

Tim Roughgarden

Curriculum Vitae

Work Address:

Columbia University
Department of Computer Science
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Education

Ph.D., Computer Science, Cornell University, Ithaca, New York, May 2002.

Thesis: *Selfish Routing*

M.S., Mathematics, Cornell University, Ithaca, New York, May 2002.

M.S., Computer Science, Stanford University, Stanford, California, June 1998.

B.S., Applied Mathematics, Stanford University, Stanford, California, June 1997.

Postdoctoral Employment

Professor, Department of Computer Science, Columbia University, January 2019–present.

Visiting Professor, Department of Mathematics, London School of Economics, September 2017–August 2018.

Professor, Department of Computer Science and (by courtesy) Management Science and Engineering, Stanford University, February 2017–December 2018.

Associate Professor, Department of Computer Science and (by courtesy) Management Science and Engineering, Stanford University, September 2011–January 2017.

Assistant Professor (by courtesy), Department of Management Science and Engineering, Stanford University, September 2004–August 2011.

Postdoctoral Researcher, Computer Science Division, UC Berkeley, August 2003–August 2004.

Postdoctoral Researcher, Department of Computer Science, Cornell University, June 2002–July 2003.

Selected Awards and Honors

Guggenheim Fellowship, 2017

Tau Beta Pi Teaching Honor Roll, 2017

Kalai Prize in Game Theory and Computer Science, 2016

Social Choice and Welfare Prize, 2014

EATCS-SIGACT Gödel Prize, 2012

ACM Grace Murray Hopper Award, 2009

Shapley Lecturer, Third World Congress of the Game Theory Society, 2008

Game Theory Society Prize in Game Theory and Computer Science, Honorable Mention, 2008

Presidential Early Career Award for Scientists and Engineers (PECASE), 2007

ONR Young Investigator, 2007–2010

Alfred P. Sloan Fellow, 2006–2008

International Congress of Mathematicians Invited Speaker, 2006

INFORM's Optimization Prize for Young Researchers, 2003

Mathematical Programming Society's Tucker Prize, 2003

ACM Doctoral Dissertation Award, Honorable Mention, 2002

Danny Lewin Best Student Paper Award, STOC 2002

Books and Monographs

1. T. Roughgarden, *Algorithms Illuminated, Part 2: Graph Algorithms and Data Structures*, Soundlike-yourself Publishing, 2018.
2. T. Roughgarden, *Algorithms Illuminated, Part 1: The Basics*, Soundlikeyourself Publishing, 2017.
3. T. Roughgarden, *Twenty Lectures on Algorithmic Game Theory*, Cambridge University Press, 2016.
4. T. Roughgarden, *Communication Complexity (for Algorithm Designers)*, Foundations and Trends in Theoretical Computer Science, Now Publishers, 2016.
5. N. Nisan, T. Roughgarden, É. Tardos, and V. V. Vazirani (editors), *Algorithmic Game Theory*, Cambridge University Press, 2007.
6. T. Roughgarden, *Selfish Routing and the Price of Anarchy*, MIT Press, 2005.

Book Chapters

1. T. Roughgarden, “Complexity-Theoretic Barriers in Economics,” in *The Future of Economic Design*, J.-F. Laslier, H. Moulin, R. Sanver, and W. S. Zwicker, editors, Springer, 2019.
2. T. Roughgarden, “Routing Games,” chapter 18 in *Algorithmic Game Theory*, N. Nisan, T. Roughgarden, É. Tardos, and V. V. Vazirani, editors, Cambridge University Press, pages 461–486, 2007.
3. T. Roughgarden and É. Tardos, “Introduction to the Inefficiency of Equilibria,” chapter 17 in *Algorithmic Game Theory*, N. Nisan, T. Roughgarden, É. Tardos, and V. V. Vazirani, editors, Cambridge University Press, pages 443–459, 2007.

Edited Conference Proceedings

1. T. Roughgarden, M. Feldman, and M. Schwarz, editors, *Proceedings of the 16th ACM Conference on Economics and Computation (EC)*, ACM, 2015.
2. T. Roughgarden, editor, *Proceedings of the 2015 Conference on Innovations in Theoretical Computer Science (ITCS)*, ACM, 2015.
3. D. Boneh, T. Roughgarden, and J. Feigenbaum, editors, *Proceedings of the 43rd Annual ACM Symposium on Theory of Computing (STOC)*, ACM, 2013.
4. T. Roughgarden, editor, *Proceedings of the 53rd Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, IEEE, 2012.
5. Y. Shoham, Y. Chen, and T. Roughgarden, editors, *Proceedings of the 12th ACM Conference on Electronic Commerce (EC)*, ACM, 2011.

Journal Publications

1. R. Colini-Baldeschi, P. W. Goldberg, B. de Keijzer, S. Leonardi, T. Roughgarden, and S. Turchetta, “Approximately Efficient Two-Sided Combinatorial Auctions,” revised and resubmitted to *ACM Transactions on Economics and Computation*, October 2018.
2. J. Fox, T. Roughgarden, C. Seshadhri, F. Wei, and N. Wein, “Finding Cliques in Social Networks: A New Distribution-Free Model,” submitted to *SIAM Journal on Computing*, September 2018.
3. R. Niazadeh, T. Roughgarden, and J. R. Wang, “Optimal Algorithms for Continuous Non-monotone Submodular and DR-Submodular Maximization,” submitted to *Journal of Machine Learning Research*, August 2018.

4. T. Roughgarden and J. R. Wang, “Minimizing Regret with Multiple Reserves,” revised and resubmitted to *ACM Transactions on Economics and Computation*, August 2018.
5. T. Roughgarden, “Barbados Lectures on Complexity Theory, Game Theory, and Economics,” submitted to *Foundations and Trends in Theoretical Computer Science*, July 2018.
6. T. Roughgarden, I. Talgam-Cohen, and Q. Yan, “Robust Auctions for Revenue via Enhanced Competition,” revised and resubmitted to *Operations Research*, March 2017.
7. G. Barmpalias, N. Huang, A. Lewis-Pye, A. Li, X. Li, Y. Pan, and T. Roughgarden, “The Idemetric Property: When Most Distances Are (Almost) the Same,” accepted to *Proceedings of the Royal Society of London*, January 2019.
8. T. Roughgarden, “Beyond Worst-Case Analysis,” accepted to *Communications of the ACM*, June 2018.
9. T. Roughgarden and I. Talgam-Cohen, “Approximately Optimal Mechanism Design,” accepted to *Annual Reviews of Economics*, June 2018.
10. P. Gopalan, N. Nisan, and T. Roughgarden, “Public Projects, Boolean Functions, and the Borders of Border’s Theorem,” *ACM Transactions on Economic and Computation*, 6(3-4): Article 18, November 2018.
11. T. Roughgarden, S. Vassilvitskii, and J. R. Wang, “Shuffles and Circuits (On Lower Bounds for Modern Parallel Computation),” *Journal of the ACM*, 65(6):Article 41, November 2018.
12. Z. Huang, Y. Mansour, and T. Roughgarden, “Making the Most of Your Samples,” *SIAM Journal on Computing*, 47(3):651–674, May 2018.
13. S. Dobzinski, A. Mehta, T. Roughgarden, and M. Sundararajan, “Is Shapley Cost Sharing Optimal?,” *Games and Economic Behavior*, 108(1):130–138, March 2018.
14. P. D. Dütting, V. Gkatzelis, and T. Roughgarden, “The Power of Deferred Heuristic Auctions,” *Mathematics of Operations Research*, 42(4):897–914, November 2017.
15. P. D. Dütting, T. Roughgarden, and I. Talgam-Cohen, “Modularity and Greed in Double Auctions,” *Games and Economic Behavior*, 105:59–83, September 2017.
16. R. Gupta and T. Roughgarden, “A PAC Approach to Application-Specific Algorithm Selection,” *SIAM Journal on Computing*, 46(3):992–1017, June 2017.
17. T. Roughgarden, V. Syrgkanis, and É. Tardos, “The Price of Anarchy in Auctions,” *Journal of Artificial Intelligence Research*, 59:59–101, May 2017.
18. Y. Chen, A. Ghosh, M. Kearns, T. Roughgarden, and J. Wortman Vaughan, “Mathematical Foundations for Social Computing,” *Communications of the ACM*, 59(12):102–108, December 2016.
19. J. Hsu, Z. Huang, A. Roth, T. Roughgarden, and Z. S. Wu, “Private Matchings and Allocations,” *SIAM Journal on Computing*, 45(6):1953–1984, November 2016.
20. V. Gkatzelis, K. Kollias, and T. Roughgarden, “Optimal Cost-Sharing in General Resource Selection Games,” *Operations Research*, 64(6):1230–1238, November 2016.
21. S. Dughmi, T. Roughgarden, and Q. Yan, “Optimal Mechanisms for Combinatorial Auctions and Combinatorial Public Projects via Convex Rounding,” *Journal of the ACM*, 63(4):Article 30, September 2016.
22. T. Roughgarden and I. Talgam-Cohen, “Optimal and Near-Optimal Mechanism Design with Interdependent Values,” *ACM Transactions on Economics and Computation*, 4(3):Article 18, June 2016.
23. R. Gupta, T. Roughgarden, and C. Seshadhri, “Decompositions of Triangle-Dense Graphs,” *SIAM Journal on Computing*, 45(2):197–215, March 2016.

24. T. Roughgarden and O. Schrijvers, “Network Cost-Sharing without Anonymity,” *ACM Transactions on Economics and Computation*, 4(2):Article 8, February 2016.
25. T. Roughgarden, “Intrinsic Robustness of the Price of Anarchy,” *Journal of the ACM*, 62(5):Article 32, November 2015.
26. K. Bhawalkar, J. Kleinberg, K. Lewi, T. Roughgarden, and A. Sharma, “Preventing Unraveling in Social Networks: The Anchored k -Core Problem,” *SIAM Journal on Discrete Mathematics*, 29(3):1452–1475, August 2015.
27. K. Kollias and T. Roughgarden, “Restoring Pure Equilibria to Weighted Congestion Games,” *ACM Transactions on Economics and Computation*, 3(4):Article 21, July 2015.
28. P. Dhangwatnotai, T. Roughgarden, and Q. Yan, “Revenue Maximization with a Single Sample,” *Games and Economic Behavior*, 91:318–333, May 2015.
29. T. Roughgarden, “The Price of Anarchy in Games of Incomplete Information,” *ACM Transactions on Economics and Computation*, 3(1):Article 6, March 2015.
30. T. Roughgarden and F. Schoppmann, “Local Smoothness and the Price of Anarchy in Atomic Splittable Congestion Games,” *Journal of Economic Theory*, 156:317–342, March 2015.
31. T. Roughgarden, “Approximately Optimal Mechanism Design: Motivation, Examples, and Lessons Learned,” *SIGecom Exchanges*, pages 4–20, December 2014.
32. K. Bhawalkar, M. Gairing, and T. Roughgarden, “Weighted Congestion Games: Price of Anarchy, Universal Worst-Case Examples, and Tightness,” *ACM Transactions on Economics and Computation*, 2(4):Article 14, October 2014.
33. J. R. Marden and T. Roughgarden, “Generalized Efficiency Bounds In Distributed Resource Allocation,” *IEEE Transactions on Automatic Control*, 59(3):571–584, March 2014.
34. S. Dughmi and T. Roughgarden, “Black-Box Randomized Reductions in Algorithmic Mechanism Design,” *SIAM Journal on Computing*, 43(1):312–336, February 2014.
35. S. Dughmi, T. Roughgarden, and M. Sundararajan, “Revenue Submodularity,” *Theory of Computing*, 8:95–119, December 2012.
36. A. Ghosh, T. Roughgarden, and M. Sundararajan, “Universally Utility-Maximizing Privacy Mechanisms,” *SIAM Journal on Computing*, 41(6):1673–1693, December 2012.
37. R. Cole, Y. Dodis, and T. Roughgarden, “Bottleneck Links, Variable Demand, and the Tragedy of the Commons,” *Networks*, 60(3):194–203, October 2012.
38. T. Roughgarden, “Intrinsic Robustness of the Price of Anarchy,” *Communications of the ACM*, 55(7):116–123, July 2012.
[Version of conference paper 62 for CACM “Research Highlights” column.]
39. H. Lin, T. Roughgarden, É. Tardos, and A. Walkover, “Stronger Bounds on Braess’s Paradox and the Maximum Latency of Selfish Routing,” *SIAM Journal on Discrete Mathematics*, 25(4):1667–1686, December 2011.
40. P. Dhangwatnotai, S. Dobzinski, S. Dughmi, and T. Roughgarden, “Truthful Approximation Schemes for Single-Parameter Agents,” *SIAM Journal on Computing*, 40(3):915–933, June 2011.
41. R. Krauthgamer and T. Roughgarden, “Metric Clustering via Consistent Labeling,” *Theory of Computing*, 7:49–74, March 2011.
42. G. Valiant and T. Roughgarden, “Braess’s Paradox in Large Random Graphs,” *Random Structures and Algorithms*, 37(4):495–515, December 2010.

