

Sanmay Das

Dept. of Computer Science
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Education

- 2001–2006 **Massachusetts Institute of Technology, Cambridge, MA**
Ph.D. in Computer Science, June 2006
Dissertation: Dealers, Insiders and Bandits: Learning and its Effects on Market Outcomes
Advisors: Profs. Tomaso Poggio and Andrew Lo
S.M. in Electrical Engineering and Computer Science, June 2003
Thesis: Intelligent Market-Making in Artificial Financial Markets
Advisor: Prof. Tomaso Poggio
- 1997–2001 **Harvard College, Cambridge, MA**
A.B. magna cum laude with highest honors in Computer Science
Honors thesis: Optimal Behavior in Group Environments
Advisors: Profs. Barbara Grosz and Avi Pfeffer

Professional Experience

- August 2020– **Professor** George Mason University *Fairfax, VA*
Department of Computer Science
Co-Director, Center for Advancing Human-Machine Partnership (2022-)
- July–August 2020 **Professor** Washington University in St. Louis, *St. Louis, MO*
Department of Computer Science and Engineering
- 2013–June 2020 **Associate Professor** Washington University in St. Louis, *St. Louis, MO*
Department of Computer Science and Engineering (granted tenure in 2015)
Steering Committee Chair, Division of Computational and Data Sciences (2018-2020)
- 2012–2013 **Associate Professor** Virginia Tech, *Blacksburg, VA*
Department of Computer Science
Member of the Discovery Analytics Center
- 2007–2012 **Assistant Professor** Rensselaer Polytechnic Institute, *Troy, NY*
Department of Computer Science
and the Lally School of Management and Technology (by courtesy, 2010-2012)
Member of the Data Science Research Center
- 2011–2012 **Visiting Scholar** Office of the Comptroller of the Currency, *Washington, DC*
- 2006–2007 **Postdoctoral Scholar** UC San Diego, *La Jolla, CA*
Department of Computer Science and Engineering.

2002–2006	Research Assistant	MIT, Cambridge, MA Center for Biological and Computational Learning and Laboratory for Financial Engineering.
Summer 2004	Consultant	Bessemer Venture Partners, Larchmont, NY Full-time work with a small team on the development of trading strategies for a new hedge fund.
1999–2001	Research Assistant	Harvard University, Cambridge, MA Division of Engineering and Applied Sciences.

Awards and Honors

2023	Outstanding Service Award, Department of Computer Science, George Mason University.
2022	<i>Computing Community Consortium</i> Award for the Best Paper in the Blue Sky Ideas Track at AAAI.
2022	Best Paper Award, Learning with Strategic Agents Workshop at AAMAS.
2019	Co-author and advisor on a paper awarded the 2019 Best Original Research Paper by an Early Career Scholar award in the <i>International Journal of Eating Disorders</i> .
2018	Distinguished Senior Program Committee Member, IJCAI.
2017	Department Chair Award for Outstanding Teaching, Computer Science and Engineering, Washington University in St. Louis.
2011	Co-author and advisor on one of two runners-up for the Best Student Paper Award at AAMAS.
2010	National Science Foundation Early Career Development Award.
2001	Presidential Fellow, Massachusetts Institute of Technology.
2001	Thomas T. Hoopes Prize for Excellence in Undergraduate Research, Harvard College.
2001	Nominated for the Division of Engineering and Applied Sciences Teaching Fellow Award, Harvard University.
Spring 2001	Committee on Undergraduate Education Certificate of Distinction in Teaching, Computer Science 181, Harvard University.
Fall 2000	Committee on Undergraduate Education Certificate of Distinction in Teaching, Computer Science 182, Harvard University.

Funding

2019-2023	PI, National Science Foundation RI Small award (\$459,444) for the project <i>Efficient and Just Allocation of Scarce Societal Resources, and Applications to Homelessness</i> (Co-PI: Patrick Fowler)
2019-2022	PI, National Science Foundation EAGER award under the AI and Society (AI-DCL) program (\$299,996) for the project <i>Exploratory research on the use of AI at the intersection of homelessness and child maltreatment</i> (Co-PI: Patrick Fowler)
2020-2023	Co-PI, National Science Foundation / Amazon Fairness in AI program (\$785,000 total; \$444,145 NSF, \$340,855 Amazon) for the project <i>FAI: FairGame: An Audit-Driven Game Theoretic Framework for Development and Certification of Fair AI</i> (PI: Yevgeniy Vorobeychik; Co-PIs Roman Garnett, Chien-Ju Ho, and Brendan Juba).

