

EHSAN NOURBAKHSH

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ehsaan@utdallas.edu

Education

- **The University of Texas at Dallas**—Richardson, TX
Ph.D. in Computer Science
 - August 2008 - present
 - Supervised by Dr. R. Prakash, Distributed Systems Lab
- **University of Texas at Dallas**—Richardson, TX
M.Sc. in Computer Science
 - January 2007 - August 2008
 - Supervised by Dr. R. Prakash, Distributed Systems Lab
 - GPA: 3.6/4
- **Sharif University of Technology**—Tehran, Iran
B.Sc. in Computer Software Engineering
 - Thesis: A Hybrid Approach for Refreshing Web Repository
 - Supervised by Professor M. Ghodsi, ADA Parallel Processing Lab
 - Graduation Date: February, 2006

Research Interests

- Wireless Research Topics
- Sensor Networks
- Wireless Networks in Smart Grid Infrastructure
- Ad-hoc networks

Skills

- **Operating Systems:** Linux (Gentoo, Red Hat, Fedora, Debian, Ubuntu, Familiar), FreeBSD, OpenBSD, Windows 98/2000/XP/2003, DOS, VAX/VMS, TinyOS
- **Computer Languages and Scripts:** Proficient in C, C++, Java, Javascript, HTML, \LaTeX , Farsi \TeX , PHP, UNIX Shells, SQL, nesC. Familiar with Perl. Other languages supported upon request/need!
- **Tools and Systems:** Proficient in Apache, BIND, Make, Postfix, Qmail, Sendmail, OpenSSL, Subversion, OpenLDAP, MySQL

Research Experience

- **Distributed Systems Lab, UT Dallas**—Richardson, TX
Research Assistant: January 2007 - Present
 - Supervised By Dr. R. Prakash
 - Wireless Networks: MANETs and WSNs

- Current activity: research in the *Advanced wireleSS Environment Research Testbed (ASSERT)* project
- ASSERT, formerly named Texas Networking Testbed (TNT) program, is a networked wireless testbed for use in research and development. ASSERT will provide an interface for testing new wireless equipment or new protocols.
- I have been involved in the TNT project for the general research phase, studying the research trends already being practiced. At the next step I was involved in our study of RF propagation properties and interference. Currently I am involved in the software architecture for running experiments and retrieving results.
- **ADA Parallel Processing Lab, Sharif University of Tech**—Tehran, Iran
Research Assistant: Aug. 2004 - Jan. 2006
 - Supervised By Professor M. Ghodsi
 - Research activities: Parallel Processing on ADA cluster, Web Compression and Search Engine Design. My B.Sc. degree thesis was done as part of a Iran Telecommunication Research Center (ITRC) funded project on designing and developing a clustered search engine in ADA lab.
- **Fraunhofer-Gesellschaft**—Darmstadt, Germany
Research Assistant: Aug. 2003 - Sep. 2003
 - Supervised By Professor E. J. Neuhold
 - Research and Development in the fields of Computer Supported Cooperative Learning (CSCL) and Mobile Learning.
- **AICT Center, Sharif University of Tech**—Tehran, Iran
Research Assistant: Jun. 2001 - Aug. 2004
 - Supervised By Dr. H. R. Rabiee
 - Research and Development in the fields of Computer Networks, Databases, Image Processing and web technologies

Work Experience

- **Cisco Systems Inc.**—San Jose, CA
Graduate Intern: May - June 2010
 - Shortly worked with the Radio Resource Management (RRM) Group, Wireless Networking Business Unit (WNBU)*
- **Aria Rasana Tadbir**—Tehran, Iran
Software Developer, Quality Assurance: Aug. 2004 - Dec.2006
 - I worked in this ADSL service provider in Iran initially as part time employee from August 2004 until my graduation in January 2006. I was invloved in an issue tracking system and a monitoring and auditing software for various DSLAMs, switches and end user equipment throughout the country.
 - Beginning January 2006 I became a full time employee in Quality Assurance team until I started my graduate studies.
- **Portnet Multimedia**—Tehran, Iran
part time Linux Administrator, Software Developer: Jan. 2002 - Aug. 2004

- My tasks in this hosting company included maintaining Linux and NetBSD servers. I also participated in our web based software development team