43. D. Mosk-Aoyama, T. Roughgarden, and D. Shah, “Fully Distributed Algorithms for Convex Optimization,” *SIAM Journal on Optimization*, 20(6):3260–3279, October 2010.
44. T. Roughgarden, “Algorithmic Game Theory,” *Communications of the ACM*, 53(7):78–86, July 2010.
45. H. Chen, T. Roughgarden, and G. Valiant, “Designing Network Protocols for Good Equilibria,” *SIAM Journal on Computing*, 39(5):1799–1832, January 2010.
46. T. Roughgarden, “Computing Equilibria: A Computational Complexity Perspective,” *Economic Theory*, 42(1):193–236, January 2010.
47. A. Mehta, T. Roughgarden, and M. Sundararajan, “Beyond Moulin Mechanisms,” *Games and Economic Behavior*, 67(1):125–155, September 2009.
48. H. Chen and T. Roughgarden, “Network Design with Weighted Players,” *Theory of Computing Systems*, 45(2):302–324, August 2009.
49. T. Roughgarden and M. Sundararajan, “Quantifying Inefficiency in Cost-Sharing Mechanisms,” *Journal of the ACM*, 56(4), Article 23, June 2009.
50. E. Anshelevich, A. Dasgupta, J. Kleinberg, É. Tardos, T. Wexler, and T. Roughgarden, “The Price of Stability for Network Design with Fair Cost Allocation,” *SIAM Journal on Computing*, 38(4):1602–1623, November 2008.
51. C. H. Papadimitriou and T. Roughgarden, “Computing Correlated Equilibria in Multi-Player Games,” *Journal of the ACM*, 55(3), Article 14, July 2008.
52. M. Haviv and T. Roughgarden, “The Price of Anarchy in an Exponential Multi-Server,” *Operations Research Letters*, 35(4):421–426, July 2007.
53. A. Gupta, A. Kumar, M. Pál, and T. Roughgarden, “Approximation via Cost-Sharing: Simpler and Better Approximation Algorithms for Network Design,” *Journal of the ACM*, 54(3), Article 11, June 2007.
54. T. Roughgarden, “Selfish Routing and the Price of Anarchy,” *OPTIMA*, 74:1–15, May 2007.
55. T. Roughgarden, “On the Severity of Braess’s Paradox: Designing Networks for Selfish Users Is Hard,” *Journal of Computer and System Sciences*, 72(5):922–953, August 2006.
56. R. Cole, Y. Dodis, and T. Roughgarden, “How Much Can Taxes Help Selfish Routing?,” *Journal of Computer and System Sciences*, 72(3):444–467, May 2006.
57. M. Saha, G. Sanchez-Ante, T. Roughgarden, and J.C. Latombe, “Planning Tours of Robotic Arms Among Partitioned Goals,” *International Journal of Robotics Research*, 25(3):207–223, March 1 2006.
58. M. Enachescu, Y. Ganjali, A. Goel, N. McKeown, and T. Roughgarden, “Routers with Very Small Buffers,” *ACM Computer Communication Review*, 35(3):83–90, July 2005.
59. F. A. Chudak, T. Roughgarden, and D. P. Williamson, “Approximate k -MSTs and k -Steiner Trees via the Primal-Dual Method and Lagrangean Relaxation,” *Mathematical Programming*, 100(2):411–421, June 2004.
60. T. Roughgarden, “Stackelberg Scheduling Strategies,” *SIAM Journal on Computing*, 33(2):332–350, June 2004.
61. T. Roughgarden and É. Tardos, “Bounding the Inefficiency of Equilibria in Nonatomic Congestion Games,” *Games and Economic Behavior*, 47(2):389–403, May 2004.
62. T. Roughgarden, “The Price of Anarchy Is Independent of the Network Topology,” *Journal of Computer and System Sciences*, 67(2):341–364, September 2003.

63. A. J. Hoffman, K. Jenkins, and T. Roughgarden, “On A Game in Directed Graphs,” *Information Processing Letters*, 83(1):13–16, 16 July 2002.
64. T. Roughgarden and É. Tardos, “How Bad Is Selfish Routing?,” *Journal of the ACM*, 49(2):236–259, March 2002.

Publications in Refereed Conference Proceedings

1. B. Plaut and T. Roughgarden, “The Communication Complexity of Discrete Fair Division,” *29th Annual Symposium on Discrete Algorithms (SODA)*, pages 2014–2033, 2019.
2. T. Ezra, M. Feldman, T. Roughgarden, and W. Suksompong, “Pricing Multi-Unit Markets,” *14th Conference on Web and Internet Economics (WINE)*, pages 140–153, 2018.
3. R. Niazadeh, T. Roughgarden, and J. R. Wang, “Optimal Algorithms for Continuous Non-monotone Submodular and DR-Submodular Maximization,” *31st Annual Conference on Neural Information Processing Systems (NIPS)*, pages 9617–9627, 2018.
4. T. Roughgarden and J. Wang, “An Optimal Learning Algorithm for Online Unconstrained Submodular Maximization,” *31st Annual Conference on Learning Theory (COLT)*, pages 1307–1325, 2018.
5. J. Fox, T. Roughgarden, C. Seshadhri, F. Wei, and N. Wein, “Finding Cliques in Social Networks: A New Distribution-Free Model,” *46th International Symposium on Automata, Languages, and Programming (ICALP)*, Article 55, 2018.
6. B. Plaut and T. Roughgarden, “Almost Envy-Freeness with General Valuations,” *28th Annual Symposium on Discrete Algorithms (SODA)*, pages 2584–2603, 2018.
7. T. Roughgarden and O. Schrijvers, “Online Prediction with Selfish Experts,” *30th Annual Conference on Neural Information Processing Systems (NIPS)*, pages 1300–1310, 2017.
8. V. Chatziafratis, T. Roughgarden, and J. Vondrak, “Stability and Recovery for Independence Systems,” *25th Annual European Symposium on Algorithms (ESA)*, 2017.
9. T. Roughgarden, I. Talgam-Cohen, and J. Vondrak, “When Are Welfare Guarantees Robust?,” *20th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)*, pages 1–22, 2017.
10. R. Colini-Baldeschi, P. W. Goldberg, B. de Keijzer, S. Leonardi, T. Roughgarden, and S. Turchetta, “Approximately Efficient Two-Sided Combinatorial Auctions,” *18th Annual ACM Conference on Economics and Computation (EC)*, pages 591–608, 2017.
11. V. Gkatzelis, E. Markakis, and T. Roughgarden, “Deferred-Acceptance Auctions for Multiple Levels of Service,” *18th Annual ACM Conference on Economics and Computation (EC)*, pages 21–38, 2017.
12. T. Roughgarden and O. Weinstein, “On the Communication Complexity of Approximate Fixed Points,” *57th Annual Symposium on Foundations of Computer Science (FOCS)*, pages 229–238, 2016.
13. T. Roughgarden and J. R. Wang, “On the Complexity of the k -Means Method,” *24th Annual European Symposium on Algorithms (ESA)*, pages 78:1–78:14, 2016.
14. T. Roughgarden and J. R. Wang, “Minimizing Regret with Multiple Reserves,” *17th Annual ACM Conference on Economics and Computation (EC)*, pages 601–616, 2016.
15. T. Roughgarden and O. Schrijvers, “Ironing in the Dark,” *17th Annual ACM Conference on Economics and Computation (EC)*, pages 1–18, 2016.
16. T. Roughgarden, S. Vassilvitskii, and J. R. Wang, “Shuffles and Circuits (On Lower Bounds for Modern Parallel Computation),” *28th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, pages 1–12, 2016. **Best Paper Award.**

17. J. Morgenstern and T. Roughgarden, “Learning Simple Auctions,” *29th Annual Conference on Learning Theory (COLT)*, pages 1298–1318, 2016.
18. M. Feldman, N. Immorlica, B. Lucier, T. Roughgarden, and V. Syrgkanis, “The Price of Anarchy in Large Games,” *49th Annual ACM Symposium on Theory of Computing (STOC)*, pages 963–976, 2016.
19. O. Schrijvers, J. Bonneau, D. Boneh, and T. Roughgarden, “Incentive Compatibility of Bitcoin Mining Pool Reward Functions,” *20th International Conference on Financial Cryptography (FC)*, 2016.
20. R. Gupta and T. Roughgarden, “A PAC Approach to Application-Specific Algorithm Selection,” *7th Conference on Innovations in Theoretical Computer Science (ITCS)*, pages 123–134, 2016.
21. J. Morgenstern and T. Roughgarden, “The Pseudo-Dimension of Near-Optimal Auctions,” *28th Annual Conference on Neural Information Processing Systems (NIPS)*, pages 136–144, 2015.
22. A. Globerson, T. Roughgarden, D. Sontag, and C. Yildirim, “How Hard Is Inference for Structured Prediction?,” *32nd International Conference on Machine Learning (ICML)*, pages 2181–2190, 2015.
23. P. Gopalan, N. Nisan, and T. Roughgarden, “Public Projects, Boolean Functions, and the Borders of Border’s Theorem,” *16th Annual ACM Conference on Economics and Computation (EC)*, page 395, 2015.
24. Z. Huang, Y. Mansour, and T. Roughgarden, “Making the Most of Your Samples,” *16th Annual ACM Conference on Economics and Computation (EC)*, pages 45–60, 2015.
25. T. Roughgarden and I. Talgam-Cohen, “Why Prices Need Algorithms,” *16th Annual ACM Conference on Economics and Computation (EC)*, pages 19–36, 2015. **(Talgam-Cohen was awarded the Best Student Paper Prize for this paper.)**
26. V. Gkatzelis, K. Kollias, and T. Roughgarden, “Optimal Cost-Sharing in Weighted Congestion Games,” *10th Conference on Web and Internet Economics (WINE)*, pages 72–88, 2014.
27. T. Roughgarden, “Barriers to Near-Optimal Equilibria,” *55th Annual Symposium on Foundations of Computer Science (FOCS)*, pages 71–80, 2014.
28. T. Roughgarden and O. Schrijvers, “Network Cost-Sharing without Anonymity,” *7th International Symposium on Algorithmic Game Theory (SAGT)*, pages 134–145, 2014.
29. J. Hsu, A. Roth, T. Roughgarden, and J. Ullman, “Privately Solving Linear Programs,” *42nd International Symposium on Automata, Languages, and Programming (ICALP)*, pages 612–624, 2014.
30. P. D. Dütting, T. Roughgarden, and I. Talgam-Cohen, “Incentives and Greed in Double Auctions,” *15th Annual ACM Conference on Electronic Commerce (EC)*, pages 241–258, 2014.
31. P. D. Dütting, V. Gkatzelis, and T. Roughgarden, “The Power of Deferred Heuristic Auctions,” *15th Annual ACM Conference on Electronic Commerce (EC)*, pages 187–204, 2014.
32. R. Cole and T. Roughgarden, “The Sample Complexity of Revenue Maximization,” *46th Annual ACM Symposium on Theory of Computing (STOC)*, pages 243–252, 2014.
33. J. Hsu, Z. Huang, A. Roth, T. Roughgarden, and Z. S. Wu, “Private Matchings and Allocations,” *46th Annual ACM Symposium on Theory of Computing (STOC)*, pages 21–30, 2014.
34. R. Gupta, T. Roughgarden, and C. Seshadhri, “Decompositions of Triangle-Dense Graphs,” *5th Conference on Innovations in Theoretical Computer Science (ITCS)*, pages 471–482, 2014.
35. M. Kearns and T. Roughgarden, “Marginals-to-Models Reducibility,” *26th Annual Conference on Neural Information Processing Systems (NIPS)*, pages 1043–1051, 2013.
36. T. Roughgarden and I. Talgam-Cohen, “Optimal and Near-Optimal Mechanism Design with Interdependent Values,” *14th Annual ACM Conference on Electronic Commerce (EC)*, pages 767–784, 2013.

