### Curriculum Vitae

# Grant Schoenebeck

3341 North Quad 105 S. State St. Ann Arbor, MI 48109-1285 schoeneb@umich.edu http://schoeneb.people.si.umich.edu/ (510)316-8733

## Positions

- Fall 2021 present: Associate Professor, University of Michigan School of Information
- Fall 2021 present: Visiting Researcher, Computer Science Department, University of California Santa Barbara
- Fall 2019 Summer 2021: Assistant Professor, University of Michigan School of Information
- Fall 2012 Summer 2019: Assistant Professor, Computer Science and Engineering Division, University of Michigan
- Fall 2010 Summer 2012: Simons Foundation Postdoctoral Research Fellow in Theoretical Computer Science, Princeton University
- Fall 2011 Summer 2012: Senior Postdoctoral Research Fellow on National Science Foundation Expedition Grant to "Understand, Cope with, and Benefit From Intractability"
- Summer 2011 Summer 2012: Visitor at the Institute for Advanced Study School of Mathematics

## Education

University of California-Berkeley

- PhD in Computer Science, 2010
- Thesis "The Limitations of Linear and Semidefinite Programs"
- Advised by Luca Trevisan
- Management of Technology certificate, joint with Haas School of Business

#### Oxford University

- von Clemm Fellow at Corpus Christi College, 2004-2005
- Graduate Visiting Scholar in Theology, 2004-2005

#### Harvard University

- SM in Computer Science, 2004
- AB with highest honors in Mathematics, 2004
- Thesis "The Computational Complexity of Nash Equilibrium in Concisely Represented Games," advised by Salil Vadhan

# Awards and Honors

- WSDM 2021 Outstanding Reviewer Award
- NSF CAREER Award
- ACM Computing Reviews "Best of 2012" award for article "The computational complexity of Nash equilibria in concisely represented games." ACM Transactions on Computation Theory 4, 2 (May 2012), Article No. 4.
- National Science Foundation Graduate Student Fellowship, 2005-2010.
- University of California Berkeley Computer Science Department, Departmental Fellowship, 2005-2006.
- von Clemm Fellow, 2004-2005.
- Computing Research Association Outstanding Undergraduate Honorable Mention, 2004.
- Phi Beta Kappa, 2004.
- John Harvard Scholarship, 2001, 2002, and 2003.
- Detur Prize, 2001.

# **Scholarly Products**

Names of student and post-doc coauthors (at time research was undertaken) are underlined. As is customary, authors of theoretical computer science papers are listed in alphabetical order and do not indicate contribution; however a few papers in other fields do not have alphabetical author order, and for those order indicates contribution level.

#### **Conference** Articles

- 1. Yuqing Kong and Grant Schoenebeck. False consensus, information theory, and prediction markets. In *Proceedings of 14th Innovations in Theoretical Computer Science (ITCS 2023)*, January 2023.
- Yichi Zhang, Fang-Yi Yu, Grant Schoenebeck, and David Kempe. A system-level analysis of conference peer review. In Proceedings of the 23rd ACM Conference on Economics and Computation (EC 2022), pages 1041–1080, 2022.
- 3. Zhihuan Huang, Yuqing Kong, Tracy Xiao Liu, Grant Schoenebeck, and Shengwei Xu. Bonus! Maximizing surprise. In Proceedings of the 31st ACM Web Conference (WWW 2022), page 36–46, 2022.
- 4. <u>Darshan Chakrabarti</u>, Jie Gao, <u>Aditya Saraf</u>, Grant Schoenebeck, and <u>Fang-Yi Yu</u>. Optimal local bayesian differential privacy over markov chains. In *Proceedings of Twenty-first International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2022)*, May 2022. Extended Abstract.
- 5. Shih-Tang Su, Vijay Subramanian, and Grant Schoenebeck. Bayesian persuasion in sequential trials. In *Proceedings of the 17th Conference on Web and Internet Economics (WINE 2021)*, December 2021.
- 6. Grant Schoenebeck and <u>Biaoshuai Tao</u>. Wisdom of the crowd voting: Truthful aggregation of voter information and preferences. In *Proceedings of the Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS 2021)*, December 2021.
- Zhihuan Huang, Shengwei Xu, You Shan, Yuxuan Lu, Yuqing Kong, Tracy Xiao Liu, and Grant Schoenebeck. SURPRISE! and when to schedule its. In Proceedings of the 30th International Joint Conference on Artificial Intelligence (IJCAI 2021), August 2021.
- 8. Grant Schoenebeck, Fang-Yi Yu, and Yichi Zhang. Information elicitation from rowdy crowds. In *Proceedings of the 30th The Web Conference (WWW 2021)*, April 2021.

