

Calvin C. Newport

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Last Updated: *April 12, 2017*

Education

Massachusetts Institute of Technology. *Cambridge, MA.*
Ph.D. Computer Science, 2009.
Advisor: Nancy Lynch. Thesis: *Distributed Computation on Unreliable Radio Channels.*

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.*
A.B. Computer Science (High Honors in the Major), 2004, *Summa Cum Laude.*

Employment

Georgetown University. *Washington, D.C.*
Provost's Distinguished Associate Professor (with tenure), Department of Computer Science.
February 2017 - current

Georgetown University. *Washington, D.C.*
Associate Professor (with tenure), Department of Computer Science. *August 2016 - February 2017*

Georgetown University. *Washington, D.C.*
Assistant Professor, Department of Computer Science. *August 2011 - August 2016*

Massachusetts Institute of Technology. *Cambridge, MA.*
Postdoctoral Associate, Networks and Mobile Systems Group. *2009 - 2011*

Massachusetts Institute of Technology. *Cambridge, MA.*
Research Assistant and Teaching Assistant, Theory of Distributed Systems Group. *2004 - 2009*

A Note on Author Order Conventions

In theoretical computer science it is standard to list author names in alphabetical order. Most of my papers appear in theory venues and therefore follow this convention. The citations in the two sections that follow that *do not* follow this convention, and instead list authors in order of contribution, are marked with the † symbol.

Journal Publications

Michael Dinitz, Jeremy Fineman, Seth Gilbert and Calvin Newport. Smoothed Analysis of Dynamic Networks. (Accepted: Publication Pending.)

Seth Gilbert, Calvin Newport, and Chaodong Zheng. Who Are You? Secure Identities in Ad Hoc Networks. *Distributed Computing* 30(2): 103–125, 2017.

Christoph Lenzen, Nancy Lynch, Calvin Newport, and Tsvetomira Radeva. Searching Without Communicating: Tradeoffs Between Performance and Selection Complexity. *Distributed Computing*. doi:10.1007/s00446-016-0283-x. First Online: September, 2016. (Print Version Pending.)

† Ranit Mishori, Lisa Singh, Brendan Levy, and Calvin Newport. Mapping Physician Twitter Networks: Describing How They Work as a First Step in Understanding Connectivity, Information Flow, and Message Diffusion. *Journal of Medical Internet Research*, 16(4): 2014.

Keren Censor-Hillel, Seth Gilbert, Fabian Kuhn, Nancy Lynch, and Calvin Newport. Structuring Unreliable Radio Networks *Distributed Computing* 27(1): 1–19, 2014.

† Alejandro Cornejo, Calvin Newport, Subha Gollakota, Jayanthi Rao, and T.J. Giuli. Prioritized Gossip in Vehicular Networks. *Ad Hoc Networks* 11(1): 397–409, 2013.

Fabian Kuhn, Nancy Lynch, and Calvin Newport. The Abstract MAC Layer. *Distributed Computing* 24(3): 187–296, 2011.

† Calvin Newport and Nancy Lynch. Modeling Radio Networks. *Distributed Computing*, 24(2): 101–118, 2011.

Rachid Guerraoui, Maurice Herlihy, Petr Kouznetsov, Nancy Lynch and Calvin Newport. On the Weakest Failure Detector Ever. *Distributed Computing*, 21(5): 353–366, 2009.

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.

Peer-Reviewed Conference and Workshop Publications

Calvin Newport. Leader Election in a Smartphone Peer-to-Peer Network In *Proceedings of the IEEE International Parallel and Distributed Processing Symposium (IPDPS)*. To Appear.

Michael Dinitz, Jeremy Fineman, Seth Gilbert and Calvin Newport. Load Balancing with Bounded Convergence in Dynamic Networks In *Proceedings of the IEEE Conference on Computer Communications (INFOCOM)*. To Appear. (Acceptance rate: $292/1395 = 20.9\%$)

Mohsen Ghaffari and Calvin Newport. How to Discreetly Spread a Rumor in a Crowd. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. September, 2016. (Acceptance rate: $32/132 = 24.2\%$)

Jeremy Fineman, Calvin Newport, and Tonghe Wang. Contention Resolution on Multiple Channels with Collision Detection. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July, 2016. (Acceptance rate: $40/137 = 29.2\%$)

Jeremy Fineman, Seth Gilbert, Fabian Kuhn, and Calvin Newport. Contention Resolution on a Fading Channel. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July, 2016. **Invited for journal submission.** (Acceptance rate: $40/137 = 29.2\%$)

