **Microsoft Academic Alliance, Guwahati, India**

*Research Assistant, 8/15/2003 - 5/24/2004*

Implementation of Cluster Based Ad Hoc Routing protocol under Windows CE.NET. Developed & implemented a cluster based routing protocol for providing Quality of Service and Security in Mobile Ad Hoc Networks. The project was a part of Microsoft Embedded Systems research. The details of the project can be found at [www.cs.wisc.edu/~viveks/project\\_CRESQ.html](http://www.cs.wisc.edu/~viveks/project_CRESQ.html)

## **Center for Mathematics and Computer Science, Amsterdam, The Netherlands**

*Project Member, Database Research Lab, 5/7/2003 - 7/26/2004*

As member of X100 Database project, developed an efficient algorithm for real time compression of statistical data for our prototype database kernel. Also conceptualized and implemented the I/O sub system for X100 database kernel to enable asynchronous bulk data transfer and reduce I/O latency for real time OLAP applications. The detailed project report can be found at [www.cs.wisc.edu/~viveks/project\\_X100.html](http://www.cs.wisc.edu/~viveks/project_X100.html)

## **PRESENTATIONS**

- “BAZAAR : A lightweight framework for p2p streaming,” presented at NOSSDAV’05, Skamania, Washington
- “Phase-based adaptive branch predictor”, presented at HPCA WISA 06, Austin, Texas

## **MAJOR PROJECTS UNDERTAKEN**

- Virtual Disk Partitions for Virtual Machine Monitors (January 2005 – May 2005)
- Optimizing Bandwidth Allocation for Peer-to-Peer Streaming (August 2004- December 2004)
- Sampling Reloaded : An analysis of sampling methodologies for data streams (August 2004- December 2004)
- Cluster Based Ad hoc Network Routing Protocol Implementation under Windows CE.NET (August 2003 – May 2004)
- X100 prototype Database Kernel for On Line Analytical Processing (May 2003 – July 2003)
- Study and Implementation of Dynamic Routing Algorithms for Wired and Wireless Networks (February 2003 – April 2003)
- Developing the Configuration Control and Diagnostic Utilities for Mobile IPv6 in Linux (December 2002 - January 2003)
- Development Of NachOS (September 2002 – November 2002)
- Design and Implementation of Central Processing Unit (January 2002 – April 2002)

## **COMPUTER SKILLS**

**Programming Languages** C, C++, Java, 80x86 Assembly Language, Python, Shell Programming, CGI, Perl, PHP, HTML, DHTML, SQL, JavaScript, JSP, JDBC, Lisp, ML, Visual Prolog, Visual Basic, Visual C++

**Application Packages** MS Mobile Internet Toolkit, Rational Rose, Microsoft Access, Oracle 8i/9i, Form 6i, Open GL, Xilinx Simulator, ns-2 simulator

## **ACHIEVEMENTS**

- *Merit scholarship* (2001) by Ministry of Human Resource and Development, Government of India for Academic excellence in undergraduate studies.
- Awarded merit scholarship under AITSE (All India Talent Search Examination) in 1994.
- Selected for Joint Entrance Examination for admission into IITs, where only 3000 students make out from amongst 120,000 & top 200 eventually make it to Computer Science and Engineering Departments of IITs.

## **REFERENCES**

**Prof. Suman Banerjee**  
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**Prof. Mary Vernon**  
Computer Science Department  
University of Wisconsin Madison  
[vernon@cs.wisc.edu](mailto:vernon@cs.wisc.edu)