- 9. Grant Schoenebeck, <u>Chenkai Yu</u>, and <u>Fang-Yi Yu</u>. Timely information from prediction markets. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2021)*, May 2021.
- 10. <u>Noah Burrell</u> and Grant Schoenebeck. Relaxing common belief for social networks. In *Proceedings of* the 12th Innovations in Theoretical Computer Science (ITCS 2021), January 2021.
- 11. Grant Schoenebeck and Fang-Yi Yu. Learning and strongly truthful multi-task setting peer prediction: A variational approach. In *Proceedings of the 12th Innovations in Theoretical Computer Science (ITCS 2021)*, January 2021.
- Grant Schoenebeck and Fang-Yi Yu. Two strongly truthful mechanisms for three heterogeneous agents answering one question. <u>ACM Transactions on Economics and Computation (TEAC)</u>, September 2022. Accepted. To appear. Preliminary version appeared in WINE '20.
- Grant Schoenebeck and Fang-Yi Yu. Escaping saddle points in constant dimensional spaces: an agentbased modeling perspective. In Proceedings of the 21st ACM Conference on Economics and Computation, (EC 2020), July 2020.
- Grant Schoenebeck, <u>Fang-Yi Yu</u>, and <u>Biaoshuai Tao</u>. Limitations of greed: Influence maximization in undirected networks re-visited. In *International Conference on Autonomous Agents and Multi-Agent* Systems (AAMAS 2020), May 2020.
- Wei Chen, <u>Binghui Peng</u>, Grant Schoenebeck, and <u>Biaoshuai Tao</u>. Adaptive greedy versus non-adaptive greedy for influence maximization. In *Thirty-Fourth AAAI Conference on Arificial intelligence (AAAI 2020)*, February 2020.
- Yuqing Kong, Grant Schoenebeck, Fang-Yi Yu, and Biaoshuai Tao. Information elicitation mechanisms for statistical estimation. In *Thirty-Fourth AAAI Conference on Arificial intelligence (AAAI 2020)*, February 2020.
- 17. Yuqing Kong, Chris Peikert, Grant Schoenebeck, and <u>Biaoshuai Tao</u>. Outsourcing computation: the minimal refereed mechanism. In *The 15th Conference on Web and Internet Economics (WINE 2019)*, December 2019.
- Grant Schoenebeck, <u>Biaoshuai Tao</u>, and <u>Fang-Yi Yu</u>. Think globally, act locally: On the optimal seeding for nonsubmodular influence maximization. In *International Conference on Randomization and Computation (RANDOM 2019)*, pages 39:1–39:20, September 2019.
- Grant Schoenebeck and <u>Biaoshuai Tao</u>. Influence maximization on undirected graphs: Towards closing the (1-1/e) gap. In *Proceedings of the 20th ACM Conference on Economics and Computation*, (EC 2019), pages 423–453, June 2019.
- 20. Jie Gao, Grant Schoenebeck, and Fang-Yi Yu. The volatility of weak ties: Co-evolution of selection and influence in social networks. In *Proceedings of the 18th International Conference on Autonomous Agents and MultiAgent Systems, (AAMAS 2019)*, pages 619–627, May 2019.
- 21. Yuqing Kong and Grant Schoenebeck. Eliciting expertise without verification. In Proceedings of the 2018 ACM Conference on Economics and Computation (EC 2018), June 2018.
- 22. Yuqing Kong and Grant Schoenebeck. Water from two rocks: Maximizing the mutual information. In *Proceedings of the 2018 ACM Conference on Economics and Computation (EC 2018)*, June 2018.
- Xingjun Ma, <u>Bo Li</u>, Yisen Wang, Sarah M. Erfani, <u>Sudanthi Wijewickrema</u>, Michael E. Houle, Grant Schoenebeck, Dawn Song, and James Bailey. Characterizing adversarial subspaces using local intrinsic dimensionality. In *Proceedings of the 6th International Conference on Learning Representations (ICLR* 2018), April 2018.
- 24. Yuqing Kong and Grant Schoenebeck. Equilibrium selection in information elicitation without verification via information monotonicity. In *Proceedings of the 9th Innovations in Theoretical Computer Science (ITCS 2018)*, January 2018.