Mohsen Ghaffari and Calvin Newport. Leader Election in Unreliable Radio Networks. In *Proceedings of the International Colloquium on Automata, Languages, and Programming (ICALP)*. July, 2016. (Acceptance rate: $146/515 = 28.3\%$)

Seth Gilbert, Calvin Newport, and Tonghe Wang. Bounds for Blind Rate Adaptation. In *Proceedings of the International Conference on Principles of Distributed Systems (OPODIS)*. December, 2015. (Acceptance rate: $31/91 = 34.1\%$)

Seth Gilbert and Calvin Newport. The Computational Power of Beeps. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October, 2015. (Acceptance rate: $42/136 = 30.9\%$)

Michael Dinitz, Jeremy Fineman, Seth Gilbert and Calvin Newport. Smoothed Analysis of Dynamic Networks. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October, 2015. **Invited for journal submission.** (Acceptance rate: $42/136 = 30.9\%$)

Seth Gilbert, Fabian Kuhn, Calvin Newport and Chaodong Zheng. Efficient Communication in Cognitive Radio Networks. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2015. (Acceptance rate: $45/191 = 23.6\%$)

Nancy Lynch and Calvin Newport. A (Truly) Local Broadcast Layer for Unreliable Radio Networks. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2015. (Acceptance rate: $45/191 = 23.6\%$)

Calvin Newport and Wenchao Zhou. The (Surprising) Computational Power of the SDN Data Plane. In *Proceedings of the IEEE Conference on Computer Communications (INFOCOM)*. April 2015. (Acceptance rate: $316/1640 = 19.3\%$)

† Henry Tan, Chris Wacek, Calvin Newport, and Micah Sherr. A Disruption-Resistant MAC Layer for Multichannel Wireless Networks. In *Proceedings of the International Conference on Principles of Distributed Systems (OPODIS)*. December 2014. (Acceptance rate: $32/98 = 32.7\%$)

Calvin Newport. Radio Network Lower Bounds Made Easy. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October 2014. (Acceptance rate: $35/148 = 23.6\%$)

Calvin Newport. Lower Bounds for Structuring Unreliable Radio Networks. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October, 2014. (Acceptance rate: $35/148 = 23.6\%$)

Seth Gilbert, Calvin Newport and Chaodong Zheng. Who Are You? Secure Identities in Ad-Hoc Networks. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October 2014. (Acceptance rate: $35/148 = 23.6\%$)

Calvin Newport. Consensus with an Abstract MAC Layer. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2014. (Acceptance rate: $39/141 = 27.7\%$)

Mohsen Ghaffari, Erez Kantor, Calvin Newport and Nancy Lynch. Multi-Message Broadcast with Abstract MAC Layers and Unreliable Links. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2014. (Acceptance rate: $39/141 = 27.7\%$)

Christoph Lenzen, Nancy Lynch, Calvin Newport, and Tsvetomira Radeva. Trade-offs Between Selection Complexity and Performance when Searching the Plane without Communication. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2014. (Acceptance rate: $39/141 = 27.7\%$)

Nimantha Baranasuriya, Seth Gilbert, Calvin Newport, and Jaynathi Rao. Aggregation in Smartphone Sensor Networks. In *Proceedings of the IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)*. May 2014. (Acceptance rate: $30/100 = 30\%$)

Jeremy Fineman, Calvin Newport, Micah Sherr, and Tonghe Wang. Fair Maximal Independent Sets. In *Proceedings of the IEEE International Parallel and Distributed Processing Symposium (IPDPS)*. May 2014. (Acceptance rate: $114/541 = 21.1\%$)

† Calvin Newport, Lisa Singh, and Yiqing Ren. Short Paper: Membership Detection Using Cooperative Data Mining Algorithms. In *Proceedings of the SIAM International Conference on Data Mining (SDM)*. April 2014.

Sebastian Daum, Seth Gilbert, Fabian Kuhn, and Calvin Newport. Broadcast in the Ad Hoc SINR Model. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October 2013. (Acceptance rate: $27/142 = 19\%$)

Mohsen Ghaffari, Nancy Lynch, and Calvin Newport. The Cost of Radio Network Broadcast for Different Models of Unreliable Links In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2013. (Acceptance rate: $37/145 = 25.5\%$)

Sebastian Daum, Seth Gilbert, Mohsen Ghaffari, Fabian Kuhn, and Calvin Newport. Maximal Independent Sets in Multichannel Radio Networks In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2013. (Acceptance rate: $37/145 = 25.5\%$)

Jeremy Fineman, Calvin Newport, and Tonghe Wang. Brief Announcement: Fair Maximal Independent Sets in Trees In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2013.

