

Sonia Fahmy
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(a) Professional Preparation

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

(b) Appointments

- Professor, Department of Computer Science, Purdue University, 2011–present
- Associate Head, Department of Computer Science, Purdue University, 2015–2019, 2020–present
- University Faculty Scholar, Purdue University, 2015–2020
- Visiting Scientist, Hewlett-Packard Laboratories, Palo Alto, CA, November 2012–July 2013 and February–April 2006
- Associate Professor, Computer Science, Purdue University, 2005–2011
- 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

(c) Products

1. Amit Sheoran, Sonia Fahmy, Matthew Osinski, Chunyi Peng, Bruno Ribeiro, Jia Wang, “Experience: Towards Automated Customer Issue Resolution in Cellular Networks,” In Proceedings of ACM MO-BICOM, pp. 610-622, September 2020.
2. Jianfei Gao, Mohamed Zahran, Amit Sheoran, Sonia Fahmy, Bruno Ribeiro, “Infinity Learning: Learning Markov Chains from Aggregate Steady-State Observations,” In Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20), 8 pp. + 11 pp. supplementary material, February 2020.
3. Amit Sheoran, Sonia Fahmy, Chunyi Peng, Navin Modi, “NASCENT: Tackling caller-ID spoofing in 4G networks via efficient network-assisted validation,” In Proceedings of IEEE INFOCOM (the conference on computer communications), 9 pp., April 2019.
4. Lianjie Cao, Sonia Fahmy, Puneet Sharma, Shandian Zhe, “Data-driven Resource Flexing for Network Functions Virtualization,” In Proc. of the ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS), 14 pp., July 2018.
5. Ming Shi, Xiaojun Lin, Sonia Fahmy, Dong-Hoon Shin, “Competitive Online Convex Optimization with Switching Costs and Ramp Constraints,” In Proceedings of IEEE INFOCOM (the conference on computer communications), 9 pp., April 2018.
6. Amit Sheoran, Puneet Sharma, Sonia Fahmy, Vinay Saxena, “Contain-ed: An NFV Micro-Service System for Containing e2e Latency,” ACM SIGCOMM Computer Communications Review (CCR), 47(5), 7 pp., October 2017.
7. Samuel Jero, Xiangyu Bu, Cristina Nita-Rotaru, Hamed Okhravi, Richard Skowrya, Sonia Fahmy, “BEADS: A Framework for Attack Discovery in OpenFlow-based SDN Systems,” In Proceedings of the 20th International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2017), 22 pp., September 2017.

8. Wei-Min Yao, Sonia Fahmy. Flow-based Partitioning of Network Testbed Experiments. *Computer Networks*, 58(1):141-157, 15 January 2014.
9. Sriharsha Gangam, Puneet Sharma, Sonia Fahmy. Pegasus: Precision Hunting for Icebergs and Anomalies in Network Flows. In *Proceedings of IEEE INFOCOM (the conference on computer communications)*, 9 pp., April 2013.
10. Ethan Blanton, Sonia Fahmy, Greg N. Frederickson, Sriharsha Gangam. On the Cost of Network Inference Mechanisms. *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 22(4):662–672, April 2011.
11. Roman Chertov and Sonia Fahmy. Forwarding Devices: From Measurements to Simulations. *ACM Transactions on Modeling and Computer Simulation (TOMACS)*, 21(2), pp. 12:1–12:23, February 2011.
12. Yan Wu, Zhoujia Mao, Sonia Fahmy, Ness B. Shroff. Constructing Maximum-Lifetime Data Gathering Forests in Sensor Networks. *IEEE/ACM Transactions on Networking*, 18(5):1571–1584, October 2010.
13. Jelena Mirkovic, Alefiya Hussain, Sonia Fahmy, Peter Reiher, Roshan K. Thomas. Accurately measuring denial of service in simulation and testbed experiments. *IEEE Transactions on Dependable and Secure Computing (TDSC)*, 6(2):81–95, Apr/June 2009.
14. Roman Chertov, Sonia Fahmy, and Ness B. Shroff. Fidelity of Network Simulation and Emulation: A Case Study of TCP-Targeted Denial of Service Attacks. *ACM Transactions on Modeling and Computer Simulation (TOMACS)*, 19:1:4:1–4:29, December 2008.
15. Yan Wu, Sonia Fahmy, Ness B. Shroff. Optimal Sleep/Wake Scheduling for Time-Synchronized Sensor Networks with QoS Guarantees. *IEEE/ACM Transactions on Networking*, 17(5):1508–1521, October 2009.
16. Sonia Fahmy, Minseok Kwon. Characterizing Overlay Multicast Networks and their Costs. *IEEE/ACM Transactions on Networking*, 15(2):373–386, April 2007.
17. Ossama Younis, Sonia Fahmy. HEED: A Hybrid, Energy-Efficient, Distributed Clustering Approach for Ad-hoc Sensor Networks. *IEEE Transactions on Mobile Computing*, 3(4):366–379, Oct–Dec 2004.

(d) Synergistic Activities

- Steering committee member of the IEEE International Conference on Network Protocols (ICNP), 2008–present
- Technical program committee (TPC) chair of IEEE INFOCOM 2015 (with B. Li and J. Lui)
- TPC member (or TPC area chair) of ACM SOSR 2020 and 2017; ACM MOBICOM 2016 and 2021; ACM SIGCOMM 2013; ACM CoNEXT 2015 and 2012; ACM SIGMETRICS 2010; IEEE INFOCOM 2001, 2003–2006, 2008–2014, 2016–2019, 2021; IEEE ICNP 2001, 2005–2007, 2009–2012, 2016–2020; IEEE ICDCS 2000, 2004, 2005, 2007, 2009; IEEE IWQoS 2004–2007, 2009
- Associate Editor, IEEE Transactions on Mobile Computing, February 2016–2019
- Associate Editor, IEEE/ACM Transactions on Networking, February 2011–2015