- 25. <u>Yuqing Kong</u> and Grant Schoenebeck. Optimizing bayesian information revelation strategy in prediction markets: the Alice Bob Alice case. In *Proceedings of the 9th Innovations in Theoretical Computer Science (ITCS 2018)*, January 2018.
- Grant Schoenebeck and Fang-Yi Yu. Consensus of interacting particle systems on Erdös-Rényi graphs. In Proceedings of the Twenty-Nineth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2018), January 2018.
- Boyu Tian, Jiamin Huang, Barzan Mozafari, and Grant Schoenebeck. Contention-aware lock scheduling for transactional databases. Proceedings of the 44th International Conference on Very Large Data Bases (VLDB 2018), 11(5), January 2018.
- 28. <u>Rico Angell</u> and Grant Schoenebeck. Don't be greedy: Leveraging community structure to find high quality seed sets for influence maximization. In *The 13th Conference on Web and Internet Economics (WINE 2017)*, December 2017.
- 29. Jie Gao, Grant Schoenebeck, and Fang-Yi Yu. Cascades and myopic routing in nonhomogeneous Kleinberg's small world model. In *The 13th Conference on Web and Internet Economics (WINE 2017)*, December 2017.
- Grant Schoenebeck and <u>Biashuai Tao</u>. Beyond worst-case (in)approximability of nonsubmodular influence maximization. In *The 13th Conference on Web and Internet Economics (WINE 2017)*, December 2017.
- 31. <u>Huang, Jiamin, Barzan Mozafari, Grant Schoenebeck, and Thomas F Wenisch. A top-down approach</u> to achieving performance predictability in database systems. In *Proceedings of the 2017 ACM International Conference on Management of Data (SIGMOD 2017)*, pages 745–758. ACM, May 2017.
- 32. Jie Gao, <u>Bo Li</u>, Grant Schoenebeck, and <u>Fang-Yi Yu</u>. Engineering agreement: The naming game with asymmetric and heterogeneous agents. In <u>Proceedings</u> of the Thirty-First AAAI Conference on Artificial Intelligence (AAAI 2017), pages 537–543, February 2017.
- 33. Yuqing Kong, Katrina Ligett, and Grant Schoenebeck. Putting peer prediction under the micro(economic)scope and making truth-telling focal. In *The 13th Conference on Web and Internet Economics (WINE 2016)*, December 2016.
- Grant Schoenebeck and Fang-Yi Yu. Complex contagions on configuration model graphs with a powerlaw degree distribution. In *The 13th Conference on Web and Internet Economics (WINE 2016)*, December 2016.
- 35. Jie Gao, <u>Ghasemiesfeh</u>, <u>Golnaz</u>, Grant Schoenebeck, and <u>Fang-Yi Yu</u>. General threshold model for social cascades: Analysis and simulations. In *Proceedings of the 2016 ACM Conference on Economics* and Computation (EC 2016), pages 617–634, July 2016.
- Grant Schoenebeck, Snook, Aaron, and Fang-Yi Yu. Sybil detection using latent network structure. In Proceedings of the 2016 ACM Conference on Economics and Computation (EC 2016), pages 739–756. ACM, July 2016.
- <u>Roozbeh Ebrahimi</u>, Jie Gao, <u>Golnaz Ghasemiesfeh</u>, and Grant Schoenebeck. Complex contagions in Kleinberg's small world model. In *Proceedings of the 6th Innovations in Theoretical Computer Science* (*ITCS 2015*), pages 63–72, January 2015.
- Arpita Ghosh, Katrina Ligett, Aaron Roth, and Grant Schoenebeck. Buying private data without verification. In Proceedings of the 15th ACM Symposium on Economics and Computation (EC 2014), June 2014.
- Shiri Chechik, Daniel Larkin, Liam Roditty, Grant Schoenebeck, Robert Endre Tarjan, and Virginia Vassilevska Williams. Better approximation algorithms for the graph diameter. In Proceedings of the 25th ACM-SIAM Symposium on Discrete Algorithms (SODA 2014), pages 1041–1052, 2014.