37. S. Bhattacharya, E. Koutsoupias, J. Kulkarni, S. Leonardi, T. Roughgarden, and X. Xu, “Near-Optimal Multi-Unit Auctions with Ordered Bidders,” *14th Annual ACM Conference on Electronic Commerce (EC)*, pages 91–102, 2013.
38. K. Bhawalkar and T. Roughgarden, “Simultaneous Single-Item Auctions,” *8th International Workshop on Internet & Network Economics (WINE)*, pages 338–350, 2012.
39. K. Bhawalkar, J. Kleinberg, K. Lewi, T. Roughgarden, and A. Sharma, “Preventing Unraveling in Social Networks: The Anchored k -Core Problem,” *40th International Symposium on Automata, Languages, and Programming (ICALP)*, pages 440–451, 2012.
40. T. Roughgarden and É. Tardos, “Do Externalities Degrade GSP’s Efficiency?,” *8th Ad Auctions Workshop*, 2012.
41. T. Roughgarden, “The Price of Anarchy in Games of Incomplete Information,” *13th Annual ACM Conference on Electronic Commerce (EC)*, pages 862–879, 2012.
42. T. Roughgarden, I. Talgam-Cohen, and Q. Yan, “Supply-Limiting Mechanisms,” *13th Annual ACM Conference on Electronic Commerce (EC)*, pages 844–861, 2012.
43. I. Abraham, M. Babaioff, S. Dughmi, and T. Roughgarden, “Combinatorial Auctions with Restricted Complements,” *13th Annual ACM Conference on Electronic Commerce (EC)*, pages 3–16, 2012.
44. S. Leonardi and T. Roughgarden, “Prior-Free Auctions with Ordered Bidders,” *44th Annual ACM Symposium on Theory of Computing (STOC)*, pages 427–434, 2012.
45. A. Badanidiyuru, S. Dobzinski, H. Fu, R. D. Kleinberg, N. Nisan, and T. Roughgarden, “Sketching Valuation Functions,” *22nd Annual Symposium on Discrete Algorithms (SODA)*, pages 1025–1035, 2012.
46. R. Johari, U. Nadav, and T. Roughgarden, “Uncoupled Potentials for Proportional Allocation Markets,” *50th IEEE Conference on Decision and Control (CDC)*, pages 4479–4484, 2011.
47. R. Kumar, J. O. Talton, S. Ahmad, T. Roughgarden, and S. R. Klemmer, “Flexible Tree Matching,” *22nd International Joint Conference on Artificial Intelligence (IJCAI)*, pages 2674–2679, 2011.
48. K. Kollias and T. Roughgarden, “Restoring Pure Equilibria to Weighted Congestion Games,” *38th International Symposium on Automata, Languages, and Programming (ICALP)*, pages 539–551, 2011.
49. S. Dughmi, T. Roughgarden, and Q. Yan, “From Convex Optimization to Randomized Mechanisms: Toward Optimal Combinatorial Auctions with Submodular Bidders,” *43rd Annual ACM Symposium on Theory of Computing (STOC)*, pages 149–158, 2011.
50. K. Bhawalkar and T. Roughgarden, “Welfare Guarantees for Combinatorial Auctions with Item Bidding,” *21st Annual Symposium on Discrete Algorithms (SODA)*, pages 700–709, 2011.
51. T. Roughgarden and F. Schoppmann, “Local Smoothness and the Price of Anarchy in Atomic Splittable Congestion Games,” *21st Annual Symposium on Discrete Algorithms (SODA)*, pages 255–267, 2011.
52. U. Nadav and T. Roughgarden, “The Limits of Smoothness: A Primal-Dual Framework for Price of Anarchy Bounds,” *6th International Workshop on Internet & Network Economics (WINE)*, pages 319–326, 2010.
53. J. R. Marden and T. Roughgarden, “Generalized Efficiency Bounds In Distributed Resource Allocation,” *49th IEEE Conference on Decision and Control (CDC)*, pages 2233–2238, 2010.
54. S. Dughmi and T. Roughgarden, “Black-Box Randomized Reductions in Algorithmic Mechanism Design,” *51st Annual Symposium on Foundations of Computer Science (FOCS)*, pages 775–784, 2010.

55. K. Bhawalkar, M. Gairing, and T. Roughgarden, “Weighted Congestion Games: Price of Anarchy, Universal Worst-Case Examples, and Tightness,” *18th Annual European Symposium on Algorithms (ESA)*, pages 17–27, 2010.
56. P. Dhangwatnotai, T. Roughgarden, and Q. Yan, “Revenue Maximization with a Single Sample,” *11th Annual ACM Conference on Electronic Commerce (EC)*, pages 129–138, 2010.
57. M. Babaioff and T. Roughgarden, “Equilibrium Efficiency and Price Complexity in Sponsored Search Auctions,” Sixth Workshop on Ad Auctions, 2010.
58. A. Roth and T. Roughgarden, “Interactive Privacy via the Median Mechanism,” *42nd Annual ACM Symposium on Theory of Computing (STOC)*, pages 765–774, 2010.
59. D. Mosk-Aoyama and T. Roughgarden, “Worst-Case Efficiency Analysis of Queueing Disciplines,” *36th International Symposium on Automata, Languages, and Programming (ICALP)*, pages 546–557, 2009.
60. S. Dughmi, T. Roughgarden, and M. Sundararajan, “Revenue Submodularity,” *10th Annual ACM Conference on Electronic Commerce (EC)*, 2009, pages 243–252.
61. J. D. Hartline and T. Roughgarden, “Simple versus Optimal Auctions,” *10th Annual ACM Conference on Electronic Commerce (EC)*, pages 225–234, 2009.
62. T. Roughgarden, “Intrinsic Robustness of the Price of Anarchy,” *41st Annual ACM Symposium on Theory of Computing (STOC)*, pages 513–522, 2009.
63. A. Ghosh, T. Roughgarden, and M. Sundararajan, “Universally Utility-Maximizing Privacy Mechanisms,” *41st Annual ACM Symposium on Theory of Computing (STOC)*, pages 351–359, 2009.
64. A. Motskin, P. Skraba, T. Roughgarden, and L. Guibas, “Lightweight Coloring and Desynchronization for Networks,” *28th Annual INFOCOM Conference*, pages 2383–2391, 2009.
65. P. Dhangwatnotai, S. Dobzinski, S. Dughmi, and T. Roughgarden, “Truthful Approximation Schemes for Single-Parameter Agents,” *49th Annual Symposium on Foundations of Computer Science (FOCS)*, pages 15–24, 2008.
66. T. Roughgarden, “An Algorithmic Game Theory Primer,” *5th IFIP International Conference on Theoretical Computer Science*, pages 21–42, 2008. [Invited survey.]
67. J. D. Hartline and T. Roughgarden, “Money Burning and Optimal Mechanism Design,” *40th Annual ACM Symposium on Theory of Computing (STOC)*, pages 75–84, 2008.
68. S. Dobzinski, A. Mehta, T. Roughgarden, and M. Sundararajan, “Is Shapley Cost Sharing Optimal?,” *First International Symposium on Algorithmic Game Theory (SAGT)*, pages 327–336, 2008.
69. S. Chawla and T. Roughgarden, “Bertrand Competition in Networks,” *First International Symposium on Algorithmic Game Theory (SAGT)*, pages 70–82, 2008.
70. H. Chen, T. Roughgarden, and G. Valiant, “Designing Networks with Good Equilibria,” *19th Annual Symposium on Discrete Algorithms (SODA)*, pages 854–863, 2008.
71. R. Krauthgamer and T. Roughgarden, “Metric Clustering via Consistent Labeling,” *19th Annual Symposium on Discrete Algorithms (SODA)*, pages 809–818, 2008.
72. D. Mosk-Aoyama, T. Roughgarden, and D. Shah, “Fully Distributed Algorithms for Convex Optimization” *21st International Symposium on Distributed Computing (DISC)*, pages 492–493, 2007.
73. T. Roughgarden and M. Sundararajan, “Optimal Efficiency Guarantees for Network Design Mechanisms,” *Twelfth Conference on Integer Programming and Combinatorial Optimization (IPCO)*, pages 469–483, 2007.

74. A. Mehta, T. Roughgarden, and M. Sundararajan, “Beyond Moulin Mechanisms,” *8th Annual ACM Conference on Electronic Commerce (EC)*, pages 1–10, 2007.
75. S. Chawla, T. Roughgarden, and M. Sundararajan, “Optimal Cost-Sharing Mechanisms for Network Design,” *2nd International Workshop on Internet & Network Economics (WINE)*, pages 112–123, 2006.
76. S. Chawla and T. Roughgarden, “Single-Source Stochastic Routing,” *9th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)*, pages 82–94, 2006.
77. T. Roughgarden, “Potential Functions and the Inefficiency of Equilibria,” *Proceedings of the International Congress of Mathematicians (ICM)*, Volume III, pages 1071–1094, 2006. [Invited survey.]
78. H. Chen and T. Roughgarden, “Network Design with Weighted Players,” *18th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, pages 28–37, 2006.
79. G. Valiant and T. Roughgarden, “Braess’s Paradox in Large Random Graphs,” *7th Annual ACM Conference on Electronic Commerce (EC)*, pages 296–305, 2006.
80. T. Roughgarden and M. Sundararajan, “New Trade-Offs in Cost-Sharing Mechanisms,” *38th Annual ACM Symposium on Theory of Computing (STOC)*, pages 79–88, 2006.
81. M. Enachescu, Y. Ganjali, A. Goel, N. McKeown, and T. Roughgarden, “Routers with Very Small Buffers,” *25th Annual INFOCOM Conference*, 2006.
82. R. Cole, Y. Dodis, and T. Roughgarden, “Bottleneck Links, Variable Demand, and the Tragedy of the Commons,” *17th Annual Symposium on Discrete Algorithms (SODA)*, pages 668–677, 2006.
83. H. Lin, T. Roughgarden, É. Tardos, and A. Walkover, “Braess’s Paradox, Fibonacci Numbers, and Exponential Inapproximability,” *32nd International Symposium on Automata, Languages, and Programming (ICALP)*, pages 497–512, 2005.
84. T. Roughgarden, “Selfish Routing with Atomic Players,” *16th Annual Symposium on Discrete Algorithms (SODA)*, pages 1184–1185, 2005.
85. C. H. Papadimitriou and T. Roughgarden, “Computing Equilibria in Multi-Player Games,” *16th Annual Symposium on Discrete Algorithms (SODA)*, pages 82–91, 2005.
86. E. Anshelevich, A. Dasgupta, J. Kleinberg, É. Tardos, T. Wexler, and T. Roughgarden, “The Price of Stability for Network Design with Fair Cost Allocation,” *45th Annual Symposium on Foundations of Computer Science (FOCS)*, pages 295–304, 2004.
87. H. Lin, T. Roughgarden, and É. Tardos, “A Stronger Bound on Braess’s Paradox,” *15th Annual Symposium on Discrete Algorithms (SODA)*, pages 333–334, 2004.
88. T. Roughgarden, “The Maximum Latency of Selfish Routing,” *15th Annual Symposium on Discrete Algorithms (SODA)*, pages 973–974, 2004.
89. A. Gupta, A. Kumar, M. Pál, and T. Roughgarden, “Approximation via Cost-Sharing: A Simple Approximation Algorithm for the Multicommodity Rent-or-Buy Problem,” *44th Annual Symposium on Foundations of Computer Science (FOCS)*, pages 606–615, 2003.
90. R. Cole, Y. Dodis, and T. Roughgarden, “Pricing Network Edges for Heterogeneous Selfish Users,” *35th Annual ACM Symposium on Theory of Computing (STOC)*, pages 521–530, 2003.
91. A. Gupta, A. Kumar, and T. Roughgarden, “Simpler and Better Approximation Algorithms for Network Design,” *35th Annual ACM Symposium on Theory of Computing (STOC)*, pages 365–372, 2003.
92. R. Cole, Y. Dodis, and T. Roughgarden, “How Much Can Taxes Help Selfish Routing?,” *4th Annual ACM Conference on Electronic Commerce (EC)*, pages 98–107, 2003.

93. A. Kumar, A. Gupta, and T. Roughgarden, “A Constant-Factor Approximation Algorithm for the Multicommodity Rent-or-Buy Problem,” *43rd Annual Symposium on Foundations of Computer Science (FOCS)*, pages 333–342, 2002.
94. T. Roughgarden, “The Price of Anarchy Is Independent of the Network Topology,” *34th Annual ACM Symposium on Theory of Computing (STOC)*, pages 428–437, 2002.
95. T. Roughgarden, “How Unfair Is Optimal Routing?,” *13th Annual Symposium on Discrete Algorithms (SODA)*, pages 203–204, 2002.
96. T. Roughgarden, “Designing Networks for Selfish Users Is Hard,” *42nd Annual Symposium on Foundations of Computer Science (FOCS)*, pages 472–481, 2001.
97. T. Roughgarden, “Stackelberg Scheduling Strategies,” *33rd Annual ACM Symposium on Theory of Computing (STOC)*, pages 104–113, 2001.
98. F. A. Chudak, T. Roughgarden, and D. P. Williamson, “Approximate k -MSTs and k -Steiner Trees via the Primal-Dual Method and Lagrangean Relaxation,” *Eighth Conference on Integer Programming and Combinatorial Optimization (IPCO)*, pages 60–70, 2001.
99. T. Roughgarden and É. Tardos, “How Bad Is Selfish Routing?,” *41st Annual Symposium on Foundations of Computer Science (FOCS)*, pages 93–102, 2000.

Plenary and Keynote Lectures

1. “How Does Computer Science Inform Modern Auction Design?,” keynote lecture at the 26th Annual European Symposium on Algorithms (ESA), Helsinki, Finland, August 21, 2018.
2. “The Surprising Power of Reserve Prices,” keynote lecture at the AdKDD & TargetAd Workshop at the 24rd ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), London, England, August 20, 2018.
3. “Learning Near-Optimal Auctions: Statistical, Algorithmic, and Strategic Challenges,” keynote lecture at the COST Workshop on Algorithmic Game Theory, Rome, Italy, March 16, 2018.
4. “Learning Near-Optimal Auctions: Statistical, Algorithmic, and Strategic Challenges,” keynote lecture at the 1st UK Workshop on Algorithmic Game Theory and Mechanism Design, Oxford, England, March 6, 2018.
5. “Learning Near-Optimal Auctions: Statistical, Algorithmic, and Strategic Challenges,” keynote lecture at the 13th International Workshop on Internet & Network Economics (WINE), Bangalore, India, December 19, 2017.
6. “Why Prices Need Algorithms,” invited plenary talk, 49th Annual ACM Symposium on Theory of Computing (STOC), Montreal, Canada, June 20, 2017.
7. “Beyond Worst-Case Analysis,” keynote lecture at the 2nd Conference on Highlights of Algorithms (HALG), Berlin, Germany, June 11, 2017.
8. “Two Applications of Learning Theory to Algorithmic Game Theory,” keynote lecture at the 11th Annual Machine Learning Symposium, New York Academy of Science, New York, NY, March 3, 2017.
9. “Application-Specific Algorithm Selection,” Open Lecture, Simons Institute for the Theory of Computing, Berkeley, CA, October 24, 2016.
10. “Intrinsic Robustness of the Price of Anarchy,” Kalai Prize Lecture, 5th World Congress of the Game Theory Society, Maastricht, Netherlands, July 27, 2016.