Calvin Newport. Brief Announcement: A Shorter and Stronger Proof of an $\Omega(D \log n/D)$ Lower Bound on Broadcast in Radio Networks In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2013.

Mohsen Ghaffari, Seth Gilbert, Calvin Newport and Henry Tan. Optimal Broadcast in Shared Spectrum Radio Networks In *Proceedings of the International Conference on Principle of Distributed Systems (OPODIS)*. December 2012. (Acceptance rate: $24/89 = 27\%$)

Sebastian Daum, Fabian Kuhn, and Calvin Newport. Efficient Symmetry Breaking in Multi-Channel Radio Networks In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October 2012. (Acceptance rate: $27/119 = 22.7\%$)

Mohsen Ghaffari, Bernhard Haeupler, Nancy Lynch, and Calvin Newport. Bounds on Contention Management in Radio Networks. In *Proceedings of the International Symposium on Distributed Computing (DISC)*. October 2012. (Acceptance rate: $27/119 = 22.7\%$)

Alejandro Cornejo, Seth Gilbert, and Calvin Newport. Aggregation in Dynamic Networks. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2012. (Acceptance rate: $35/142 = 24.6\%$)

Sebastian Daum, Seth Gilbert, Fabian Kuhn, and Calvin Newport. Leader Election in Shared Spectrum Networks. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*. July 2012. (Acceptance rate: $35/142 = 24.6\%$)

Shlomi Dolev, Seth Gilbert, Majid Khabbazi and Calvin Newport. Leveraging Channel Diversity to Gain Efficiency and Robustness for Wireless Broadcast. In *Proceedings of the International Symposium on Distributed Computing (DISC)*, September 2011. (Acceptance rate: $31/136 = 22.8\%$)

† Jiang Wu, Nancy Griffeth, Calvin Newport, and Nancy Lynch. Engineering the Virtual Node Layer for Reactive MANET Routing. In *Proceedings of the International Symposium on Network Computing and Applications (NCA)*, August 2011. (Acceptance rate: $27/96 = 28.1\%$)

Keren Censor-Hillel, Seth Gilbert, Fabian Kuhn, Nancy Lynch and Calvin Newport. Structuring Unreliable Radio Networks. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*, June 2011. (Acceptance rate: $34/129 = 26.4\%$)

† Lenin Ravindranath, Calvin Newport, Hari Balakrishnan, and Sam Madden. Improving Wireless Network Performance Using Sensor Hints. In *Proceedings of the USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, March 2011. (Acceptance rate: $27/157 = 17.2\%$)

† Lenin Ravindranath, Calvin Newport, Hari Balakrishnan, and Sam Madden. “Extra-Sensory Perception” for Wireless Networks. In *Proceedings of the ACM Workshop on Hot Topics in Networks (HOTNETS)*, October 2010. (Acceptance rate: $22/104 = 21.2\%$)

Alex Cornejo and Calvin Newport. Prioritized Gossip in Vehicular Networks. In *Proceedings of the ACM SIGACT/SIGMOBILE International Workshop on Foundations of Mobile Computing (DIALM-POMC)*, September 2010.

Fabian Kuhn, Nancy Lynch, Calvin Newport, Rotem Oshman, and Andrea Richa. Broadcasting in Radio Networks with Unreliable Communication. In *Proceedings of the ACM Symposium on the Principles of Distributed Computing (PODC)*, July 2010. (Acceptance rate: $39/179 = 21.8\%$)

Dan Alistarh, Seth Gilbert, Rachid Guerraoui, Zarko Milosevic and Calvin Newport. Securing Every Bit: Authenticated Broadcast in Radio Networks. In *Proceedings of the ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, June 2010. (Acceptance rate: $35/104 = 33.7\%$)

Fabian Kuhn, Nancy Lynch, and Calvin Newport. The Abstract MAC Layer. In *Proceedings of the International Symposium on Distributed Computing (DISC)*, September 2009. **Selected for Special Awards Session. Invited for journal submission.** (Acceptance rate: $33/121 = 27.3\%$)