Volunteer Activities

- **Computer Engineering Department, Sharif University of Technology**—Tehran, Iran
Volunteer Administrator: Aug. 2003 - Sep. 2006
 - Volunteer work for server administration, later leading a team of 8 students working on the servers. The servers, running operating systems including Linux, BSD and Windows distributions, acted as main e-mail, web server, file server and client authentication for windows machines for all students in the CE department.
- Student Representative, Student Government of CE Department, Sharif University of Technology, Sep. 2004 - Sep. 2005

Courses

- **Graduate Level**—The University of Texas at Dallas
M.Sc. and Ph.D. in Computer Science
 - Design and Analysis Of Computer Algorithms, Advanced Operating Systems, Advanced Computer Networks, Software Project Planning and Management (Software Engineering), Database Design, Algorithmic Aspects of Telecommunication Networks, Mobile Computing Systems, Combinatorics and Graph Algorithms, Theory Of Computation, Service-Oriented Computing, Game Theory (School of Management)
- **Undergraduate Level**—Sharif University of Technology
B.Sc. in Software Computer Engieernig
 - Digital System Design, Design of Programming Languages, Artificial Intelligence, Network Security, Software Engineering, Computer Architecture, Engineering Economy, Project Management, Electrical Circuits, Electronic Circuits, Logic Design, Advanced Programming, Data Structure and Algorithms, Theory of Machines and Languages, Computer Engineering Probability and Statistics, Numerical Computation, Differential Equations, Databases, Operating Systems, Compilers, Computer Networks, Microprocessors, Computer Simulation

Publications

- Ehsan Nourbakhsh, Ravi Prakash, "ATR-MAC: Smart Meter Scheduling for High Throughput," under preparation
- Ehsan Nourbakhsh, Ryan Burchfield, S. Venkatesan, Neeraj Mittal, Ravi Prakash, "Enhancing ASSERT: Making an Accurate Testbed Friendly," to appear in The Sixth ACM International Workshop on Wireless Network Testbeds, Experimental evaluation and Characterization (WiNTECH11)
- Ravi Prakash, Ehsan Nourbakhsh, "Gradient-based Aggregation in Forest of Sensors (GrAFS)," to appear in International Conference on Parallel Processing (ICPP) 2011
- Ehsan Nourbakhsh, Jeff Dix, Paul Johnson, Ryan Burchfield, S. Venkatesan, Neeraj Mittal and Ravi Prakash, "ASSERT: A Wireless Networking Testbed", Proceedings of 6th International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom) May 2010, Berlin, Germany

- Ravi Prakash, Ehsan Nourbakhsh, Kunal Sahu, “Data Aggregation in Sensor Networks: No More a Slave to ,” Forty-Seventh Annual Allerton Conference on Communication, Control, and Computing, October 2009 (invited)
- Ryan Burchfield, Ehsan Nourbakhsh, Jeff Dix, Kunal Sahu, S. Venkatesan, Ravi Prakash, “RF in the Jungle: Effect of Environment Assumptions on Wireless Experiment Repeatability,” Proceedings of the IEEE International Conference on Communications (ICC), Dresden, Germany, June 2009
- Ehsan Nourbakhsh, Ryan Burchfield, Jeff Dix, Kunal Sahu, S. Venkatesan, Ravi Prakash, “RF in the Jungle: Reproducibility of Wireless Experiments,” Technical Report UTDCS-25-08, August 2008
- E. Nourbakhsh, M. Arasteh, “Application of Software Engineering Methods on Open-Source Development,” [in Farsi] FarsiLinux Project Documentation
- **Presentations & Demonstrations—**
 - Ehsan Nourbakhsh, Ryan Burchfield, S. Venkatesan, Neeraj Mittal, Ravi Prakash, “Using ASSERT: Emulating Outdoor Mobility Using An Indoor Wireless Testbed,” demo in MobiCom 2011
 - A. Mahdian, H. Khalili, E. Nourbakhsh, M. Ghodsi, “Web Graph Compression by Edge Elimination,” poster in Proc. IEEE Data Compression Conference (DCC), Utah, March 2006.
 - Paul Johnson, Ehsan Nourbakhsh , Ryan Burchfield , Jeff Dix , Ravi Prakash , S. Venkatesan , Neeraj Mittal , Lee McFearin, “ASSERT: Advanced Wireless Environment Research Testbed,” demo in ACM SenSys '09, Berkeley, CA, November 2009