11. “New Connections Between Complexity Theory and Algorithmic Game Theory,” keynote lecture at the 8th International Symposium on Algorithmic Game Theory (SAGT), Saarbrücken, Germany, September 30, 2015.
12. “When Do Simple Mechanisms Suffice?,” keynote lecture at the 26th International Conference on Game Theory at Stony Brook, Stony Brook, NY, July 22, 2015.
13. “Two Applications of Learning Theory to Algorithmic Game Theory,” keynote lecture at the Conference on Learning Theory (COLT), Paris, France, July 5, 2015.
14. “Approximately Optimal Mechanism Design: Motivation, Examples, and Lessons Learned,” keynote lecture at the Sixth Annual Southern California Symposium on Network Economics and Game Theory, Caltech, Pasadena, CA, November 21, 2014.
15. “Quantifying Inefficiency in Games and Mechanisms,” Social Choice and Welfare Prize Lecture, Boston College, MA, June 21, 2014.
16. “Approximately Optimal Mechanism Design: Motivation, Examples, and Lessons Learned,” keynote lecture in the Special Joint EC-NBER-Decentralization Session, Palo Alto, CA, June 9, 2014.
17. “Extension Theorems for the Price of Anarchy,” keynote lecture at the Summer Workshop of the Centre for Mathematical Social Sciences, Auckland, New Zealand, December 10, 2013.
18. “Prior-Independent Auctions,” keynote lecture at the Workshop on Algorithmic Game Theory, Singapore, January 14, 2013.
19. “Quantifying the Inefficiency of Equilibria,” semi-plenary lecture at the Econometric Society Australasian Meeting (ESAM), Melbourne, Victoria, Australia, July 6, 2012.
20. “Simple and Near-Optimal Auctions,” semi-plenary lecture at the Society for the Advancement of Economic Theory Conference on Current Trends in Economics (SAET), Brisbane, Queensland, Australia, June 29, 2012.
21. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” keynote lecture at the Conference on Mathematical Aspects of Game Theory and Applications, Toulouse, France, September 12, 2011.
22. “How To Think About Algorithmic Game Theory,” keynote lecture at the CFEM Workshop on New Trends in Mechanism Design, Copenhagen, Denmark, September 7, 2011.
23. “Approximation in Algorithmic Game Theory,” keynote lecture at the Workshop on Approximation Algorithms: The Last Decade and the Next, Princeton, NJ, June 17, 2011.
24. “Potential Functions and the Inefficiency of Equilibria,” keynote lecture at the Bay Area Discrete Math Day, Berkeley, CA, October 16, 2010.
25. “Robust Price of Anarchy Bounds via Smoothness Arguments,” keynote lecture at the Workshop on Advances in Algorithmic Game Theory, CWI Amsterdam, Netherlands, September 2, 2010.
26. “Intrinsic Robustness of the Price of Anarchy,” semi-plenary lecture at the 36th International Symposium on Automata, Languages, and Programming (ICALP), special session honoring Christos Papadimitriou, Rhodes, Greece, July 8, 2009.
27. “Scheduling and Algorithmic Game Theory,” keynote lecture at the 9th Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP), Kerkrade, Netherlands, July 2, 2009.
28. “Intrinsic Robustness of the Price of Anarchy,” keynote lecture at the Bellairs Workshop on Algorithmic Game Theory, Bellairs Research Institute, Barbados, March 25, 2009.
29. “Algorithmic Game Theory: A Brief, Biased Introduction,” keynote lecture at the 5th IFIP International Conference on Theoretical Computer Science, Milan, Italy, September 9, 2008.

30. “Potentials and Approximation,” Shapley Lecture, Third World Congress of the Game Theory Society, Evanston, IL, July 17, 2008.
31. “From Bayesian Auctions to Approximation Guarantees,” keynote lecture at the Fourth Workshop on Ad Auctions, Chicago, IL, July 8, 2008.
32. “Designing Network Protocols with Good Equilibria,” keynote lecture at the Third Workshop on Future Directions in Distributed Computing, Bertinoro, Italy, June 6, 2007.
33. “Quantifying Inefficiency in Mechanism and Protocol Design,” keynote lecture at the DIMAP Workshop on Algorithmic Game Theory, University of Warwick, Coventry, England, March 27, 2007.
34. “Potential Functions and the Inefficiency of Equilibria in Network Games,” two keynote lectures at the 32nd Conference on the Mathematics of Operations Research, Lunteren, The Netherlands, January 16 and 17, 2007.
35. “The Price of Anarchy in Network Games,” keynote lecture at the DIMACS Workshop on Large-Scale Games, Evanston, IL, April 19, 2005.
36. “Selfish Routing and the Price of Anarchy,” keynote lecture at the 14th International Conference on Game Theory at Stony Brook, Stony Brook, NY, July 23, 2003.
37. “Selfish Routing and the Price of Anarchy,” keynote lecture at the Workshop on Computer Communication and Networks, Isaac Newton Institute for Mathematical Sciences, Cambridge, England, December 19, 2002.

Public Lectures

1. “How Does Computer Science Inform Modern Auction Design?,” Pekeris Lecture, Weizmann Institute, Rehovot, Israel, February 5, 2019.
2. “How Does Computer Science Inform Modern Auction Design?,” Public Lecture, Simons Foundation, New York, NY, April 18, 2018.
3. “Game Theory Through the Computational Lens,” Lecture Series in Computer Science, Collège de France, Paris, France, January 23, 2018.
4. “Game Theory Through the Computational Lens,” Public Lecture, London School of Economics, London, England, November 30, 2017.
5. “Equilibria, Computation, and Compromises,” Workshop on Lens of Computation on the Sciences, Institute for Advanced Studies, Princeton, NJ, November 22, 2014.
6. “Quantifying the Inefficiency of Game-Theoretic Equilibria,” Lecture Series in Computer Science, Collège de France, Paris, France, November 22, 2012.

Invited Tutorials, Summer Schools, Etc.

1. “Data-Driven Optimal Auction Theory,” Gaspard Monge Programme for Optimisation and Operations Research lecture series, École Polytechnique, Palaiseau, France, September 14–21, 2017.
2. “When Are Equilibria of Simple Auctions Near-Optimal?,” 28th Jerusalem School in Economic Theory, Hebrew University, Jerusalem, July 5–6, 2017.
3. “Complexity Theory in Game Theory and Economics,” Barbados Workshop on Computational Complexity (featured speaker), Bellairs Research Institute, Barbados, February 19–24, 2017.
4. “Beyond Worst-Case Analysis,” Simons Institute Algorithms and Uncertainty Boot Camp, Berkeley, CA, August 25, 2016.

5. “Near-Optimal Equilibria,” Simons Institute Economics and Computation Boot Camp, Berkeley, CA, August 24 and 25, 2015.
6. “Approximation and Algorithmic Game Theory,” Simons Symposium on Approximation Algorithms for NP-Hard Problems, Rio Grande, PR, February 23, 2015.
7. “The Price of Anarchy: Intrinsic Robustness and Some Barriers,” 6th Annual Winedale Workshop, Winedale, TX, October 17, 2014.
8. “Short Course on Algorithmic Game Theory,” Gran Sasso Science Institute, L’Aquila, Italy, March 17–20, 2014.
9. “Algorithmic Game Theory,” Lipari School on Computational Complex Systems, Lipari, Italy, July 11–15, 2011.
10. “How To Think About Algorithmic Game Theory,” 51st Annual Symposium on Foundations of Computer Science (FOCS), Las Vegas, NV, October 23, 2010.
11. “Bayesian and Worst-Case Revenue-Maximizing Auctions,” 5th International Workshop on Internet & Network Economics (WINE), Rome, Italy, December 14, 2009.
12. “Approximation in Algorithmic Game Theory,” 10th Max Planck Advanced Course on the Foundations of Computer Science (ADFOCS), Saarbrücken, Germany, September 14, 16, and 18, 2009.
13. “The Inefficiency of Equilibria in Network Games,” Summer School on Game Theory in Computer Science, Aarhus, Denmark, June 27 and 28, 2006.
14. “The Price of Anarchy,” Tenth Conference on Integer Programming and Combinatorial Optimization (IPCO), New York, NY, June 8, 2004.
15. “The Price of Anarchy,” 5th Annual ACM Conference on Electronic Commerce (EC), New York, NY, May 17, 2004.

Invited Colloquia and Seminars

1. “Distribution-Free Models of Social and Information Networks,” Computer Science Colloquium, Technion, Haifa, Israel, February 7, 2019.
2. “How Does Computer Science Inform Modern Auction Design?,” Distinguished Lecture, SUNY Stony Brook, NY, October 26, 2018.
3. “How Does Computer Science Inform Modern Auction Design?,” SCS Distinguished Lecture, Georgia Tech, Atlanta, GA, October 5, 2018.
4. “How Does Computer Science Inform Modern Auction Design?,” Beer & Tech Seminar, Criteo, Paris, France, June 6, 2018.
5. “Data-Driven Optimal Auction Theory,” Micro Workshop, Adam Smith Business School, Universität Bonn, Germany, May 30, 2018.
6. “How Does Computer Science Inform Modern Auction Design?,” Game Theory Seminar, Corvinus University of Budapest, Hungary, May 29, 2018.
7. “How Does Computer Science Inform Modern Auction Design?,” Computer Science Department Colloquium, University of Liverpool, England, May 24, 2018.
8. “Data-Driven Optimal Auction Theory,” Microtheory Research Seminar, Adam Smith Business School, University of Glasgow, Scotland, May 22, 2018.
9. “Distribution-Free Models of Social and Information Networks,” Theory Seminar, University of Oxford, England, April 26, 2018.

10. “How Does Computer Science Inform Modern Auction Design?,” Operations Research & Financial Engineering Department Colloquium, Princeton University, Princeton, NJ, April 17, 2018.
11. “How Does Computer Science Inform Modern Auction Design?,” Computer Science Department Colloquium, New York University, New York, NY, April 2, 2018.
12. “Distribution-Free Models of Social and Information Networks,” Math Colloquium, Queen Mary University of London, England, March 12, 2018.
13. “How Does Computer Science Inform Modern Auction Design?,” Computer Science Department Colloquium, University of Warwick, Coventry, England, February 14, 2018.
14. “Game Theory Through the Computational Lens,” Colloquium, Sapienza School for Advanced Studies, Rome, Italy December 14, 2017.
15. “Data-Driven Optimal Auction Theory,” Economics Seminar, LUISS Guido Carli, Rome, Italy, December 5, 2017.
16. “Distribution-Free Models of Social and Information Networks,” Seminar on Combinatorics, Games, and Optimisation, London School of Economics, London, England, November 16, 2017.
17. “Distribution-Free Models of Social and Information Networks,” IC Colloquium, EPFL, Lausanne, Switzerland, November 9, 2017.
18. “How Does Computer Science Inform Modern Auction Design?,” Distinguished Lecture Series, Columbia University, New York, NY, November 1, 2017.
19. “How Does Computer Science Inform Modern Auction Design?,” Colloquium, Technische Universität Berlin, Berlin, Germany, October 23, 2017.
20. “How Does Computer Science Inform Modern Auction Design?,” Distinguished Lecture in Computer Science, University of Illinois, Urbana-Champaign, IL, September 11, 2017.
21. “Data-Driven Optimal Auction Theory,” Game Theory Seminar, Technion, Haifa, Israel, July 9, 2017.
22. “How Hard Is Inference for Structured Prediction?,” Northwestern University Quarterly Theory Workshop, Evanston, IL, May 24, 2017.
23. “How Does Computer Science Inform Modern Auction Design?,” Computer Science Theory Seminar, University of Washington, Seattle, WA, May 16, 2017.
24. “How Hard Is Inference for Structured Prediction?,” Theory Seminar, Microsoft Research, Redmond, WA, May 15, 2017.
25. “Data-Driven Optimal Auction Theory,” Economics Department Seminar, Pennsylvania State University, State College, PA, April 7, 2017.
26. “How Does Computer Science Inform Modern Auction Design?,” Computer Science Theory Seminar, Pennsylvania State University, State College, PA, April 6, 2017.
27. “How Does Computer Science Inform Modern Auction Design?,” Theory of Computation Colloquium, MIT, Cambridge, MA, November 29, 2016.
28. “Data-Driven Optimal Auction Theory,” Economic Theory Seminar, Department of Economics, Stanford University, CA, October 19, 2016.
29. “Data-Driven Optimal Auction Theory,” Market Design Seminar, Columbia Business School, New York, NY, September 30, 2016.
30. “How Does Computer Science Inform Modern Auction Design?,” IBM Accelerated Discovery Lab Distinguished Speaker Forum, IBM Almaden, San Jose, CA, August 9, 2016.

