

RANJITH VASIREDDY

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Educational Background

Present First Year PhD student (PRATT fellow), **Duke University, Durham** (Advisor: Dr. Kishor S Trivedi)

07/02 to 05/04 **Indian Institute of Technology (IIT), Kanpur, India.** Master of Technology

- Major in Computer Science and Engineering (CPI : 8.57/10)

07/98 to 05/02 **Jawaharlal Nehru Technological University, Hyderabad, India.** Bachelor of Technology

- Major in Computer Science and Engineering (Percentage : 82.38)

Areas of Interest

- Performance, Availability, and Reliability Analysis of Computer Systems
- Self Managing Systems
- Distributed Systems
- Fault-Tolerant Computing Systems

Work Experience

06/04 to 03/05 **Oracle** India Private Limited, India.

Member Technical Staff, Grid and Data Access Development

- *Transparent Session Migration (TSM) for Oracle connection pooled sessions over a Grid Architecture.* My involvement in this project is from Design, Coding till Unit-Testing.
- *Load Balancing for connection pooled sessions over a Grid Architecture using TSM.* My involvement in this project is from Design, Coding till Unit-Testing.
- *Enhancement to Existing Feature.* My work in one enhancement was to enable To-Schema method of authentication at the Oracle Call Interface (OCI) layer.

Relevant Course-Work

Performance and Availability Analysis of Computer and Communication Systems
Self-Managing Systems, Distributed Systems and Networks,
Fault-Tolerant Computing Systems, Advanced Compiler Optimization,
Advanced Computer Architecture, Advanced Databases, Machine Translation,
Computer Networks, Operating Systems, Software Engineering,
Parallel Complexity and Sub-logarithmic Time Algorithms

Major Projects (including research projects)

- *Improving Service-Level Agreeability by 'Rejuvenating' DB statistics at optimal times.* I am currently working on this with Dr. Kishor and Dr. Shivnath. IBM DB2 has automated statistics collection to automate the whole process of which tables to consider and what kind of system catalog to maintain for optimization. One interesting problem that is not yet solved is the question of how often to do this recollection. This is important because of the computational-expensive nature of the statistics collection. I am currently working on this problem by trying to apply software rejuvenation techniques that were developed in our group.
- IBM Argus Project. Currently working on IBM High-Availability Project with my advisor Dr. Kishor.
- *Symbolic Hierarchical Automated Reliability and Performance Evaluator (SHARPE).* Currently developing this tool.
- *Implementation of Fault-Tolerant Load-Balancing Cache-able Web Proxy.* This project aims at guaranteeing highly-reliable, high-available, performing webproxy. I assumed that any of the proxies, load-balancing servers, and network links can fail and achieved high-availability and performance, despite these failures.

- *Implementation of HTTP/1.0 client, multithreaded server and analysis of its availability and performance.* I implemented HTTP Client, multi-threaded HTTP/1.0 server and analyzed proxy request-handling performance using thhttp as client and thttpd as server. Aim of this project is to get the hands-on experience in analyzing large-scale systems (Distributed Systems, Operating Systems or Database Systems).
- Text Classification through Bayesian Classifier. We classified various text documents using training corpora in this project.
- Ranjith Vasireddy. Software Implemented Fault-Tolerance. Technical Report in Fault-Tolerant Computing Systems course, Duke University.
- Ranjith Vasireddy. Document Classification using Hidden Markov Models. Technical Report in Machine Translation course, IIT Kanpur.

Publications

- Kishor S Trivedi, Ranjith Vasireddy, David Trindade, Swami Nathan, Rick Castro. *Modeling High Availability Systems*. Submitted to International Service Availability Symposium (ISAS-06).
- Ranjith Vasireddy, Somenath Biwas. *Modeling Gene Regulatory Network of Fission Yeast Cell Cycle using Hybrid Stochastic Petri Nets*. Proceedings of 11th International Conference on Neural Information Processing (ICONIP), November 2004, Springer-Verlag LNCS 3316: 1310-1315.
- Ranjith Vasireddy. *Mathematical Modeling of Regulation in a Network of Genes*. Published in the proceedings of Second National Conference on Mathematical and Computational Modeling (NCMCM), Dec 2003

Academic Achievements

- 07/05 Pratt Fellow
- Recipient of Pratt School of Engineering fellowship for the academic year 2005-2006 in the ECE department at Duke University.
- 04/01 GATE-2001
- Secured percentile of 98.97 in B.Tech third year with All India Rank of 56 from among 28,000 students in Graduate Aptitude Test for Engineers (GATE-2001).
- 04/02 GATE-2002
- Secured percentile of 99.86 in B.Tech final year with All India Rank of 27 from among 28,000 students in Graduate Aptitude Test for Engineers (GATE-2002).

(GATE entrance exam is similar in syllabus to GRE computer science subject test.)

Computer Skills

- Programming languages: C, C++, Java, COBOL, HTML, Latex, Perl
- Platforms: Linux, Solaris, Windows
- Scientific Tools: MATLAB, SHARPE, SPNP and SREPT

Teaching Experience

- Fall-05. TA for Computer Networks for in Dept of ECE, Duke University.
- Fall-03 and Spring-03. Tutor for ESc101- Programming in JAVA for 1 yr Undergraduate students as a part of teaching assistantship in Dept of CSE, IIT Kanpur

Service to Professional Committees

- Graduate and Professional Student Council (GPSC) representative to the Career Center Advisor Committee for the 2005-06 academic year.
- Chairman of Indian Society for Technical Education (ISTE) students' chapter for the academic year 2000-01.

References:

Prof. Kishor S Trivedi kst@ee.duke.edu
 Dr. Shivnath Babu shivnath@cs.duke.edu
 Prof. Somenath Biswas sb@cse.iitk.ac.in

Natural Languages: Telugu (native), English (fluent) and Hindi (fluent)

Date Of Birth: 07 MAY 1981

Martial Status: Single