2019-2022	PI, National Science Foundation CISE REU Site award (\$379,994) for renewal of the site <i>Big Data Analytics</i> (Co-PI: Roman Garnett).
2019-2021	Co-I, NIH (National Institute of Mental Health) R34 Award (\$708,749) for the project <i>Leveraging Social Media to Identify and Connect Teens with Eating Disorders to a Mobile Guided Self-Help Mobile Intervention</i> (PI: Patricia Cavazos-Rehg, Co-PI: Denise Wilfley, Co-Is: Ellen Fitzsimmons-Craft, Richard Grucza, Craig Barr Taylor)
2019-2020	Co-PI, Mozilla Foundation Responsible Computer Science Challenge Award (\$149,833) (PI: Ron Cytron, Co-PIs: Sandra Mateucci, Marion Neumann, William Siever)
2018-2020	PI, Computer Science & Engineering Department Seed Grant (\$75,000) (Co-PI: Roman Garnett)
2018-2019	Co-PI, Washington University Institute for Public Health Precision Public Health Award (\$49,972) for the project <i>Designing data-driven homelessness prevention: A precision public health approach</i> (PI: Patrick Fowler, Co-PI: Peter Hovmand).
2018-2023	Member of the Administrative Core Scientific Learning Collaborative, NIH (NICHD) <i>Center for Innovation in Child Maltreatment Policy, Research, and Training</i> (Total award \$6,496,050; PI Melissa Jonson-Reid, with a large team).
2015-2019	PI, National Science Foundation RI Small award (\$429,600) for the project <i>Modeling Platform Competition: A Multi-Agent Systems Approach</i> .
2016-2019	PI, National Science Foundation CISE REU Site award (\$359,111) for the new site <i>Big Data Analytics</i> (Co-PI: Roman Garnett).
2012-2014	Co-PI, Intelligence Advanced Research Projects Activity (IARPA) Contract (\$238,192) for the project <i>Network Identification in Large Semantic Databases Using Incomplete Information</i> (PI: Mark Goldberg, co-PIs Malik Magdon-Ismael and William Wallace).
2011-2017	Co-PI, National Science Foundation CDI Type II award (\$1.77 million total, \$1.51 million to RPI) for the project <i>Cyber Enabled Discovery System for Advanced Multidisciplinary Study of Humanitarian Logistics for Disaster Response</i> (PI: Jose-Holguin Veras, co-PIs Malik Magdon-Ismael and John Mitchell, in collaboration with Tricia Wachtendorf at the University of Delaware).
2010-2016	PI, National Science Foundation (NSF) Early Career Development (CAREER) award (\$500,000) for the project <i>The Dynamics of Collective Intelligence</i> .
2009-2013	PI, US-Israel Binational Science Foundation (BSF) grant (\$104,000) with Dr. David Sarne (Bar-Ilan University) as co-PI for the project <i>Equilibria in Shopping-Agent Mediated Marketplaces</i> .
2009-2012	PI, National Science Foundation CCF Award (\$544,000 total, \$210,000 to RPI) for the project <i>Correlation Mining and its Applications in Test Cost Reduction, Yield Enhancement, and Performance Calibration in Analog/RF Circuits</i> (in collaboration with Yiorgos Makris at Yale University / University of Texas at Dallas) (note: managed this fund from 2010-2012; transferred from original awardee Petros Drineas).

Major External Service Roles

ACM Roles	Chair, ACM Special Interest Group on Artificial Intelligence (SIGAI): July 2019–Present. Vice-Chair, SIGAI: July 2013–June 2019. Elected At-Large Member of the SIG Governing Board (SGB), 2021-23.
Member	DARPA Information Science and Technology (ISAT) Study Group, 2023-26.

Member of the Board of Directors International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS): 2018-2024.