31. “Learning Near-Optimal Auctions and Heuristics,” Joint Algorithms-Machine Learning Seminar, Google, Inc., Mountain View, CA, May 24, 2016.
32. “How Does Computer Science Inform Modern Auction Design?,” CCDC Seminar, University of California at Santa Barbara, Santa Barbara, CA, May 13, 2016.
33. “Learning Near-Optimal Auctions and Heuristics,” Machine Learning Colloquium, Carnegie Mellon University, Pittsburgh, PA, April 28, 2016.
34. “Learning Near-Optimal Auctions and Heuristics,” Northwestern University Quarterly Theory Workshop, Evanston, IL, March 7, 2016.
35. “The Sample Complexity of Near-Optimal Auctions and Heuristics,” Joint Algorithms-Machine Learning Seminar, Google, Inc., New York, NY, January 15, 2016.
36. “How Does Computer Science Inform Modern Auction Design?,” Seminar on Algorithms, Data Structures, and Applications, ETH Zurich, Zurich, Switzerland, November 24, 2015.
37. “How Does Computer Science Inform Modern Auction Design?,” IC Colloquium, EPFL, Lausanne, Switzerland, November 23, 2015.
38. “New Connections Between Complexity Theory and Algorithmic Game Theory,” TCS+ Seminar (online), November 11, 2015.
39. “New Connections Between Complexity Theory and Algorithmic Game Theory,” Theory Seminar, Columbia University, New York, NY, September 25, 2015.
40. “Barriers to Near-Optimal Equilibria,” Theory Lunch Seminar, UC Berkeley, Berkeley, CA, March 4, 2015.
41. “Barriers to Near-Optimal Equilibria,” Theory Seminar, IBM Almaden, San Jose, CA, October 14, 2014.
42. “Barriers to Near-Optimal Equilibria,” Theory Seminar, Microsoft Research, Mountain View, CA, September 17, 2014.
43. “Approximately Optimal Mechanism Design: Motivation, Examples, and Lessons Learned,” International Seminar Series on Economics with Policy, Hungarian Academy of Sciences, Budapest, Hungary, September 11, 2014.
44. “Beyond Worst-Case Analysis in Auctions, Classification, and Network Analysis,” Theory Seminar, Brown University, Providence, RI, May 9, 2014.
45. “Approximation in Algorithmic Game Theory,” EconCS Seminar, UC Berkeley, Berkeley, CA, April 8, 2014.
46. “Approximation in Algorithmic Game Theory,” Algorithmic Economics Seminar, Carnegie Mellon University, Pittsburgh, PA, March 11, 2014.
47. “Extension Theorems for the Price of Anarchy,” Mathematics Department Colloquium, Stanford University, Stanford, CA, February 27, 2014.
48. “Beyond Worst-Case Analysis in Auctions, Classification, and Network Analysis,” Computer Science Department Colloquium, University of Auckland, New Zealand, December 12, 2013.
49. “Beyond Worst-Case Analysis in Auctions, Classification, and Network Analysis,” Computer Science Department Colloquium, Harvard University, Cambridge, MA, November 21, 2013.
50. “Extension Theorems for the Price of Anarchy,” Distinguished Capitol Area Theory Seminar, University of Maryland, College Park, MD, May 3, 2013.

51. “Quantifying the Inefficiency of Game-Theoretic Equilibria,” Geometry Seminar, Courant Institute of Mathematics, New York University, New York, NY, April 30, 2013.
52. “Extension Theorems for the Price of Anarchy,” Computer Engineering and Systems Group Fish Bowl Seminar Series, Texas A & M, College Station, TX, April 11, 2013.
53. “Extension Theorems for the Price of Anarchy,” Lab Colloquium, Microsoft Research, New York, NY, April 9, 2013.
54. “Intractability in Algorithmic Game Theory,” Computer Science Seminar, Institute for Advanced Studies, Princeton, NJ, March 11, 2013.
55. “Simple and Prior-Independent Auctions,” Theory Seminar, Princeton University, Princeton, NJ, February 22, 2013.
56. “Porting the Computer Science Toolbox to Game Theory and Economics,” Computational Mathematics Colloquium, University of Waterloo, Waterloo, Canada, October 29, 2012.
57. “Porting the Computer Science Toolbox to Game Theory and Economics,” Computer Science Department Colloquium, McGill University, Montreal, Canada, October 26, 2012.
58. “Porting the Computer Science Toolbox to Game Theory and Economics,” Computer Science Department Colloquium, New York University, New York, NY, October 5, 2012.
59. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Computer Science Theory Seminar, Rutgers University, New Brunswick, NJ, September 26, 2012.
60. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Economic Theory Seminar, University of Pennsylvania, Philadelphia, PA, September 18, 2012.
61. “Porting the Computer Science Toolbox to Game Theory and Economics,” Triangle Computer Science Distinguished Lecturer Series, Duke University, Durham, NC, September 10, 2012.
62. “Simple and Near-Optimal Auctions,” Microeconomic Theory Seminar, Australian National University, Canberra, Australia, July 9, 2012.
63. “The Price of Anarchy in Games of Incomplete Information,” Theory of Computation Colloquium, MIT, Cambridge, MA, April 24, 2012.
64. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Seminar on Applied Theory, University of Chicago Booth School of Business, Chicago, IL, March 26, 2012.
65. “Proof Techniques for Bounding the Price of Anarchy,” Computer Science Theory Seminar, University of California at Santa Barbara, Santa Barbara, CA, March 6, 2012.
66. “Porting the Computer Science Toolbox to Game Theory and Economics,” Computer Science Department Colloquium, University of California at Santa Barbara, Santa Barbara, CA, March 5, 2012.
67. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Barcelona Jocs Seminar, Barcelona, Spain, February 27, 2012.
68. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Microeconomic Theory Seminar, Cowles Foundation, New Haven, NJ, February 22, 2012.
69. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Computer Science Theory Seminar, New York University, New York, NY, February 9, 2012.
70. “Porting the Computer Science Toolbox to Game Theory and Economics,” Computer Science Department Colloquium, Princeton University, Princeton, NJ, February 8, 2012.
71. “Selfish Routing and the Price of Anarchy,” Mathematics Department Colloquium, San Jose State, San Jose, CA, November 2, 2011.

72. “Robust Guarantees on Algorithmic Game Theory,” EECS Department Colloquium, UC Berkeley, Berkeley, CA, October 5, 2011.
73. “Algorithmic Game Theory: Toward Robust Guarantees,” Computer Science Department Colloquium, Washington University, St. Louis, MO, September 23, 2011.
74. “Simple Auctions with Near-Optimal Equilibria,” Research on Algorithms and Incentives in Networks (RAIN) Seminar, Stanford, CA, April 27, 2011.
75. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Theory Seminar, Weizmann Institute, Rehovot, Israel, April 11, 2011.
76. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” Computer Science Department Colloquium, Hebrew University, Jerusalem, Israel, April 4, 2011.
77. “From Bayesian to Worst-Case Optimal Auction Design,” Economics and Computation Seminar, Hebrew University, Jerusalem, Israel, March 27, 2011.
78. “Intrinsic Robustness of the Price of Anarchy,” Game Theory and Human Behavior Seminar, USC, Los Angeles, CA November 16, 2010.
79. “From Bayesian to Worst-Case Optimal Auction Design,” Colloquium, Department of Computer Science, USC, Los Angeles, CA November 15, 2010.
80. “Intrinsic Robustness of the Price of Anarchy,” Departmental Seminar, Economics Department, University of Hawaii, Honolulu, HI, November 5, 2011.
81. “Algorithmic Game Theory: Two Vignettes,” Symbolic Systems Forum, Stanford, CA, May 27, 2010.
82. “Revenue Maximization with a Single Sample,” Theory Seminar, Microsoft Research, Redmond, WA, May 5, 2010.
83. “Intrinsic Robustness of the Price of Anarchy,” STIET Seminar, University of Michigan, Ann Arbor, MI, April 15, 2010.
84. “Intrinsic Robustness of the Price of Anarchy,” Economic Theory Seminar, Northwestern University, Evanston, IL, April 14, 2010.
85. “Revenue Maximization with a Single Sample,” Computer Science Theory Seminar, Northwestern University, Evanston, IL, April 12, 2010.
86. “Intrinsic Robustness of the Price of Anarchy,” ARC Colloquium, Georgia Tech, Atlanta, GA, April 5, 2010.
87. “Intrinsic Robustness of the Price of Anarchy,” Optimization Seminar, UC Davis, Davis, CA, March 1, 2010.
88. “Intrinsic Robustness of the Price of Anarchy,” Pauli Colloquium, Wolfgang Pauli Institute, Vienna, Austria, December 18, 2009.
89. “Intrinsic Robustness of the Price of Anarchy,” Operations Research Seminar, Stanford University, Stanford, CA, October 28, 2009.
90. “Intrinsic Robustness of the Price of Anarchy,” Theory Seminar, University of Washington, Seattle, WA, October 6, 2009.
91. “Intrinsic Robustness of the Price of Anarchy,” Lab Colloquium, Microsoft Research, Mountain View, CA, September 3, 2009.
92. “Intrinsic Robustness of the Price of Anarchy,” Theory Seminar, Cornell University Ithaca, NY, June 18, 2009.

93. “Intrinsic Robustness of the Price of Anarchy,” Mathematics Department Seminar, London School of Economics, London, England, June 11, 2009.
94. “Intrinsic Robustness of the Price of Anarchy,” Lab Colloquium, Microsoft Research, Cambridge, MA, May 20, 2009.
95. “Algorithmic Game Theory: Two Vignettes,” Distinguished Lecture Series, Department of Computer Science and Engineering, Arizona State University, Tempe, AZ, April 8, 2009.
96. “Intrinsic Robustness of the Price of Anarchy,” Departmental Seminar, Economics Department, Vanderbilt University, Nashville, TN, April 6, 2009.
97. “Algorithmic Game Theory: Two Vignettes,” Computer Systems Colloquium, Stanford University, Stanford, CA, March 11, 2009.
98. “From Bayesian to Worst-Case Optimal Auctions,” Theory of Computation Colloquium, MIT, Cambridge, MA, October 14, 2008.
99. “Probability in Algorithmic Game Theory: Two Surprising Appearances,” Interdisciplinary Stochastic Processes Colloquium, UC Berkeley, Berkeley, CA, September 16, 2008.
100. “From Bayesian to Worst-Case Optimal Auction Design,” Theory Seminar, Google, Inc., New York, NY, June 6, 2008.
101. “Optimal Protocol Design in Networks with Selfish Users,” Joint Economics-Theory Seminar, Cornell University, Ithaca, NY, August 28, 2007.
102. “Optimal Protocol Design in Networks with Selfish Users,” Colloquium, Technische Universität Berlin, Berlin, Germany, June 29, 2007.
103. “Quantifying Trade-Offs in Networks and Auctions,” Colloquium, Technische Universität München, Munich, Germany, June 26, 2007.
104. “Quantifying Trade-Offs in Networks and Auctions,” Colloquium, Department of Computer Science, Wayne State University, Detroit, MI, April 16, 2007.
105. “Optimal Cost-Sharing Mechanisms,” Theory Seminar, University of California at Berkeley, Berkeley, CA, September 11, 2006.
106. “Selfish Routing and the Price of Anarchy,” Economic Theory Seminar, University of Wisconsin-Madison, Madison, WI, September 8, 2006.
107. “Optimal Cost-Sharing Mechanisms,” Theory Seminar, University of Wisconsin-Madison, Madison, WI, September 7, 2006.
108. “Optimal Cost-Sharing Mechanisms,” Theory Seminar, IBM Almaden, San Jose, CA, September 5, 2006.
109. “Optimal Cost-Sharing Mechanisms,” Theory Seminar, Microsoft Research, Mountain View, CA, August 11, 2006.
110. “Approximately Efficient Cost-Sharing Mechanisms,” Operations Research Seminar, Stanford University, Stanford, CA, May 3, 2006.
111. “Bounding Braess’s Paradox,” Theory Seminar, Università di Roma, Rome, Italy, June 17, 2005.
112. “Networks, Game Theory, and the Price of Anarchy,” Symbolic Systems Forum, Stanford, CA, May 5, 2005.
113. “Selfish Routing and the Price of Anarchy,” Annual Meeting of the National Academy of Sciences, Washington D.C., May 1, 2005.

