

ARUNESH MISHRA

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Objective: Position as a research intern for summer 2004.

EDUCATION

Ph.D., Computer Science (ongoing),
Advisor: Dr. William A. Arbaugh,
Area: Fast and Secure Roaming in Wireless Networks,
University of Maryland.

M.S., Computer Science,
University of Maryland, August 2003.

B.Tech., Computer Science,
Indian Institute of Technology, August 2000.

RESEARCH INTERESTS

Wireless Networks, Network and Systems Security, Embedded Systems, Peer-to-peer and distributed systems.

EXPERIENCE

June 2001 - current,
Research Assistant (with Dr. William A. Arbaugh) 20 hrs/week
University of Maryland.

May-Aug 2002 ,
Research Intern, (with Dr. Jonathan Agre) 40 hrs/week
Fujitsu Labs of America, MD.

Aug-Dec 2000 ,
Teaching Assistant (with Dr. Michelle Hugue) 20 hrs/week
University of Maryland.

May-Aug 1999 ,
Research Intern, (with Dr. Natwar Modani) 40 hrs/week
IBM India Research Labs, New Delhi.

PUBLICATIONS

“Context Caching Using Neighbor Graphs for Fast Handoffs in a Wireless Network”, *with* Min-ho Shin and William A. Arbaugh, *in Proceedings of the 23rd IEEE Conference on Computer Communications (INFOCOM) 2004*. Also as a Technical Report, UMD, CS-TR-4477, UMIACS-TR-2003-46.

“Improving the Latency of 802.11 hand-offs using Neighbor Graphs” *with* Min-ho Shin and William A. Arbaugh, as a *Technical Report, University of Maryland, Department of Computer Science CS-TR-4550, December 2003*.

“An Empirical Analysis of the IEEE 802.11 MAC Layer Handoff Process” *with* Min-ho Shin and William A. Arbaugh, *in the ACM SIGCOMM Computer Communication Review (ACM CCR), Volume 33, Issue 2, April 2003*. Also as a Technical Report, UMD, CS-TR-4395, UMIACS-TR-2002-75.

“Proactive Key Distribution Using Neighbor Graphs” with Min-ho Shin and William A. Arbaugh, in *IEEE Wireless Communications Magazine*, February, 2004. Also as a *Technical Report*, UMD, CS-TR-4538, UMIACS-TR-2002-106.

“Inclusion of Optimal-Channel Time into IEEE 802.11k” with Min-ho Shin, William A. Arbaugh and Insun Lee, at the *IEEE 802.11 Working Group Meeting, San Francisco, Document IEEE 802.11-03/541 K*, July 2003.

“Fast Handoffs Using Fixed Channel Probing” with Min-ho Shin, William A. Arbaugh and Insun Lee, at the *IEEE 802.11 Working Group Meeting, San Francisco, Document IEEE 802.11-03/540 K*, July 2003.

“Minimizing Broadcast Latency and Redundancy in Ad Hoc Networks” with Rajiv Gandhi and Srinivasan Parthasarathy, in *Proceedings of the Fourth ACM International Symposium on Mobile Ad Hoc Networking and Computing (MOBIHOC)*, June 2003.

“Secure-Spaces: Location-based Secure Group Communication for Wireless Networks” with Suman Banerjee, in the *ACM MOBICOM Mobile Computing and Communications Review*, Vol. 1, No. 2, October 2002. Also appears as a student poster in *ACM Mobicom*, September 2002.

“An Initial Security Analysis of the IEEE 802.1X Standard”, with William A. Arbaugh, *Technical Report*, University of Maryland, Department of Computer Science CS-TR-4328, UMIACS-TR-2002-10, February 2001.

“Opensource Implementation of IEEE 802.1X Standard”, with William A. Arbaugh, *Work-In-Progress Talk at the Tenth USENIX Security Symposium*, August 2001.

“The Co-processor as an Independent Auditor”, with Jesus Molina and William A. Arbaugh, *Work-In-Progress Talk at the IEEE Symposium on Security and Privacy*, Oakland, CA, 2001.

“Winner Determination in Combinatorial Auctions with restriction on bidding patterns” with K. Balaji, in *Proceedings of the International Conference on Information Technology 1999, India*.

“Design and Implementation of a Geographic Information System”, as the *B.Tech. Technical Report*, Indian Institute of Technology, 2000.

ACHIEVEMENTS / HONORS

President of India Gold Medal - 2000

For Academic Excellence during undergraduate degree program, Indian Institute of Technology, Guwahati.

Student Rank One Merit Scholarship 1997-2000

Indian Institute of Technology, Guwahati.

Best Presentation Award - 1999

IBM India Research Labs, New Delhi.

MISCELLANEOUS

PATENTS

“A Secure Nomadic Wireless Network: SNOWNET” with Fujitsu Labs of America, MD.

“Method for Fast Roaming in a Wireless Network” with Samsung Electronics.

MEDIA FOCUS

CNN, *PCWorld*, *ZDNet News*, *Slashdot*, “Researchers claim to crack wireless security”, February 18, 2002.

CNET Asia, “Wireless Network security shows cracks”, February 19, 2002.

BusinessWeek Online, “This LAN is Whose LAN?”, February 21, 2002.

REVIEWER

International Conference on Network Protocols (ICNP) 2001.

IEEE Infocom 2003.

IEEE Globecom 2003.

IEEE Wireless Communications and Networking Conference (WCNC) 2004.

Wireless Communications and Mobile Computing Journal, John Wiley and Sons.

ACM MOBICOM Mobile and Computer Communications Review (MC2R).

COMPUTING SKILLS

- **Major Skills (5+ years of experience)**

C (7 yrs) and C++ (7 yrs),

Java (4 yrs),

Shell Programming (5 yrs),

Systems and Network Programming (5 yrs).

- **Brief Exposure (project based)**

Visual Basic (1 yr) , Visual C++ (1 yr), HTML(1 yr), COBOL, Access Basic, PL-SQL, Lisp, Prolog.

- **Platforms**

UNIX(5yrs), HP-UX(4yrs), Linux(6yrs), Windows (5 yrs) (9x, NT, 2000, XP), IBM-AIX, Solaris(2 yrs).