- <u>Travis Martin</u>, Grant Schoenebeck, and Michael P. Wellman. Characterizing strategic cascades on networks. In *Proceedings of the 15th ACM Symposium on Economics and Computation (EC 2014)*, 2014.
- Grant Schoenebeck. Potential networks, contagious communities, and social network structure. In Proceedings of the 22nd International World Wide Web Conference (WWW 2013), 2013.
- 42. Sanjeev Arora, <u>Rong Ge, Sushant Sachdeva</u>, and Grant Schoenebeck. Finding overlapping communities in social networks: Toward a rigorous approach. In *Proceedings of the 13th ACM conference on Electronic Commerce (EC 2012)*, 2012.
- 43. <u>Aaron Roth</u> and Grant Schoenebeck. Conducting truthful surveys, cheaply. In *Proceedings of the 13th* ACM conference on Electronic Commerce (EC 2012), 2012.
- 44. <u>Rafael M. Frongillo</u>, Grant Schoenebeck, and <u>Omer Tamuz</u>. Social learning in a changing world. In <u>The Seventh Annual Workshop on Internet and Network Economics (WINE 2011)</u>, 2011.
- 45. <u>Thomas Hollenstein</u> and Grant Schoenebeck. General hardness amplification of predicates and puzzles. In 8th Theory of Cryptography Conference (TCC 2011), 2011.
- 46. Anupam Gupta, <u>Aaron Roth</u>, Grant Schoenebeck, and Kunal Talwar. Constrained non-monotone submodular maximization: Offline and secretary algoritms. In *The 6th Workshop on Internet and Network Economics (WINE 2010)*, December 2010.
- 47. <u>Arnab Bhattacharyya</u>, <u>Swastik Kopparty</u>, Grant Schoenebeck, Madhu Sudan, and David Zuckerman. Optimal testing of reed-muller codes. In *Proceedings of the 51st IEEE Symposium on Foundations of Computer Science (FOCS 2010)*, October 2010.
- 48. Elchanan Mossel and Grant Schoenebeck. Arriving at consensus in social networks. In *The First Symposium on Innovations in Computer Science (ICS 2010)*, January 2010.
- <u>Constantinos Daskalakis</u>, Grant Schoenebeck, <u>Gregory Valiant</u>, and <u>Paul Valiant</u>. On the complexity of Nash equilibria of action-graph games. In *Proceedings of the 17th ACM-SIAM Symposium on Discrete Algorithms (SODA 2009)*, pages 710–719, 2009.
- 50. Grant Schoenebeck. Linear level Lasserre lower bounds for certain k-CSPs. In Proceedings of the 49th Annual IEEE Symposium on Foundations of Computer Science (FOCS 2008), pages 593–692, 2008.
- Grant Schoenebeck, Luca Trevisan, and <u>Madhur Tulsiani</u>. A linear round lower bound for Lovasz-Schrijver SDP relaxations of Vertex Cover. In *Proceedings of the 22nd IEEE Conference on Computa*tional Complexity (CCC 2007), 2007.
- Grant Schoenebeck, Luca Trevisan, and <u>Madhur Tulsiani</u>. Tight integrality gaps for Lovasz-Schrijver LP relaxations of Vertex Cover and Max Cut. In *Proceedings of the 39th ACM Symposium on Theory* of Computing (STOC 2007), 2007.
- 53. Grant Schoenebeck and Salil Vadhan. The computational complexity of Nash equilibria in concisely represented games. In *Proceedings of the 7th ACM conference on Electronic Commerce (EC 2006)*, pages 270–279, 2006.
- David C. Parkes and Grant Schoenebeck. Growrange: Anytime VCG-based mechanisms. In Proceedings of the 19th National Conference on Artificial Intelligence (AAAI 2004), pages 34–41, 2004.