† Calvin Newport and Nancy Lynch. Modeling Radio Networks. In *Proceedings of the International Conference on Concurrency Theory (CONCUR)*, August 2009. **Invited for journal submission.** (Acceptance rate: $37/129 = 28.7\%$)

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)*, August 2009. (Acceptance rate: $27/110 = 24.5\%$)

† 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)*, July 2009. **Winner of Best Paper award.** (Acceptance rate: $27/79 = 34.2\%$)

Seth Gilbert, Rachid Guerraoui, Darek Kowalski and Calvin Newport. Interference-Resilient Information Exchange. In *Proceedings of the IEEE Conference on Computer Communications (INFOCOM)*, April 2009. (Acceptance rate: $282/1435 = 19.7\%$)

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. (Acceptance rate: $40/132 = 30.3\%$)

Ling Cheung and Calvin Newport. Provably Secure Ciphertext Policy ABE. In *Proceedings of the ACM Conference on Computer and Communications Security (CCS)*, October 2007. (Acceptance rate: $55/302 = 18.2\%$)

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 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. **Invited for journal submission.** (Acceptance rate: $32/204 = 15.7\%$)

Ling Cheung, Joseph A. Cooley, Roger Khazan, and Calvin Newport. Collusion-Resistant Group Key Management Using Attribute-Based Encryption. In *Proceedings of the International Workshop on Group-Oriented Cryptographic Protocols*, July, 2007.

Matthew Brown, Seth Gilbert, Nancy Lynch, Calvin Newport, Tina Nolte, and Michael Spindel. The Virtual Node Layer: A Programming Abstraction for Wireless Sensor Networks. In *Proceedings of the International Workshop on Sensor Network Architecture (WWSNA)*, April, 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 International Conference On Principles Of Distributed Systems (OPODIS)*, December 2006. **Invited for journal submission.**

Gregory Chockler, Murat Demirbas, Seth Gilbert and Calvin Newport. A Middleware Framework for Robust Applications in Wireless Ad Hoc Networks. In *Proceedings of the 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 ACM Symposium on the Principles of Distributed Computing (PODC)*, July 2005. (Acceptance rate: $36/160 = 22.5\%$)

Gregory Chockler, Murat Demirbas, Seth Gilbert, Nancy A. Lynch, Calvin Newport, and Tina Nolte. Reconciling the Theory and Practice of (Un)Reliable Wireless Broadcast. In *Proceedings of the International Workshop on Assurance in Distributed Systems and Networks (ADSN)*, June, 2005

† David Kotz, Calvin Newport, Robert Gray, Jason Liu, Yougu Yuan and Chip Elliott. Experimental Evaluation of Wireless Simulation Assumptions. In *Proceedings of the ACM International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems*, October 2004. (Acceptance rate: $21/121 = 17.4\%$)

† 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 ACM International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems*, October 2004. (Acceptance rate: $21/121 = 17.4\%$)

Technical Magazine Articles

Magnus Halldorsson and Calvin Newport. Making Wireless Algorithm Theory More Useful. *ACM SIGACT News* 45(3): 72–74, 2014.

Funding

“EAGER: Noisy Computation of Distributed State Machines,” NSF CCF Award #1649484, 9/1/2016 to 8/31/2018, \$72,322 (Sole PI).

“AF: Small: Algorithms for Wireless Networks with Dynamic Links,” NSF CCF Award #1320279, 9/1/2013 to 8/31/2017, \$319,461 (Sole PI).

“Enabling Innovative Infotainment Applications with a Vehicle-to-Vehicle Communication API,” Ford Motor Company’s University Research Program (Funding Rate < 10%), 6/1/2012 to 5/31/2015, \$120,000 (Not Subjected to Overhead; Sole PI).

“Secrecy Preserving Signatures,” Georgetown Security and Software Engineering Research Center (an NSF-Funded Industry/University Cooperative Research Center), Summer 2013, \$15,000.

Computer Science Presentations

Contention Resolution on a Fading Channel. The ACM Symposium on the Principles of Distributed Computing (PODC). Chicago, Illinois. July, 2016.

Notes on Noisy Distributed Computing. Workshop on Realistic Models for Algorithms in Wireless Networks (WRAWN). Chicago, Illinois. July, 2016.

Notes on Noisy Distributed Computing. The Capital Area Theory Day (Johns Hopkins University). Baltimore, Maryland. May, 2016.

A (Truly) Local Broadcast Layer for Unreliable Radio Networks. The ACM Symposium on the Principles of Distributed Computing (PODC). San Sebastian, Spain. July, 2015.