114. "Selfish Routing and the Price of Anarchy," Advanced Network Colloquium Series, University of Maryland, College Park, MD, April 22, 2005.
115. "Computing (Correlated) Equilibria in Multi-Player Games," HP Labs Algorithms Seminar, Palo Alto, CA, February 18, 2005.
116. "Selfish Routing and the Price of Anarchy," HP Labs Algorithms Seminar, Palo Alto, CA, February 11, 2005.
117. "Computing (Correlated) Equilibria in Multi-Player Games," Bay Area Theory Symposium (BATS), Berkeley, CA, December 10, 2004.
118. "Selfish Routing and the Price of Anarchy," Economic Theory Seminar, Northwestern University, Evanston, IL, September 22, 2004.
119. "Computing (Correlated) Equilibria in Multi-Player Games," Theory Seminar, University of Pennsylvania, Philadelphia, PA, August 25, 2004.
120. "Selfish Routing and the Price of Anarchy," Interdisciplinary Seminar in Game Theory, London School of Economics, London, England, July 2, 2004.
121. "Designing Networks by Flipping Coins," Theory Seminar, IBM Watson, Yorktown Heights, NY, May 26, 2004.
122. "Designing Networks by Flipping Coins," Theory Seminar, Princeton University, Princeton, NJ, May 13, 2004.
123. "Designing Networks by Flipping Coins," Theory Seminar, Columbia University, New York, NY, May 10, 2004.
124. "Designing Networks by Flipping Coins," Theory Seminar, University of California at Berkeley, Berkeley, CA, May 7, 2004.
125. "Selfish Routing and the Price of Anarchy," Theory Seminar, Department of Economics, University of California at San Diego, San Diego, CA, April 14, 2004.
126. "Selfish Routing and the Price of Anarchy," Operations, Information, and Technology Seminar, Graduate School of Business, Stanford University, Stanford, CA, April 7, 2004.
127. "Selfish Routing and the Price of Anarchy," Operations and Logistics Seminar, Sauder School of Business, University of British Columbia, Vancouver, Canada, March 22, 2004.
128. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, Brown University, Providence, RI, March 18, 2004.
129. "Bounding Braess's Paradox," Algorithmic Game Theory Seminar, MIT, Cambridge, MA, March 17, 2004.
130. "Designing Networks by Flipping Coins," Theory Seminar, Harvard University, Cambridge, MA, March 17, 2004.
131. "Designing Networks by Flipping Coins," Theory Seminar, MIT, Cambridge, MA, March 16, 2004.
132. "Selfish Routing and the Price of Anarchy," Applied Mathematics Colloquium, MIT, Cambridge, MA, March 15, 2004.
133. "Selfish Routing and the Price of Anarchy," Networking Seminar, Stanford University, Stanford, CA, January 15, 2004.
134. "Pricing Networks with Selfish Routing," Theory Seminar, IBM Almaden, San Jose, CA, December 12, 2003.

135. "Selfish Routing and the Price of Anarchy," Frontiers of Management Science Colloquium, Department of Management Science & Engineering, Stanford University, Stanford, CA, November 21, 2003.
136. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Electrical Engineering and Computer Science, California Institute of Technology, Pasadena, CA, November 5, 2003.
137. "Pricing Networks with Selfish Routing," Multi-Agent Systems Seminar, Stanford University, Stanford, CA, October 16, 2003.
138. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Industrial Engineering and Operations Research, UC Berkeley, Berkeley, CA, September 22, 2003.
139. "Selfish Routing and the Price of Anarchy," Networking, Communications, and DSP Seminar, UC Berkeley, Berkeley, CA, September 16, 2003.
140. "Selfish Routing and the Price of Anarchy," Theory Seminar, IBM Watson, Yorktown Heights, NY, July 25, 2003.
141. "Selfish Routing and the Price of Anarchy," Engineering Systems Division Seminar, MIT, Cambridge, MA, May 21, 2003.
142. "Selfish Routing and the Price of Anarchy," Colloquium, Division of Decisions, Risk, and Operations, Columbia University Business School, New York, NY, May 1, 2003.
143. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, UC San Diego, San Diego, CA, April 28, 2003.
144. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, Stanford University, Stanford, CA, April 19, 2003.
145. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, University of Toronto, Toronto, Ontario, Canada, April 8, 2003.
146. "Selfish Routing and the Price of Anarchy," Theory Seminar, Microsoft Research, Redmond, WA, April 3, 2003.
147. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, University of Washington, Seattle, WA, April 1, 2003.
148. "Selfish Routing and the Price of Anarchy," Theory Seminar, IBM Almaden, San Jose, CA, March 27, 2003.
149. "Selfish Routing and the Price of Anarchy," Theory Seminar, Microsoft Research, Mountain View, CA, March 24, 2003.
150. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Industrial Engineering and Operations Research, Columbia University, New York, NY, March 12, 2003.
151. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Electrical Engineering and Computer Science, MIT, Cambridge, MA, March 10, 2003.
152. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, University of Wisconsin-Madison, Madison, WI, March 6, 2003.
153. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, UCLA, Los Angeles, CA, February 27, 2003.
154. "Selfish Routing and the Price of Anarchy," Colloquium, Department of Computer Science, University of Chicago, Chicago, IL, February 24, 2003.
155. "Selfish Routing and the Price of Anarchy," Aladdin Theory Lunch, Carnegie Mellon University, Pittsburgh, PA, February 19, 2003.

156. “Selfish Routing and the Price of Anarchy,” Algorithms and Complexity Seminar, University of Pennsylvania, Philadelphia, PA, November 8, 2002.
157. “The Elusiveness of Braess’s Paradox: Designing Networks for Selfish Users Is Hard,” Institute for Advanced Studies Seminar in Theoretical Computer Science, Princeton, NJ, October 7, 2002.
158. “Selfish Routing and the Price of Anarchy,” Princeton Seminar in Theoretical Computer Science, Princeton, NJ, October 4, 2002.
159. “Selfish Routing and the Price of Anarchy,” Operations Research Seminar Series, MIT, Cambridge, MA, September 24, 2002.
160. “Selfish Routing and the Price of Anarchy,” Mathematics Research Colloquium, Lucent Bell Labs, Murray Hill, NJ, August 1, 2002.
161. “Selfish Routing,” Colloquium, European Graduate Program in Combinatorics, Geometry, and Computation, Technische Universität Berlin, Berlin, Germany, June 25, 2002.
162. “The Price of Anarchy Is Independent of the Network Topology,” Theory Seminar, Cornell University, Ithaca, NY, May 6, 2002.
163. “Designing Networks for Selfish Users Is Hard,” Theory Seminar, Cornell University, Ithaca, NY, September 24, 2001.
164. “Selfish Routing,” Theory Seminar, IBM Almaden, San Jose, CA, August 9, 2001.
165. “Approximate k -MSTs and k -Steiner Trees via the Primal-Dual Method and Lagrangean Relaxation,” Theory Seminar, IBM Almaden, San Jose, CA, June 8, 2001.
166. “Stackelberg Scheduling Strategies,” Theory Seminar, Cornell University, Ithaca, NY, April 23, 2001.
167. “How Bad Is Selfish Routing?,” Operations Research Seminar, GSIA, Carnegie Mellon University, Pittsburgh, PA, December 4, 2000.
168. “How Bad Is Selfish Routing?,” Theory Seminar, Cornell University, Ithaca, NY, October 23, 2000.

Invited Conference and Workshop Presentations

1. “Fair Division with Combinatorial Valuations,” Israel Algorithmic Game Theory Day, Weizmann Institute, Rehovot, Israel, February 3, 2019.
2. “Toward Incentive-Compatible Blockchains,” Dagstuhl Workshop on Blockchain Security at Scale, Wadern, Germany, November 15, 2018.
3. “When Are Equilibria of Simple Auctions Near-Optimal?,” Symposium on Auctions and Computational Game Theory in Honour of Robert Wilson, London School of Economics, London, England, July 11, 2018.
4. “Distribution-Free Models of Social and Information Networks,” Workshop on Data Science Theory and Practice, London School of Economics, London, England, March 27, 2018.
5. “Data-Driven Optimal Auction Theory,” Cemmap Conference on Optimisation and Machine Learning in Economics, University College London, England, March 8, 2018.
6. “Don, Matroids, and Stable Matchings,” Knuth80 Workshop on Algorithms, Combinatorics, and Information, Piteå, Sweden, January 8, 2018.
7. “Learning Near-Optimal Auctions, Submodular Maximization, and Offline-to-Online Reductions,” Workshop on Data-driven Algorithmics, Bertinoro, Italy, Noember 7, 2017.

8. “When Are Welfare Guarantees Robust?,” 20th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), Berkeley, CA, August 16, 2017.
9. “On a Theorem of Kalai and Samet: When Do Pure Equilibria Imply a Potential Function?,” Games and Economic Behavior Workshop (in honor of Ehud Kalai), Tel Aviv, Israel, July 11, 2017.
10. “Learning Simple Auctions,” Workshop on Connections between Theory of Computing and Mechanism Design, (STOC workshop), Montreal, Canada, June 23, 2017.
11. “New Connections Between Complexity Theory and Algorithmic Game Theory,” Young Researcher Workshop on Economics and Computation, Tel Aviv University, Israel, January 5, 2017.
12. “How Does Computer Science Inform Modern Auction Design?,” Ninth Israel CS Theory Day, Open University, Ra’anana, Israel, January 3, 2017.
13. “How Hard Is Inference for Structured Prediction?,” Workshop on Learning, Algorithm Design and Beyond Worst-Case Analysis, Simons Institute for the Theory of Computing, November 18, 2016.
14. “Outposts Between Average- and Worst-Case Analysis: A Case Study in Auction Design,” Workshop on Uncertainty in Computation, Simons Institute for the Theory of Computing, October 7, 2016.
15. “Distribution-Free Models of Social and Information Networks,” Workshop on Optimization and Decision-Making Under Uncertainty, Simons Institute for the Theory of Computing, September 21, 2016.
16. “A Learning Approach to Application-Specific Algorithm Selection,” Workshop on Information Theory and Applications, La Jolla, CA, February 5, 2016.
17. “Quantifying Inefficiency in Games and Auctions,” Conference Honoring Hugo Sonnenschein, Becker Friedman Institute, University of Chicago, Chicago, IL, October 24, 2015.
18. “The Pseudo-Dimension of Near-Optimal Auctions,” Workshop on Complexity and Simplicity in Economics, Simons Institute for the Theory of Computing, October 16, 2015.
19. “The Sample Complexity of Learning Near-Optimal Auctions and Heuristics,” Workshop on Data-driven Algorithmics, Harvard University, Cambridge, MA, September 10, 2015.
20. “Barriers to Near-Optimal Equilibria,” 22nd International Symposium on Mathematical Programming (ISMP), Pittsburgh, PA, July 16, 2015.
21. “Barriers to Near-Optimal Equilibria,” Workshop on Strategic Behavior and Phase Transitions in Random and Complex Combinatorial Structures, Barcelona, Spain, June 8, 2015.
22. “Making the Most of Your Samples,” Workshop on Information Theory and Applications, La Jolla, CA, February 1, 2015.
23. “Barriers to Near-Optimal Equilibria,” 55th Annual Symposium on Foundations of Computer Science (FOCS), Philadelphia, PA, October 19, 2014.
24. “Decompositions of Triangle-Dense Graphs,” Dagstuhl Workshop on Beyond Worst-Case Analysis, Wadern, Germany, September 8, 2014.
25. “Decompositions of Triangle-Dense Graphs,” 7th Workshop on Flexible Network Design, Lugano, Switzerland, July 31, 2014.
26. “The Sample Complexity of Revenue-Maximization,” 46th Annual ACM Symposium on Theory of Computing (STOC), New York, NY, June 1, 2014.
27. “Approximate Recovery of Binary Classifications,” Workshop on Information Theory and Applications, La Jolla, CA, February 14, 2014.
28. “The Price of Anarchy in Games of Incomplete Information,” Workshop on Computational Game Theory, Stony Brook, NY, July 17, 2013.

29. “The Price of Anarchy in Games of Incomplete Information,” Workshop on Trends in Mechanism Design II, Aarhus, Denmark, June 25, 2013.
30. “Extension Theorems for the Price of Anarchy,” New York Area Theory Day, New York University, New York, NY, May 10, 2013.
31. “Optimal and Near-Optimal Auction Design with Interdependent Values,” Dagstuhl Workshop on the Interface of Computation, Game Theory, and Economics, Wadern, Germany, April 18, 2013.
32. “Intractability in Algorithmic Game Theory,” Workshop on Modeling Intractability, Mitzpe Ramon, Israel, February 12, 2013.
33. “Prior-Independent Auctions,” 5th New York Computer Science & Economics (NYCE) Day, New York, NY, December 3, 2012.
34. “Simple and Prior-Independent Auctions,” FOCS Workshop on Bayesian Mechanism Design, New Brunswick, NJ, October 20, 2012.
35. “Prior-Independent Auctions,” Fourth World Congress of the Game Theory Society, Istanbul, Turkey, July 26, 2012.
36. “The Price of Anarchy in Games of Incomplete Information,” 13th Annual ACM Conference on Electronic Commerce (EC), Valencia, Spain, June 5, 2012.
37. “Simple and Near-Optimal Auctions,” Google Research Workshop, New York, NY, May 23, 2012.
38. “The Price of Anarchy: Out-of-Equilibrium Guarantees, Intrinsic Robustness, and Beyond,” NSF/CEME Conference on Decentralization, Pasadena, CA, March 31, 2012.
39. “Restoring Pure Equilibria to Weighted Congestion Games,” 38th International Symposium on Automata, Languages, and Programming (ICALP), Zurich, Switzerland, July 6, 2011.
40. “Simple and Near-Optimal Auctions,” Workshop on Innovations in Algorithmic Game Theory, Jerusalem, Israel, May 26, 2011.
41. “Intrinsic Robustness of the Price of Anarchy,” IPAM Workshop on Algorithmic Game Theory, Los Angeles, CA, January 10, 2011.
42. “Intrinsic Robustness of the Price of Anarchy,” Forty-Eighth Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL, September 30, 2010.
43. “Intrinsic Robustness of the Price of Anarchy,” SIAM Conference on Discrete Mathematics, Austin, TX, June 14, 2010.
44. “Equilibrium Efficiency and Price Complexity in Sponsored Search Auctions,” Sixth Workshop on Ad Auctions, Cambridge, MA, June 8, 2010.
45. “Revenue Maximization with a Single Sample,” Workshop on Prior-Free Mechanism Design, Guanajuato, Mexico, May 20, 2010.
46. “Revenue Maximization with a Single Sample,” Workshop on Frontiers in Mechanism Design, Bertinoro, Italy, March 15, 2010.
47. “Intrinsic Robustness of the Price of Anarchy,” Workshop on Distributed Decisions via Games and Price Mechanisms, Lund University, Lund, Sweden, March 10, 2010.
48. “Intrinsic Robustness of the Price of Anarchy,” 20th International Symposium on Mathematical Programming (ISMP), Chicago, IL, August 24, 2009.
49. “Worst-Case Efficiency Analyses of Queueing Disciplines,” 36th International Symposium on Automata, Languages, and Programming (ICALP), Rhodes, Greece, July 10, 2009.