#### Journal Articles

1. Grant Schoenebeck and Fang-Yi Yu. Two strongly truthful mechanisms for three heterogeneous agents answering one question. <u>ACM Transactions on Economics and Computation (TEAC)</u>, September 2022. Accepted. To appear. Preliminary version appeared in WINE '20

- Wei Chen, <u>Binghui Peng</u>, Grant Schoenebeck, and Biaoshuai Tao. Adaptive greedy versus non-adaptive greedy for influence maximization. *Journal of Artificial Intelligence Research*, 74:303–351, 2022. Previous version appeared in AAAI '20
- Grant Schoenebeck, <u>Biaoshuai Tao</u>, and <u>Fang-Yi Yu</u>. Think globally, act locally: On the optimal seeding for nonsubmodular influence maximization. *Information and Computation (I&C)*, 2022. Accepted; to appear. Previous version appeared in Approx/Random '19.
- Grant Schoenebeck and <u>Biaoshuai Tao</u>. Influence maximization on undirected graphs: Towards closing the (1-1/e) gap. ACM Transactions on Economics and Computation (TEAC), 2020. Previous version appeared in EC '19.
- Grant Schoenebeck and <u>Biaoshuai Tao</u>. Beyond worst-case (in)approximability of nonsubmodular influence maximization. ACM Transactions on Computation Theory (ToCT), 11(3):12:1–12:56, June 2019. Previous version appeared in WINE '17.
- 6. <u>Yuqing Kong</u> and Grant Schoenebeck. An information theoretic framework for designing information elicitation mechanisms that reward truth-telling. *ACM Transactions on Economics and Computation* (*TEAC*), 7(1):2:1–2:33, February 2019.
- 7. <u>Roozbeh Ebrahimi</u>, Jie Gao, <u>Golnaz Ghasemiesfeh</u>, and Grant Schoenebeck. How complex contagions spread quickly in the preferential attachment model and other time-evolving networks. *IEEE Transactions on Network Science and Engineering*, 4(4):201–214, June 2017.
- 8. Grant Schoenebeck and Salil Vadhan. The computational complexity of Nash equilibria in concisely represented games. ACM Transactions on the Theory of Computation (ToTC), 4, 2012. A previous version appeared in EC '06.
- <u>Sarita Yardi</u>, <u>Daniel M. Romero</u>, Grant Schoenebeck, and danah boyd. Detecting spam in a twitter network. *First Monday*, 15(2), January 2010.

### Workshops

1. <u>Halldor Gylfason</u>, <u>Omar Khan</u>, and Grant Schoenebeck. Chora: Expert-based p2p web search. Agents and Peer-to-Peer Computing, 4461:74–85, 2008. First appeared in Workshop on Agents and Peer to Peer Computing (AP2PC) at Automous Agents and Multiagent systems (AAMAS 2006).

### Working Papers

- 1. <u>Yichi Zhang</u> and Grant Schoenebeck. High-effort crowds: Limited liability via tournaments, 2022. submitted.
- 2. <u>Noah Burrell</u> and Grant Schoenebeck. Measurement integrity in peer prediction: A peer assessment case study. *arXiv*, 2021.
- 3. Paul Resnick, Yuqing Kong, Grant Schoenebeck, and Tim Weninger. Survey equivalence: A procedure for measuring classifier accuracy against human labels. *arXiv*, 2021.
- 4. <u>Shih-Tang Su</u>, Vijay G. Subramanian, and Grant Schoenebeck. Social learning with questions. In *Proceedings of the 14th Workshop on the Economics of Networks, Systems and Computation (NetEcon 2019)*, page 9:1, June 2019.
- 5. Jie Gao, <u>Golnaz Ghsemisefeh</u>, Jason Jones, and Grant Schoenebeck. Penny for the poor: Complex contagions in charitable donations, 2019.

### **Technical Reports**

1. <u>Paolo Codenotti</u>, Grant Schoenebeck, and <u>Aaron Snook</u>. Graph isomorphism and the lasserre hierarchy. arXiv, 2013.

