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Education

Massachusetts Institute of Technology. *Cambridge, MA.*
Ph.D. Computer Science, 2009 (Expected).
5.0/5.0 Cumulative G.P.A.

Massachusetts Institute of Technology. *Cambridge, MA.*
M.S. Computer Science, 2006. Advisors: Nancy Lynch and Gregory Chockler.
Thesis: *Consensus and Collision Detectors in Wireless Ad Hoc Networks.*

Dartmouth College. *Hanover, NH.*
B.A. Computer Science (High Honors in the Major), 2004, *Summa Cum Laude.*
3.95/4.0 Cumulative G.P.A.

Journal Publications

Rachid Guerraoui, Maurice Herlihy, Petr Kouznetsov, Nancy Lynch and Calvin Newport. On the Weakest Failure Detector Ever. *Distributed Computing*, (To Appear).

Seth Gilbert, Rachid Guerraoui and Calvin Newport. Of Malicious Motes and Suspicious Sensors: On the Efficiency of Malicious Interference in Wireless Networks. *Theoretical Computer Science*, 410: 546–569, 2009.

Gregory Chockler, Murat Demirbas, Seth Gilbert, Nancy Lynch, Calvin Newport and Tina Nolte. Consensus and Collision Detectors in Radio Networks. *Distributed Computing*, 21(1): 55–84, 2008.

Calvin Newport, David Kotz, Yougu Yuan, Robert Gray, Jason Liu and Chip Elliott. Experimental Evaluation of Wireless Simulation Assumptions. *Simulation*, 83(9): 643–661, 2007.

Jason Liu, Yougu Yuan, David Nicol, Robert Gray, Calvin Newport, David Kotz and Luiz Felipe Perrone. Empirical Validation of Wireless Models in Simulations of Ad Hoc Routing Protocols. *Simulation*, 81(4): 307–323, 2005.

Selected Conference Publications

Calvin Newport and Nancy Lynch. Modeling Radio Networks. In *Proceedings of the International Conference on Concurrency Theory (CONCUR)*, (To Appear).

Jiang Wu, Nancy Griffeth, Nancy Lynch, Calvin Newport, and Ralph Droms. Using Virtual Infrastructure to Adapt Wireline Protocols to MANET. In *Proceedings of the International Symposium on Network Computing and Applications (NCA)*, Winner of the Best Paper Award, (To Appear).

Shlomi Dolev, Seth Gilbert, Rachid Guerraoui, Fabian Kuhn and Calvin Newport. The Wireless Synchronization Problem. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*, (To Appear).

Seth Gilbert, Rachid Guerraoui, Darek Kowalski and Calvin Newport. Interference-Resilient Information Exchange. In *Proceedings of the IEEE Conference on Computer Communications (INFO-*

COM), April 2009.

Shlomi Dolev, Seth Gilbert, Rachid Guerraoui and Calvin Newport. Secure Communication Over Radio Channels. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*, August 2008.

Ling Cheung and Calvin Newport. Provably Secure Ciphertext Policy ABE. In *Proceedings of the 14th ACM Conference on Computer and Communications Security (CCS)*, October 2007.

Shlomi Dolev, Seth Gilbert, Rachid Guerraoui and Calvin Newport. Gossiping in a Multi-Channel Radio Network: An Oblivious Approach to Coping with Malicious Interference. In *Proceedings of the 21th International Symposium on Distributed Computing (DISC)*, September 2007.

Rachid Guerraoui, Maurice Herlihy, Petr Kouznetsov, Nancy Lynch and Calvin Newport. On the Weakest Failure Detector Ever. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*, August 2007.

Seth Gilbert, Rachid Guerraoui and Calvin Newport. Of Malicious Motes and Suspicious Sensors: On the Efficiency of Malicious Interference in Wireless Networks. In *Proceedings of the 10th International Conference On Principles Of Distributed Systems (OPODIS)*, December 2006.

Gregory Chockler, Murat Demirbas, Seth Gilbert and Calvin Newport. A Middleware Framework for Robust Applications in Wireless Ad Hoc Networks. In *Proceedings of the 43rd Allerton Conference on Communication, Control, and Computing*, September 2005.

Gregory Chockler, Murat Demirbas, Seth Gilbert, Calvin Newport and Tina Nolte. Consensus and Collision Detectors in Wireless Ad Hoc Networks. In *Proceedings of the 24th Annual Symposium on the Principles of Distributed Computing (PODC)*, July 2005.

David Kotz, Calvin Newport, Robert Gray, Jason Liu, Yougu Yuan and Chip Elliott. Experimental Evaluation of Wireless Simulation Assumptions. In *Proceedings of the 7th ACM International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems*, October 2004.

Robert Gray, David Kotz, Calvin Newport, Nikita Dubrovsky, Aaron Fiske, Jason Liu, Christopher Masone, Susan McGrath and Yougu Yuan. Outdoor Experimental Comparison of Four Ad Hoc Routing Algorithms. In *Proceedings of the 7th ACM International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems*, October 2004.

Books

How to Become a Straight-A Student: The Unconventional Strategies Real College Students Use to Score High While Studying Less. Broadway/Random House, December 2006. (2nd printing.)

How To Win at College: Surprising Secrets for Success from the Country's Top Students. Broadway/Random House. April 2005. (7th printing.)

Teaching Experience

Teaching Assistant, **Distributed Algorithms**, Massachusetts Institute of Technology, Spring 2008.

Teaching Assistant, **Computer & Network Security**, Massachusetts Institute of Technology, Fall 2006.

Presentations

Reliable Distributed Computing on Unreliable Radio Channels. The S^3 Workshop at the ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc). New Orleans, LA. May 2009.

Interference-Resilient Information Exchange. The IEEE Conference on Computer Communications (INFOCOM). Rio de Janeiro, Brazil. April 2009.

Distributed Computing in the Age of Open Airwaves. Boston University. Boston, MA. April 2009.

Distributed Computing in the Age of Open Airwaves. The Brown University Theory Lunch. Providence, RI. January 2009.

Secure Communication Over Radio Channels. The ACM Symposium on the Principles of Distributed Computing (PODC). Toronto, Canada. August 2008.

Collusion-Resistant Group Key Management Using Attribute-Based Encryption. The 1st International Workshop on Group-Oriented Cryptographic Protocols. Wroclaw, Poland. July 2007.

Virtual Infrastructure for Mobile Ad Hoc Networks. Area II Open House, Massachusetts Institute of Technology. Cambridge, MA. October 2006.

A Middleware Framework for Robust Applications in Wireless Ad Hoc Networks. The 43rd Allerton Conference on Communication, Control, and Computing. Allerton, IL. September 2005.

Professional Activities

Program Committees. International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSOR), 2009.

Journal Reviews. Theoretical Computer Science, IEEE Transactions on Mobile Computing, Information Processing Letters, IEEE Security and Communication Networks, IEEE Transactions on Computers.

Conference Reviews. Symposium on the Principles of Distributed Computing (PODC), Symposium on Distributed Computing (DISC), Symposium on Mathematical Foundations of Computer Science (MFCS), The International Conference on Distributed Computing Systems (ICDCS), International Parallel & Distributed Processing Symposium (IPDPS), International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), International Conference on Distributed Computing in Sensor Systems (DCOSS), etc.