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Education

- Ph.D., Computer and Information Science, The Ohio State University, Columbus, OH, 1999
- M.S., Computer and Information Science, The Ohio State University, Columbus, OH, 1996
- B.Sc., Computer Science, The American University in Cairo, Egypt, 1992

Professional Experience

- Associate Professor, Computer Science, Purdue University, 2005–present
- Visiting Scientist, Hewlett-Packard Laboratories, Palo Alto, CA, February–April 2006
- Assistant Professor, Computer Science, Purdue University, 1999–2005
- Presidential Fellow, The Ohio State University, 1998–1999
- Research Associate, Computer and Info. Science, The Ohio State University, 1996–1998
- Teaching Associate, Computer and Info. Science, The Ohio State University, 1994–1996
- Software Engineer, DigitalTest/PSD, 1992–1994

Research Interests

- Network security
- Internet measurements, tomography, and testbeds
- Wireless and sensor networks

Selected Awards, Patents, and Memberships

- Best student paper award, 14th IEEE International Workshop on Quality of Service (IWQoS), 2006
- National Science Foundation CAREER award, 2003
- Schlumberger Foundation technical merit award, 2000 and 2001
- Presidential Fellowship for Dissertation Research, The Ohio State University, 1998–1999
- President's Cup for the Highest Ranking Graduating Student, The American University in Cairo, June 1992
- Presidential Fellowship, The American University in Cairo, 1989–1992
- "ERICA: Explicit Rate Indication for Congestion Avoidance in ATM Networks," U.S. Patent 5,805,577, September 1998 (with R. Jain, S. Kalyanaraman, R. Goyal, and R. Viswanathan)
- Senior member of the IEEE, and member of the ACM

Professional Service

Program and Organizing Committees

- General chair (with M. Gouda) of the 16th IEEE International Conference on Network Protocols (ICNP), 2008; General chair, First Workshop on Secure Network Protocols (NPSec), held in conjunction with IEEE ICNP, Boston, MA, 2005 (also current steering committee chair)
- Technical program committee (TPC) chair (with J. Mirkovic) of the Workshop on Cyber Security Experimentation and Test (CSET) 2008; TPC chair (with G. Manimaran) of the 4th IEEE International Conference on Broadband Communications, Networks and Systems (BroadNets), Internet Technologies Symposium, 2007; TPC chair (with G. Carle) of the 4th International Conference on Wired/Wireless Internet Communications (WWIC), 2006; TPC chair (with K. Park), First SPIE International Conference on Scalability and Traffic Control in IP Networks, 2001
- Selected TPC memberships: IEEE INFOCOM 2001, 2003–2006, 2008–2009; IEEE ICNP 2001, 2005–2007; IEEE IWQoS 2004–2007; IEEE ICDCS 2000, 2004, 2005, 2007, 2009; WNS2 2006; IEEE WoWMoM 2006; Networking 2005; IEEE ASWN 2004; ICPP 2003; IEEE ICC 2000; IEEE GLOBECOM 2000

Editorial Boards

- Associate Editor, IEEE Transactions on Computers, August 2007–present

- Editor, Computer Communications, Elsevier Science, April 2004–present
- Editor, Journal of High Speed Networks (JHSN), IOS Press, April 2005–December 2006

Standards Bodies

- Contributed sections to the ATM Forum traffic management specifications 4.0 and 4.1, and participated in several IETF and IRTF working groups, 1995–2000

Selected Mentoring and Outreach Activities

- Distributed Mentor Program (DMP) (for undergraduate women); Women in Science Program (for graduate women); Engineering Projects in Community Service (EPICS) program (for undergraduate students); Horizons program (for minority freshmen).

Selected Publications

1. R. Chertov, S. Fahmy, N. B. Shroff. A Device-Independent Router Model. In *Proceedings of IEEE INFOCOM (the conference on computer communications)*, 9 pp., April 2008.
2. J. Mirkovic, A. Hussain, B. Wilson, S. Fahmy, P. Reiher, R. Thomas, W. Yao, S. Schwab. Towards User-Centric Metrics for Denial of Service Measurement. In *Proceedings of the Workshop on Experimental Computer Science (part of ACM FCRC)*, 14 pp., June 2007.
3. R. Chertov, S. Fahmy, N. B. Shroff. Emulation versus Simulation: A Case Study of TCP-Targeted Denial of Service Attacks. In *Proceedings of 2nd International IEEE/CreateNet Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom)*, 10 pp., March 2006. Extended version to appear in *ACM TOMACS*.
4. Y. Wu, S. Fahmy, N. B. Shroff. Energy Efficient Sleep/Wake Scheduling for Multi-hop Sensor Networks: Non-convexity and Approximation Algorithm. In *Proceedings of IEEE INFOCOM (the conference on computer communications)*, 9 pp., May 2007.
5. Y. Wu, S. Fahmy, N. B. Shroff. On the Construction of a Maximum-Lifetime Data Gathering Tree in Sensor Networks: NP-Completeness and Approximation Algorithm. In *Proceedings of IEEE INFOCOM (the conference on computer communications)*, 9 pp., April 2008.
6. S. Fahmy, M. Kwon. Characterizing Overlay Multicast Networks and their Costs. *IEEE/ACM Transactions on Networking*, 15(2):373–386, April 2007. Short version appeared in *Proceedings of the IEEE International Conference on Network Protocols (ICNP)*, pp. 61–70, November 2003.
7. O. Younis, S. Fahmy. On Efficient On-line Grouping of Flows with Shared Bottlenecks at Loaded Servers. *IEEE/ACM Transactions on Networking*, 13(2):288–301, April 2005.
8. M. Kwon, S. Fahmy. Path-aware Overlay Multicast. *Computer Networks*, 47(1):23–45, 14 January 2005.
9. O. Younis, S. Fahmy. Distributed Clustering in Ad-hoc Sensor Networks: A Hybrid, Energy-Efficient Approach. In *Proceedings of IEEE INFOCOM*, volume 1, pp. 629–640, March 2004 (extended version appeared in *IEEE Transactions on Mobile Computing*, 3(4):366–379, Oct–Dec 2004).
10. S. Kalyanaraman, R. Jain, S. Fahmy, R. Goyal, B. Vandalore. The ERICA Switch Algorithm for ABR Traffic Management in ATM Networks. *IEEE/ACM Transactions on Networking*, 8(1):87–98, February 2000.