

Swapnil P. Bhatia

CONTACT INFORMATION	Kingsbury Hall, Rm. 242 Department of Computer Science University of New Hampshire College Rd. Durham, NH 03824 USA	<i>Voice:</i> +1-603-295 7223 <i>E-mail:</i> sbhatia@cs.unh.edu <i>WWW:</i> www.cs.unh.edu/~sbhatia
RESEARCH INTERESTS	Design and evaluation of protocols for communication networks.	
EDUCATION	University of New Hampshire , Durham, New Hampshire USA Ph.D. Candidate, Computer Science, (ABD) Advisor: Dr. Radim Bartoš Mumbai University , Mumbai, India B.E., (Computer Engineering), May, 1999	
ACADEMIC EXPERIENCE	University of New Hampshire , Durham, New Hampshire, USA <i>Graduate Student</i>	August, 1999 - present
PROFESSIONAL EXPERIENCE	Dept. of Computer Science, University of New Hampshire , Durham, NH, USA <i>Primary Instructor</i> Teaching an undergraduate course on programming for scientific applications to a class of over fifty students of various majors and levels. <i>Research Assistant</i> Dept. of Computer Science, University of New Hampshire , Durham, NH, USA <i>Primary Instructor</i> Taught a core undergraduate course in Assembly Language Programming and Machine Organization to a class of nineteen students. Dept. of Computer Science, University of New Hampshire , Durham, NH, USA <i>Research Assistant (Cisco University Research Program)</i> Worked on design and performance evaluation of IEEE Ethernet Passive Optical Networks with Cisco. (Primary contacts: Wael Diab, <i>Editor-in-Chief, IEEE EPON 802.3ah standard</i> and Russ Gyurek, <i>Cisco Systems.</i>) InterOperability Laboratory (IOL), University of New Hampshire , Durham, NH, USA <i>Test Engineer</i> Member of staff in the Fiber Channel, DOCSIS and Ethernet in the First Mile Consortia. Helped develop and execute test suites and worked with vendors to debug and troubleshoot problems in products. The IOL employs over a 100 students and is supported by over 130 companies.	Fall 2008 January, 2007 - August, 2008 Fall 2006 January, 2004 - August, 2006 August, 1999 - December, 2003
REFEREED PUBLICATIONS	S. Bhatia and R. Bartoš, "Self-similar functions and population protocols: a characterization and a comparison," accepted for presentation at the <i>10th International Conference on Distributed Computing and Networking (ICDCN 2009)</i> , Hyderabad, India, January, 3-9, 2009 M. Charpentier, R. Bartoš, and S. Bhatia, "A mechanism to structure mission-aware interaction in mobile sensor networks," accepted for presentation at the <i>10th International Conference on Distributed Computing and Networking (ICDCN 2009)</i> , Hyderabad, India, January, 3-9, 2009	

M. Li, E. Varki, S. Bhatia, and A. Merchant, "TaP: Table-based Prefetching for Storage Caches," in *Proc. of USENIX Conference on File and Storage Technologies (FAST) 2008*, Feb. 2008, San Jose, CA

S. Bhatia, R. Bartoš, and K. Ma, "Throughput-Delay Tradeoff in Small and Sparse Mobile Ad hoc Networks," (poster) in *Proc. of ACM/SIGMOBILE MobiHoc 2007*, Montreal, Canada, September 2007

S. Bhatia and R. Bartoš, "IPACT with Smallest Available Report First: A New DBA Algorithm for EPON," in *Proc. of IEEE ICC 2007*, Glasgow, Scotland, June 2007

S. Bhatia, D. Garbuzov and R. Bartoš, "Analysis of the Gated IPACT Scheme for EPONs," in *Proc. of IEEE ICC 2006*, Istanbul, Turkey, June 2006

S. Bhatia, "Design of DBA Algorithms for EPONs," abstract in *Proc. of IEEE INFOCOM 2006 Student's Workshop*, Barcelona, Spain, April 2006

S. Bhatia and R. Bartoš, "Closed-form expression for the collision probability in the IEEE Ethernet Passive Optical Network registration scheme," *Journal of Optical Networking*, **5**, 1-14 (2005)
<http://www.osa-jon.org/abstract.cfm?URI=JON-5-1-1> (also in *Proc. of IEEE GLOBECOM 2005*, St. Louis, MO, November 2005)

S. Bhatia, R. Bartoš and C. Godsay, "Empirical Evaluation of Upstream Throughput in a DOCSIS Access Network," in *Proc. of the IEEE Conference on Multimedia Services Access Networks*, Orlando, FL, June 2005

S. Bhatia and R. Bartoš, "Performance of the IEEE 802.3 EPON Registration Scheme Under High Load," *Proc. of SPIE: Optics East - Performance, Quality of Service, and Control of Next-Generation Communication Networks Conference*, Philadelphia, PA, October 2004

R. Bartoš and S. Bhatia, "Fast Restoration Signaling in Optical Networks." *Proc. of the Special Session on Optical Networks and Communications of the Fourteenth International Conference on Parallel and Distributed Computing and Systems (PDCS)*, Cambridge, MA, (S. G. Akl and T. Gonzalez, eds.), pp. 845-850, November 2002

A. Gandhi, E. Varki, S. Bhatia, "Reader-Writer Locks for Network Attached Storage and Storage Area Networks," *Proc. of 17th International Conference on Computers and Their Applications*, ISBN 1-880843-42-0, San Francisco, CA, April 2002

UNREFEREED
PUBLICATIONS

S. Bhatia, "Look Up and Scream: Analytical Difficulties Resolved!" *J. of Recreational Mathematics*, 34(1), pp. 12-23, 2005-2006.

S. Bhatia, "USENIX FAST '08 Conference Session summaries," *USENIX "login," Magazine*, 33(3), June 2008.

HONORS, AWARDS
AND MEMBERSHIPS

Travel grant to USENIX FAST 2008 conference.
Cisco University Research Program Assistantship (2004, 2005).
Ranked 15th in State Junior College Examination (1995).
Member of the online IEEE EPON Community.
Student member of the IEEE and the ACM.

PROFESSIONAL
SERVICE

Reviewed papers for the *Journal of Interconnection Networks*, *Journal of Optical Networking*, *IEEE Communications Letters*, *ICC 2006*, and the *9th Workshop on Membrane Computing*.