50. “Universally Utility-Maximizing Privacy Mechanisms,” ELSE Workshop on Search, Mechanism Design and the Internet, UCL, London, England, June 12, 2009.
51. “Intrinsic Robustness of the Price of Anarchy,” 41st Annual ACM Symposium on Theory of Computing (STOC), Bethesda, MD, June 2, 2009.
52. “The Price of Anarchy: Some Old and New Results,” First Workshop of the Lund Center for Control of Complex Engineering Systems, Lund University, Lund, Sweden, May 29, 2009.
53. “Intrinsic Robustness of the Price of Anarchy,” Workshop on Distributed Computing, UT Austin, Austin, TX, April 3, 2009.
54. “Intrinsic Robustness of the Price of Anarchy,” Workshop on Information Theory and Applications, La Jolla, CA, February 13, 2009.
55. “Intrinsic Robustness of the Price of Anarchy,” Conference on Adaptive Systems and Mechanism Design, Institute for Mathematical Behavioral Sciences at UC Irvine, Irvine, CA, January 24, 2009.
56. “Worst-Case Efficiency Analyses of Queueing Disciplines,” Workshop on Networks of Networks, Institute for Pure & Applied Mathematics at UCLA, Los Angeles, CA, November 3, 2008.
57. “Potentials and Approximation,” Cowles Foundation Conference on Choice, Contracts, and Computation, New Haven, CT, June 10, 2008.
58. “When Do Pure Equilibria Imply a Potential?,” Caltech Microeconomic Dynamics Workshop, Pasadena, CA, May 24, 2008.
59. “When Do Pure Equilibria Imply a Potential?,” Fifth Bay Algorithmic Game Theory Symposium (BAGT), Mountain View, CA, April 11, 2008.
60. “Optimal Protocol Design in Networks with Selfish Users,” Forty-Fifth Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL, September 26, 2007.
61. “Optimal Protocol Design in Networks with Selfish Users,” Fourth ACM SIGACT-SIGOPS International Workshop on Foundations of Mobile Computing (DIAL-M), Portland, OR, August 16, 2007.
62. “Optimal Protocol Design in Networks with Selfish Users,” Dagstuhl Workshop on Computational Social Systems and the Internet, Wadern, Germany, July 2, 2007.
63. “Approximately Efficient, Budget-Balanced Cost-Sharing Mechanisms,” Society for the Advancement of Economic Theory Conference on Current Trends in Economics (SAET), Kos, Greece, June 22, 2007.
64. “Single-Source Stochastic Routing,” 9th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), Barcelona, Spain, August 30, 2006.
65. “Potential Functions and the Inefficiency of Equilibria,” International Congress of Mathematicians (ICM), Madrid, Spain, August 29, 2006.
66. “Optimal Cost-Sharing Mechanisms,” CRM Workshop on Network Design: Optimization and Algorithmic Game Theory, Montreal, Canada, August 16, 2006.
67. “Quantifying the Inefficiency of Wardrop Equilibria,” INFORMS Annual Meeting, San Francisco, CA, November 14, 2005.
68. “New Trade-Offs in Cost-Sharing Mechanisms,” Aladdin Workshop on Flexible Network Design, Princeton, NJ, November 5, 2005.
69. “Computing Correlated Equilibria in Multi-Player Games,” Conference on Foundations of Computational Mathematics (FoCM), Santander, Spain, July 5, 2005.
70. “Computing Correlated Equilibria in Multi-Player Games,” Third Bertinoro Workshop on Random Graphs and Randomized Algorithms (RGRAALS), Bertinoro, Italy, June 22, 2005.

71. "Computing Correlated Equilibria in Multi-Player Games," Dagstuhl Workshop on Design and Analysis of Randomized and Approximation Algorithms, Wadern, Germany, May 18, 2005.
72. "Selfish Routing with Atomic Players," 16th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA), Vancouver, CA, January 25, 2005.
73. "Computing Equilibria in Multi-Player Games," 16th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA), Vancouver, Canada, January 23, 2005.
74. "Selfish Routing and the Price of Anarchy," National Academy of Sciences Beckman Frontiers of Science Symposium, Irvine, CA, November 5, 2004.
75. "Bounding Braess's Paradox," INFORMS Annual Meeting, Denver, CO, October 25, 2004.
76. "Bounding Braess's Paradox," Workshop on Economic Aspects of Congested Networks and Queues, Bonn, Germany, July 10, 2004.
77. "Computing (Correlated) Equilibria in Multi-Player Games," First Bertinoro Workshop on Algorithmic Game Theory, (AGATE), Bertinoro, Italy, July 5, 2004.
78. "Bounding Braess's Paradox," First Bertinoro Workshop on Combinatorial Optimization, (BECO), Bertinoro, Italy, May 3, 2004.
79. "The Maximum Latency of Selfish Routing," 15th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA), New Orleans, LA, January 13, 2004.
80. "The Price of Anarchy Is Independent of the Network Topology," INFORMS Annual Meeting, Atlanta, GA, October 21, 2003.
81. "Selfish Routing," 18th International Symposium on Mathematical Programming (ISMP), Copenhagen, Denmark, August 19, 2003.
82. "Pricing Networks with Selfish Routing," Dagstuhl Workshop on Algorithmic Game Theory and the Internet, Wadern, Germany, July 16, 2003.
83. "How Much Can Taxes Help Selfish Routing?" 4th Annual ACM Conference on Electronic Commerce (EC), San Diego, CA, June 11, 2003.
84. "Pricing Network Edges with Heterogeneous Selfish Users," 35th Annual ACM Symposium on Theory of Computing (STOC), San Diego, CA, June 11, 2003.
85. "Pricing Networks with Selfish Routing," Workshop on Economics of Peer-to-Peer Networks, Berkeley, CA, June 5, 2003
86. "Selfish Routing and the Price of Anarchy," Annual AAAS Meeting, Denver, CO, February 14, 2003.
87. "Designing Networks for Selfish Users Is Hard," Dagstuhl Workshop on Approximation and Randomized Algorithms in Communication Networks, Wadern, Germany, June 16, 2002.
88. "The Price of Anarchy Is Independent of the Network Topology," 34th Annual ACM Symposium on Theory of Computing (STOC), Montreal, Canada, May 20, 2002.
89. "How Unfair Is Optimal Routing?," 13th Annual Symposium on Discrete Algorithms (SODA), San Francisco, CA, January 6, 2002.
90. "Designing Networks for Selfish Users Is Hard," DIMACS Workshop on Computational Issues in Game Theory and Mechanism Design, Rutgers University, Piscataway, NJ, October 31, 2001.
91. "Designing Networks for Selfish Users Is Hard," 42nd Annual Symposium on Foundations of Computer Science (FOCS), Las Vegas, NY, October 17, 2001.

92. “Stackelberg Scheduling Strategies,” 33rd Annual ACM Symposium on Theory of Computing (STOC), Hersonissos, Crete, Greece, July 6, 2001.
93. “Approximate k -MSTs and k -Steiner Trees via the Primal-Dual Method and Lagrangean Relaxation,” Eighth Conference on Integer Programming and Combinatorial Optimization (IPCO), Utrecht, The Netherlands, June 15, 2001.
94. “How Bad Is Selfish Routing?,” 41st Annual Symposium on Foundations of Computer Science (FOCS), Redondo Beach, CA, November 12, 2000.
95. “How Bad Is Selfish Routing?,” 17th International Symposium on Mathematical Programming (ISMP), Atlanta, GA, August 10, 2000.

Courses Taught (all at Stanford)

1. Fall 2018: CS269I, Incentives in Computer Science, 130 students.
Overall evaluation score: 4.8/5.0.
2. Spring 2017: CS168, The Modern Algorithmic Toolbox, 126 students. (Co-taught with Greg Valiant.)
Overall evaluation score: 4.7/5.0.
3. Winter 2017: CS264, Beyond Worst-Case Analysis, 31 students.
Overall evaluation score: 5.0/5.0.
4. Fall 2016: CS269I, Incentives in Computer Science, 52 students.
Overall evaluation score: 4.9/5.0.
5. Spring 2016: CS168, The Modern Algorithmic Toolbox, 88 students. (Co-taught with Greg Valiant.)
Overall evaluation score: 4.6/5.0.
6. Spring 2016: CS167, Readings in Algorithms, 8 students.
Overall evaluation score: 4.9/5.0.
7. Winter 2016: CS261, Optimization and Algorithmic Paradigms, 52 students. Overall evaluation score: 4.8/5.0.
8. Spring 2015: CS261, Optimization and Algorithmic Paradigms, 72 students. Overall evaluation score: 4.7/5.0.
9. Spring 2015: CS168, The Modern Algorithmic Toolbox, 81 students. (Co-taught with Greg Valiant.)
Overall evaluation score: 4.9/5.0.
10. Winter 2015: CS369E, Communication Complexity (for Algorithm Designers), 11 students.
Overall evaluation score: 5.0/5.0.
11. Fall 2014: CS264, Beyond Worst-Case Analysis, 15 students.
Overall evaluation score: 4.9/5.0.
12. Spring 2014: CS167, Readings in Algorithms, 14 students.
Overall evaluation score: 5.0/5.0.
13. Winter 2014: CS364B, Frontiers in Mechanism Design, 12 students.
Overall evaluation score: 4.8/5.0.
14. Fall 2013: CS364A, Algorithmic Game Theory, 52 students.
Overall evaluation score: 4.9/5.0.
15. Fall 2011: CS161, Design and Analysis of Algorithms, 199 students.
Overall evaluation score: 4.6/5.0.

16. Fall 2011: CS369N, Beyond Worst-Case Analysis, 18 students.
Overall evaluation score: 5.0/5.0.
17. Winter 2011: CS161, Design and Analysis of Algorithms, 123 students.
Overall evaluation score: 4.7/5.0.
18. Winter 2011: CS364A, Algorithmic Game Theory, 24 students.
Overall evaluation score: 4.8/5.0.
19. Winter 2010: CS161, Design and Analysis of Algorithms, 164 students.
Overall evaluation score: 4.7/5.0.
20. Fall 2009: CS369N, Beyond Worst-Case Analysis, 17 students.
Overall evaluation score: 4.9/5.0.
21. Winter 2009: CS161, Design and Analysis of Algorithms, 118 students.
Overall evaluation score: 4.7/5.0.
22. Fall 2008: CS364A, Algorithmic Game Theory, 38 students.
Overall evaluation score: 4.8/5.0.
23. Winter 2008: CS161, Design and Analysis of Algorithms, 116 students.
Overall evaluation score: 4.5/5.0.
24. Winter 2008: CS369B, Advanced Graph Algorithms, 18 students.
Overall evaluation score: 4.7/5.0.
25. Fall 2007: Foundations of Sponsored Search, 28 students.
Overall evaluation score: 4.7/5.0.
26. Winter 2007: CS161, Design and Analysis of Algorithms, 102 students.
Overall evaluation score: 4.6/5.0.
27. Winter 2007: CS359D, Hardness of Approximation, 16 students.
Overall evaluation score: 4.7/5.0.
28. Fall 2006: CS364A, Algorithmic Game Theory, 32 students.
Overall evaluation score: 4.8/5.0.
29. Winter 2006: CS161, Design and Analysis of Algorithms, 91 students.
Overall evaluation score: 4.7/5.0.
30. Winter 2006: CS369C, Metric Embeddings and Algorithmic Applications, 22 students.
Overall evaluation score: 4.6/5.0.
31. Fall 2005: CS364B, Topics in Algorithmic Game Theory, 27 students.
Overall evaluation score: 4.4/5.0.
32. Winter 2005: CS161, Design and Analysis of Algorithms, 101 students.
No scores available.
33. Fall 2004: CS364A, Algorithmic Game Theory, 22 students.
No scores available.