# Grants/Gifts

- National Science Foundation, "Collaborative Research: AF: Small: Promoting Social Learning Amid Interference in the Age of Social Media," \$269,376. Oct. 2022 - September 2025. PI Grant Schoenebeck. Collaborative award with PI Jie Gao from Rutgers; and PI Jason Jones from SUNY Stony Brook, who received an additional \$330,000.
- National Science Foundation, "AF: Small: Unifying Information Aggregation and Information Elicitation," \$349,907. Oct. 2020 - Oct. 2023. PI Grant Schoenebeck.
- National Science Foundation, "AF: Small: Eliciting Accurate and Useful Information from Heterogeneous Agents," \$400,000. Sep. 2016 Aug. 2020. PI Grant Schoenebeck.
- National Science Foundation, "AitF: FULL: Collaborative Research: Modeling and Understanding Complex Influence in Social Networks," \$363,154. Sep. 2015 - Jul. 2018. Collaborative award with PI Jie Gao; co-PI Jason Jones from SUNY Stony Brook, who received an additional \$356,845. There is an additional \$16,000 REU supplement for this award (at UMich).
- National Science Foundation, "CAREER: Social Networks Processes, Structures, and Algorithms," \$505,000. Jul. 2015-Jun. 2021. PI Grant Schoenebeck.
- Facebook Faculty Award. "Complex Contagions on Social Networks." \$25,000. Gift. July, 2014.
- Google Faculty Award. "Discovering Underlying Social Structure Using Online Social Network Data." \$76,722. Gift. Feb. 2013.

# Mentorship

Postdocs Advised:

- Fang-Yi Yu: 2019-2020. (Post-doc at Harvard)
- Bo Li: 2016-2017. (Tenure-track position at UIUC)

PhD Students Advised:

- Yuqing Kong. Graduated: May 2018. (Tenure-track position at Peking University)
- Fang-Yi Yu. Graduated: May 2019. (Postdoc at University of Michigan)
- Biaoshuai Tao. Graduation: May 2020. (Tenure-track position at Shenghai Jiao Tong University)
- Noah Burrell. Expected Graduation: May 2023.
- Yichi Zhang. Expected Graduation: May 2024.
- Sanzeed Anwar. Expected Graduation: May 2026.
- Shengwei Xu. Expected Graduation: May 2026.
- David Gamba. Expected Graduation: May 2027.

Masters Students Advised:

- Jose Sanchez. December 2021. (Next position: Northwestern University, PhD student)
- Ping-Sheng Kao. May 2019. (Next position: Apple)
- Aaron Snook. May 2015. (Next position: Epic Systems)
- Ture Peken. May 2013. (Next position: University of Arizona, PhD student)

Undergraduate research projects directed:

- Maitreyi Swaroop—"Testing Social Choice Functions in Uncertain Situations," Summer, Fall 2021.
- Yunsoo Kim—"Ideological Turing Test," Summer, Fall 2019. (Next position: IMC Trading)
- Josh Kavner—"Detecting the Overton Window," Summer 2019. (Next position: PhD Rensselaer Polytechnic institute).
- Andong Luiz Li Zhao—"Peer Prediction," SURE, Summer 2017. (Next position: PhD Northweatern University).
- Rico Angell— "Nonsubmodular Influence Maximization," SURE, Summer 2015; Independent Study, Fall 2015. (Next position: PhD UMass Amhearst)
- Luum Habtermariam—"Threshold Homophily in Network Cascades," UROP Summer 2014. (Next position: Google)
- Viknesh Krishnan—" Modelling the Cost of Disagreement," Mathematics Honors Thesis, Winter 2014. (Next position: Google)

# Teaching

University of Michigan:

- SI 670: Applied Machine Learning; Fall 2022, Fall 2020, Fall 2019.
- SIADS 502: Mathematical Methods for Data Science; Winter 2021, Fall 2020, Winter 2020.
- SIADS 521: Visual Exploration of Data; Winter 2021, Winter 2020.