Radio Network Lower Bounds Made Easy The Johns Hopkins Computer Science Theory Seminar. Baltimore, Maryland. October, 2014.

Radio Network Lower Bounds Made Easy The International Symposium on Distributed Computing (DISC). Austin, Texas. October, 2014.

Lower Bounds for Structuring Unreliable Radio Networks The International Symposium on Distributed Computing (DISC). Austin, Texas. October, 2014.

Who are you? Secure identities in ad hoc networks. The International Symposium on Distributed Computing (DISC). Austin, Texas. October, 2014.

How to Tame a Dynamic Network. Workshop on the Foundations of Mobile Computing. Philadelphia, PA. August, 2014.

How to Tame a Dynamic Network. Workshop on Realistic Models for Algorithms in Wireless Networks (WRAWN). Paris, France. July, 2014.

Consensus in an Abstract MAC Layer The ACM Symposium on the Principles of Distributed Computing (PODC). Paris, France. July, 2014.

Multi-Message Broadcast with Abstract MAC Layers and Unreliable Links. The ACM Symposium on the Principles of Distributed Computing (PODC). Paris, France. July, 2014.

How to Accomplish Important Things: Words of Advice from a Computer Scientist. Middlebury College, Computer Science Seminar. Middlebury, VT. March, 2014.

Distributed Algorithms in a Wireless World. George Washington University, Computer Science Colloquium. Washington, DC. February, 2014.

Thoughts on Models for Applied Distributed Wireless Algorithms. Dagstuhl Seminar on Wireless Algorithms. Dagstuhl, Germany. January, 2014.

Distributed Algorithms in a Wireless World. Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory Seminar. Cambridge, MA. November, 2013.

Broadcasting in Radio Networks with Different Models of Unreliable Links. The ACM Symposium on the Principles of Distributed Computing (PODC). Montreal, CA. July 2013.

Fair Maximal Independent Sets in Trees. The ACM Symposium on the Principles of Distributed Computing (PODC). Montreal, CA. July 2013.

Why is Wireless Theory Ignored by Wireless Practice? Invited Talk at the Workshop on Realistic Models for Wireless Networks (WRAWN). Montreal, CA. July 2013.

How to Succeed in Graduate School. Duke University. Durham, NC. March 2013.

Distributed Algorithms in the Age of Open Airwaves. Virginia Tech, Department of Computer Science. Arlington, VA. March 2013.

Structuring Unreliable Radio Networks. The ACM Symposium on the Principles of Distributed Computing (PODC). San Jose, CA. June 2011.

Information Dissemination in Vehicle Networks. MIT CSAIL Industry Affiliates Annual Meeting. Cambridge, MA. May 2011.

Broadcasting in Radio Networks with Unreliable Communication. The ACM Symposium on the Principles of Distributed Computing (PODC). Zurich, Switzerland. July 2010.

Vehicular Networking: From Theory to Practice. Ford Motor Company. Dearborn, MI. April 2010.

Distributed Computing in the Age of Open Airwaves. The Dartmouth College Computer Science Colloquium. Hanover, NH. October 2009.

Distributed Computing in the Age of Open Airwaves. The MIT Theoretical Computer Science Colloquium. Cambridge, MA. September 2009.

Modeling Radio Networks. The International Conference on Concurrency Theory (CONCUR). Bologna, Italy. August 2009.

The Wireless Synchronization Problem. The ACM Symposium on the Principles of Distributed Computing (PODC). Calgary, Canada. August 2009.

Hardness of Broadcasting in Wireless Networks with Unreliable Communication. The ACM Symposium on the Principles of Distributed Computing (PODC). Calgary, Canada. August 2009.

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 International Workshop on Group-Oriented Cryptographic Protocols. Wroclaw, Poland. July 2007.

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

Teaching

Fall 2016, COSC 030: Math Methods for Computer Science

Spring 2016, COSC 545: Theory of Computation

Spring 2016, COSC 546: Distributed Algorithms

Fall 2015, COSC 030: Math Methods for Computer Science

Fall 2014, COSC 030: Math Methods for Computer Science

Spring 2014, COSC 545: Theory of Computation

Fall 2013, COSC 242: Algorithms for Distributed Systems

Spring 2013, COSC 545: Theory of Computation

Spring 2013, COSC 747: Wireless Network Algorithms

Spring 2012, COSC 545: Theory of Computation

Fall 2011, COSC 547: Distributed Computing Outside the Box

Student Supervision

Tonghe Wang. Doctoral student. 2012 -

Welles Robinson. Co-supervised undergraduate thesis (awarded honors). *2013 - 2014.*

Professional Activities

Steering Committees. The ACM Symposium on the Principles of Distributed Computing (PODC), term of 2016 - 2018. The Workshop on Realistic Models for Algorithms in Wireless Networks (WRAWN), 2015 - .