PhD Supervision

1. Vaggos Chatziafratis (expected 2020)
2. Warut Suksompong (2018) [Thesis: Resource Allocation and Decision Making for Groups]

3. Joshua Wang (2018) [Thesis: Theoretical Models for Practical Problems: Dynamic Data Structures, Hierarchical Clustering, and Modern Parallel Computing]
4. Okke Schrijvers (2017) [Thesis: Learning and Incentives in Computer Science]
5. Rishi Gupta (2016) [Thesis: Theoretical Foundations for Practical Problems: Network Analysis, Algorithm Selection, and Interaction Design]
6. Inbal Talgam-Cohen (2015) [Thesis: Robust Market Design: Information and Computation]
7. Kostas Kollias (2015) [Thesis: Sharing Costs to Optimize Network Equilibria]
8. Kshipra Bhawalkar (2013) [Thesis: Approximation Guarantees for Game-theoretic Equilibria]
9. Qiqi Yan (2012) [Thesis: Prior-Independence: A New Lens for Mechanism Design]
10. Peerapong Dhangwatnotai (2011) [Thesis: Auction Design with Robust Guarantees]
11. Shaddin Dughmi (2011) [Thesis: Randomization and Computation in Strategic Settings (Arthur L. Samuel Thesis Award)]
12. Aneesh Sharma (2011) [Thesis: Algorithmic Problems in Social and Geometric Influence]
13. Damon Mosk-Aoyama (2010) [Thesis: Convergence To and Quality of Equilibria in Distributed Systems]
14. Mukund Sundararajan (2009) [Thesis: Trade-Offs in Cost-Sharing]

Postdoctoral Supervision

1. Rad Niazadeh (2017–present)
2. Vasilis Gkatzelis (2013–2015)
3. Paul Dütting (2013–2014)
4. Zhiyi Huang (2013–2014)
5. Uri Nadav (2009–2011)
6. Florian Schoppmann (2009–2010)
7. Martin Hoëfer (2008)
8. Shuchi Chawla (2006)

Organized Conferences, Workshops, and Programs

1. Co-Organizer, Workshop on Learning and Strategic Behavior, Toyota Technological Institute at Chicago, IL, August 2018.
2. Chair, Keynotes and Tutorials Committee, 50th Annual ACM Symposium on Theory of Computing (STOC), Los Angeles, CA, June 2018.
3. Tutorials Chair, 29th International Conference on Algorithmic Learning Theory (ALT), Lanzarote, Spain, April 2018.
4. Co-Organizer, Donald Knuth’s 80th Birthday Workshop, Piteå, Sweden, January 2018.
5. Co-Organizer, Workshop on Learning in the Presence of Strategic Behavior, 31st Annual Conference on Neural Information Processing Systems (NIPS), December 2017.

6. Chair, Keynotes and Tutorials Committee, 49th Annual ACM Symposium on Theory of Computing (STOC), Montreal, Canada, June 2017.
7. Co-Organizer, Workshop on Learning, Algorithm Design, and Beyond Worst-Case Analysis, Simons Institute for the Theory of Computing, Berkeley, CA, November 2016.
8. Co-Organizer, Special Semester on Economics and Computation, Simons Institute for the Theory of Computing, Berkeley, CA, August–December 2015.
9. Co-Organizer, Workshop on Algorithmic Game Theory and Practice, Simons Institute for the Theory of Computing, Berkeley, CA, November 2015.
10. Co-Organizer, Boot Camp on Economics and Computation, Simons Institute for the Theory of Computing, Berkeley, CA, August 2015.
11. General Chair, 16th Annual ACM Conference on Electronic Commerce (EC), Portland, OR, June 2015.
12. Co-Organizer, Dagstuhl Workshop on Beyond Worst-Case Analysis, Wadern, Germany, September 2014.
13. General Co-Chair, 45th Annual ACM Symposium on Theory of Computing (STOC), Stanford, CA, June 2013.
14. Co-Organizer, Summer School on Algorithmic Economics, Pittsburgh, PA, August 2012.
15. Organizer, Workshop on Beyond Worst-Case Analysis, Stanford, CA, September 2011.
16. Organizer, Motwani Distinguished Lecture Series, Stanford, CA, 2011–present.
17. Co-Organizer, Bertinoro Workshop on Frontiers in Mechanism Design, Bertinoro, Italy, March 2010.
18. Scientific Committee Member, Special Semester on Distributed Decision-Making and Control, LCCC Linnaeus center, Lund University, Sweden, January–June 2010.
19. Cluster Co-Chair (Game Theory), 20th International Symposium on Mathematical Programming (ISMP), Chicago, IL, August 2009.
20. Cluster Co-Chair (Game Theory), INFORMS Annual Meeting, Seattle, WA, November 2007.
21. Co-Organizer, 2nd Bertinoro Workshop on Algorithmic Game Theory (AGATE), Bertinoro, Italy, July 2006.
22. Co-Organizer, Bay Algorithmic Game Theory Symposium (BAGT), Mountain View, CA, February 2006, September 2006, April 2007, October 2007, and April 2008.
23. Co-Organizer, Bay Area Theory Symposium (BATS), Stanford, CA, November 2005, December 2006, and December 2007.
24. Tutorials and Workshops Chair, 6th Annual ACM Conference on Electronic Commerce (EC), Vancouver, British Columbia, Canada, June 2005.
25. Organizer, Stanford Algorithms Seminar (AFLB), Stanford, CA, 2005–2012.

Program Committees (Chair)

1. Program Committee Chair, 6th Conference on Innovations in Theoretical Computer Science (ITCS), Weizmann, Israel, January 2015.
2. Program Committee Chair, 53rd Annual Symposium on Foundations of Computer Science (FOCS), New Brunswick, NY, October 2012.

3. Program Committee Co-Chair, 12th Annual ACM Conference on Electronic Commerce (EC), San Jose, CA, June 2011.
4. Program Committee Co-Chair, First Workshop on the Economics of Networked Systems (NetEcon), Ann Arbor, MI, June 2006.

Program Committees

1. Senior Program Committee Member, 20th Annual ACM Conference on Economics and Computation (EC), Phoenix, AZ, June 2019.
2. Program Committee Member, 2nd Symposium on Simplicity in Algorithms (SOSA), San Diego, CA, January 2019.
3. Program Committee Member, 59th Annual Symposium on Foundations of Computer Science (FOCS), Paris, France, October 2018.
4. Program Committee Member, 35th International Conference on Machine Learning (ICML), Stockholm, Sweden, July 2018.
5. Program Committee Member, 29th International Conference on Algorithmic Learning Theory (ALT), Lanzarote, Spain, April 2018.
6. Senior Program Committee Member, 18th Annual ACM Conference on Economics and Computation (EC), Cambridge, MA, June 2017.
7. Program Committee Member, 2nd Conference on Highlights of Algorithms (HALG), Berlin, Germany, June 2017.
8. Program Committee Member, 8th Conference on Innovations in Theoretical Computer Science (ITCS), Berkeley, CA, January 2017.
9. Program Committee Member, Fifth World Congress of the Game Theory Society, Maastricht, Netherlands, July 2016.
10. Program Committee Member, 15th Annual ACM Conference on Electronic Commerce (EC), Stanford, CA, June 2014.
11. Program Committee Member, 9th International Workshop on Internet & Network Economics (WINE), Cambridge, MA, December 2013.
12. Senior Program Committee Member, 14th Annual ACM Conference on Electronic Commerce (EC), Philadelphia, PA, June 2013.
13. Program Committee Member, Fourth World Congress of the Game Theory Society, Istanbul, Turkey, July 2012.
14. Senior Program Committee Member, 13th Annual ACM Conference on Electronic Commerce (EC), Valencia, Spain, June 2012.
15. Program Committee Member, 52nd Annual Symposium on Foundations of Computer Science (FOCS), Palm Springs, CA, October 2011.
16. Program Committee Member, 6th International Workshop on Internet & Network Economics (WINE), Stanford, CA, December 2010.
17. Program Committee Member, 11th Annual ACM Conference on Electronic Commerce (EC), Cambridge, MA, June 2010.
18. Program Committee Member, Sixth Workshop on Ad Auctions, Cambridge, MA, June 2010.

19. Program Committee Member, 19th International World Wide Web Conference (WWW), Raleigh, NC, April 2010.
20. Program Committee Member, 5th International Workshop on Internet & Network Economics (WINE), Rome, Italy, December 2009.
21. Program Committee Member, 50th Annual Symposium on Foundations of Computer Science (FOCS), Atlanta, GA, November 2009.
22. Program Committee Member, 12th International Workshop on Approximation Algorithms for Combinatorial Problems (APPROX), Berkeley, CA, August 2009.
23. Program Committee Member, 28th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC), August 2009.
24. Senior Program Committee Member, 10th Annual ACM Conference on Electronic Commerce (EC), Stanford, CA, July 2009.
25. Program Committee Member, Workshop on the Economics of Networks, Systems, and Computation (NetEcon), Stanford, CA, July 2009.
26. Program Committee Member, SIGCOMM Workshop on the Economics of Networks, Systems, and Computation (NetEcon), Seattle, WA, August 2008.
27. Program Committee Member, Third World Congress of the Game Theory Society, Evanston, IL, July 2008.
28. Program Committee Member, Fourth Workshop on Ad Auctions, Chicago, IL, July 2008.
29. Program Committee Member, 9th Annual ACM Conference on Electronic Commerce (EC), Chicago, IL, July 2008.
30. Program Committee Member, 35th International Symposium on Automata, Languages, and Programming (ICALP), Reykjavik, Iceland, July 2008.
31. Program Committee Member, 17th International World Wide Web Conference (WWW), Beijing, China, April 2008.
32. Program Committee Member, First Symposium on Algorithmic Game Theory (SAGT), Paderborn, Germany, April 2008.
33. Program Committee Member, Third International Workshop on Internet & Network Economics (WINE), San Diego, CA, December 2007.
34. Program Committee Member, 26th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC), Portland, OR, August 2007.
35. Program Committee Member, Second Workshop on the Economics of Networked Systems (NetEcon), San Diego, CA, June 2007.
36. Program Committee Member, 19th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA), San Diego, CA, June 2007.
37. Program Committee Member, 18th Annual Symposium on Discrete Algorithms (SODA), New Orleans, LA, January 2007.
38. Program Committee Member, Second International Workshop on Incentive Based Computing (IBC), Lisboa, Portugal, July 2006.
39. Program Committee Member, 33rd International Symposium on Automata, Languages, and Programming (ICALP), Venice, Italy, July 2006.

40. Program Committee Member, First International Workshop on Incentive Based Computing (IBC), Compiègne, France, September 2005.
41. Program Committee Member, Third Workshop on the Economics of Peer-to-Peer Systems (P2PECON), Philadelphia, PA, August 2005.
42. Program Committee Member, 2005 Workshop on Combinatorial and Algorithmic Aspects of Networking (CAAN), Waterloo, Ontario, Canada, August 2005.
43. Program Committee Member, 37th Annual ACM Symposium on Theory of Computing (STOC), Baltimore, MD, May 2005.
44. Program Committee Member, SIGCOMM Workshop on Practice and Theory of Incentives in Networked Systems (PINS), Portland, OR, August 2004.
45. Program Committee Member, 7th International Workshop on Approximation Algorithms for Combinatorial Problems (APPROX), Cambridge, MA, August 2004.
46. Program Committee Member, Workshop on Combinatorial and Algorithmic Aspects of Networking (CAAN), Banff, Alberta, Canada, August 2004.

Editorial Boards

Associate Editor (Research Highlights), Communications of the ACM, 2017–present.

Editor, Games and Economic Behavior, 2016–present.

Area Editor (Economics and Computation), Journal of the ACM, 2015–present.

Associate Editor, SIAM Journal on Computing, 2012–2018.

Associate Editor, Mathematics of Operations Research, 2012–2017.

Advisory Editor, Games and Economic Behavior, 2008–2016.

Associate Editor, SIAM Journal on Discrete Mathematics, 2012–2016.

Associate Editor, ACM Transactions on Economics and Computation, 2011–2015.

Associate Editor, ACM Transactions on Algorithms, 2005–2014.

Associate Editor, Operations Research Letters, 2004–2011.

Guest Editor, SIAM Journal on Computing, Special Issue on Selected Papers from the FOCS 2012 Conference.

Guest Editor, Games and Economic Behavior, Special Issue on Algorithmic Game Theory in the SODA, STOC, and FOCS Conferences, 2011.

Guest Editor, Games and Economic Behavior, Special Issue on ACM EC 2010 and 2011 Conferences, 2011.

Guest Editor, IEEE Journal on Selected Areas in Communication, Special Issue on Non-Cooperative Issues in Networking, 2007.

Additional Professional Service

Chair, National Science Foundation CCF Division Director Search Committee, August–October 2017.

Chair, Committee for the Advancement of Theoretical Computer Science (CATCS), August 2015–July 2018.

Member, Committee for the Advancement of Theoretical Computer Science (CATCS), July 2013–present.

Steering Committee Member, Innovations in Theoretical Computer Science (ITCS) Conference, 2016–present.

Council of the Game Theory Society, 2013–present.

Scientific Advisory Board, Simons Foundation Institute for the Theory of Computing, 2012–2015.

Vice Chair, ACM SIGEcom, 2011–2015.

References

Available upon request.