- EECS 547 / SI 652: Incentives and Strategic Behavior in Computational Systems(formally Electronic Commerce); Fall 2020, Fall 2019, Fall 2017.
  - A completely revamped graduate course introducing algorithmic game theory topics.
  - Fall 2017 included a section focused on information elicitation mechanisms.
- EECS 376: Foundations of Computer Science; Winter 2017, Winter 2015.
  - Winter 2017 version reformed course to include more modern topics.
- EECS 598-04: Randomness and Computation; Fall 2015.
  - A new graduate level course on randomized algorithms and the mathematical tools required to analyze them.
- EECS 574: Computational Complexity Theory; Fall 2014, Fall 2012.
- EECS 203: Discrete Mathematics; Winter 2012.
- EECS 598-06: Social Networks-Reasoning about Structure and Processes; Fall 2012.
  - A new advanced graduate seminar course looking at Social Network research from a theoretical computer science perspective.

Short-Courses / Tutorials:

- "An Information Theoretic View of Information Elicitation." Grant Schoenebeck and Yuqing Kong. We presented an overview of much of the previous "Peer prediction" literature and how our work illuminates the field by understanding it through a new information theoretic lens. Tutorial, ACM Conference on Economics and Computation, June, 2017.
- Instructor *The Math Behind the Machine*; Three week course about theoretical computer science topics for high school students in New Jersey Governor's School of Engineering and Technology, Summers 2011, 2012.

## Service

Special Semesters:

• Co-organizer of the Fall 2022 IDEAL Special semester on Data Economics. This semester gathered 19 senior faculty members, who are global leaders data economics, and their students together for a weekly 3-hour virtual program as well as three one-day in-person workshops.

Program Committees:

- ACM Economics and Computation (EC): 2021, 2020, 2017, 2016, 2015, 2014, 2013. Senior PC: 2019, 2018.
- NetEcon (Workshop): 2019, 2018, 2017. PC Co-chair, 2020-2021.
- World Wide Web Conference (Economics, Monetization, and Online Markets): 2023, 2022.
- World Wide Web Conference (Social Networks and Graph Analysis track): 2019, 2018, 2017, 2016, 2015.
- Autonomous Agents and Multiagent Sytems (AAMAS): 2021, 2020, 2019, 2018, 2017.
- Workshop on Information and Network Economics (WINE): 2019, 2012.
- WSDM: 2021.
- Neural Information Processing Systems (NeurIPS): 2020.

- Complex Networks: 2020, 2019
- Association for the Advancement of Artificial Intelligence (AAAI): 2018
- NetSciCom (Workshop): 2017.

#### Panels:

• National Science Foundation panelist: 2019, 2018 (2 panels), 2017 (2 panels), 2015 (2 panels).

#### Workshops:

- Co-organizer of the "Elicitation Mechanisms in Practice" Workshop at Northwestern University as part of the IDEAL Special semester on Data Economics. 2022
- Co-organizer of the 6th Midwest Workshop on Control and Game Theory. 182 researchers across a variety disciplines including engineering, economics, mathematics, and computer science attended the workshop which involved 20 faculty speakers (17 external) and 54 poster presentations. 2017.
- During the 2011-2012 academic year, organized monthly day-long meetings at Princeton University to bring together faculty and students from five institutions. Each centered on a particular topic in theoretical computer science and often had outside speakers. Part of the National Science Foundation Expedition grant to "Understand, Cope with, and Benefit from Intractability".

# **Diversity and Outreach**

- I have advised three underrepresented minority (URM) undergraduates (Luum Habtemariam, Rico Angell, and Andong Luis Li Zhao) for summer long projects through the University of Michigan UROP (Undergraduate Research Opportunity Program) and SURE (Summer Undergraduate Research in Engineering) programs.
- 22 of 42 papers that I have published since arriving at UMich have URM or female coauthors.
- My two joint grants are with a female PI. 1 of 2 former postdocs (Li Bo), 1 of 3 graduated PhD students (Yuqing Kong), 2 of 4 Masters' students I advised (Jose Sanchez, Ture Peken) and 4 of 6 undergraduate students I advised are URM or female.
- Presented a series of lectures on Social Networks to Ms. Ludlaw's classroom at John Glenn High School in Westland, Michigan to illustrate how mathematics can apply to everyday problems. Majority of students were URM. 2017.
- Faculty Presenter at CS KickStart, a free weeklong summer program for incoming first-year students that aims to improve the enrollment and persistence of women in U-M's computer science program. 2017.