Program Chairs. Program co-chair of the Workshop on Realistic Models for Algorithms in Wireless Networks (WRAWN), 2013, 2014, 2016. Program co-chair of the International Workshop on Foundations of Mobile Computing (FOMC; formerly known as DIALM-POMC), 2012.

Program Committees. Symposium on the Principles of Distributed Computing (PODC), Symposium on Parallelism in Algorithms and Architectures (SPAA), International Conference on Distributed Computing and Networking (ICDCN), International Colloquium on Structural Information and Communication Complexity (SIROCCO), International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), International Conference on Distributed Computing in Sensor Systems (DCOSS), ACM Workshop on Foundations of Mobile Computing (FOMC, previously DIALM-POMC), International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSOR).

Journal Reviews. Journal of the ACM, ACM Mobile Computing and Communications Review, Theoretical Computer Science, Distributed Computing, IEEE/ACM Transactions on Networking, IEEE Transactions on Mobile Computing, IEEE Journal on Selected Areas in Communications, Information Processing Letters, IEEE Journal of Security and Communication Networks, IEEE Transactions on Computers, ACM Transactions on Sensor Networks, Journal of Systems and Software.

Conference Reviews. Symposium on Foundations of Computer Science (FOCS), Symposium on the Principles of Distributed Computing (PODC), Symposium on Discrete Algorithms (SODA), Colloquium on Automata, Languages, and Programming (ICALP), Symposium on Distributed Computing (DISC), Symposium on Parallelism in Algorithms and Architecture (SPAA), European Symposium on Algorithms (ESA), Symposium on Theoretical Aspects of Computer Science (STACS), Symposium on Mathematical Foundations of Computer Science (MFCS), 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), International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), International Conference on Concurrency Theory (CONCUR).

Grant Proposal Review Panels. National Science Foundation (NSF), 2012 and 2015.

Department Committees

Joint CS-Law Faculty Search Committee, 2016 -

Graduate Committee, 2013 - 2014, 2016 -

Undergraduate Committee, 2011 - 2015

Policy Committee, 2014 - 2015

University Committees

College Executive Committee, 2015 - 2016

Presentations at Georgetown University

E-mail 2.0. Workshop for the Staff Members of the Georgetown Center for Social Justice and the Georgetown Scholarship Program. August, 2015.

How to Write a Dissertation: Panel Presentation/Discussion. Georgetown Graduate Student Organization's Thesis Writing Boot Camp. May, 2015.

How to Succeed at Georgetown. The Georgetown Student-Athlete Leadership & Development Monthly Speaker Series. March, 2015.

How to Write a Dissertation: Panel Presentation/Discussion. Georgetown Graduate Student Organization's Thesis Writing Boot Camp. March, 2015.

How to Succeed at Georgetown. Key Note Address at the Georgetown Scholarship Program Thrive Summit. January, 2015.

Why Following Your Passion is Bad Advice. Georgetown Alumni Career Services Webinar Program. November, 2014.

How to Write a Dissertation: Panel Presentation/Discussion. Georgetown Graduate Student Organization's Thesis Writing Boot Camp. August, 2014.

Writing About College. Georgetown Freshman Writing Course. April, 2014.

How to Write a Dissertation: Panel Presentation/Discussion. Georgetown Graduate Student Organization's Thesis Writing Boot Camp. August, 2013.

Non-Technical Books

Deep Work: Rules for Focused Success in a Distracted World. Grand Central/Hachette, January 2016. (Wall Street Journal Business Bestseller.)

So Good They Can't Ignore You: Why Skills Trump Passion in the Quest for Work You Love. Grand Central/Hachette, September 2012.

How to Be a High School Superstar: A Revolutionary Plan to Get into College by Standing Out (Without Burning Out). Three Rivers/Random House, July 2010.

How to Become a Straight-A Student: The Unconventional Strategies Real College Students Use to Score High While Studying Less. Three Rivers/Random House, December 2006.

How To Win at College: Surprising Secrets for Success from the Country's Top Students. Three Rivers/Random House, April 2005.