Program Co-Chair 6th AAI/ACM Conference on AI, Ethics, and Society (AIES 2023).

Program Co-Chair 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2017).

Associate Program Chair 32nd International Joint Conference on Artificial Intelligence (IJCAI 2023).

General Chair 2nd ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO 2022).

Associate Editor *ACM Transactions on Economics and Computation* (2018–)
Journal of Artificial Intelligence Research 2019–)
Autonomous Agents and Multiagent Systems (2021–)
Artificial Intelligence Review (2014–2016)
AI Matters (newsletter of SIGAI) (2014–)

Selected Other External Service Roles

JAAMAS Track Co-Chair AAMAS 2023.

Member ACM Publications Board's AI Task Force, 2023.

Committee Member INFORMS AI Strategy Ad Hoc Committee, 2021-22.

Conference Chair First ACM SIGAI Career Network Conference (CNC 2015).

Sister Track Chair 24th International Joint Conference on Artificial Intelligence (IJCAI 2015).

Sponsorships Chair 12th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2013)

Workshops Chair 12th ACM Conference on Electronic Commerce (ACM EC 2011).

General Co-Chair Second Conference on Auctions, Market Mechanisms and Their Applications (AMMA 2011).

Program Co-Chair First Conference on Auctions, Market Mechanisms and Their Applications (AMMA 2009).

Program committees AAI Conference on Artificial Intelligence (AAI): 2012 (Senior PC), 2013 (Senior PC), 2014 (Senior PC), 2015, 2016 (Senior PC), 2018 (Area Chair), 2019 (Senior PC of Main Track and AI for Social Impact Track), 2020 (Area Chair), 2021 (Area Chair), 2022 (Senior PC), 2023 (Area Chair), 2024 (Area Chair)
 Conference on AI, Ethics, and Society (AIES), 2019
 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS): 2012 (Senior PC), 2014 (PC), 2015 (PC), 2018 (Senior PC), 2019 (Senior PC), 2021 (Area Chair), 2023 (Senior PC)
 ACM Conference on Electronic Commerce / Economics and Computation (EC): 2012, 2013, 2014, 2016, 2018 (Senior PC), 2019, 2020
 International Joint Conference on Artificial Intelligence (IJCAI): 2011 (Senior PC), 2013 (Senior PC), 2016 (Senior PC), 2018 (Senior PC), 2019 (Senior PC), 2020 (Senior PC), 2021 (Area Chair), 2022 (Senior PC)
 Workshop on the Economics of Networks, Systems and Computation (NetEcon): 2017
 International Conference on Machine Learning (ICML): 2012, 2016
 European Conference on Artificial Intelligence (ECAI): 2014
 Neural Information Processing Systems (NeurIPS): 2012 (Reviewer)

IEEE International Conference on Data Mining (ICDM): 2008, 2009, 2010, 2012
Conference on Auctions, Market Mechanisms, and Their Applications (AMMA): 2011
EC Workshop on Social Computing and User Generated Content: 2014
NIPS Workshop on Computational Social Science and the Wisdom of Crowds: 2010
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD): 2010
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD): 2009
Conference on Intelligent Data Engineering and Automated Learning (IDEAL): 2008
SIAM International Conference on Data Mining (SDM): 2008

Steering committee The Conferences on Auctions, Market Mechanisms, and their Applications (AMMA).

Doctoral Consortium Mentor AAMAS 2011: mentor to Manish Jain (USC).

AAMAS 2015: mentor to Elaine Wah (U. Michigan)

IJCAI 2018: mentor to Bryan Wilder (USC)

AAMAS 2019: mentor to Bo Li (Stony Brook)

Proposal reviewing Review panelist for the US National Science Foundation for many disciplinary, interdisciplinary and graduate fellowship and training programs; proposal reviewer for the Israel Science Foundation, US-Israel Binational Science Foundation, Natural Sciences and Engineering Research Council of Canada, and the National Endowment for the Humanities.

Other reviewing Textbook and book proposal reviewer for Cambridge University Press.

Journal reviewing Refereeing for many journals, including *Proceedings of the National Academy of Sciences*, *Journal of Artificial Intelligence Research*, *Artificial Intelligence*, *Journal of Political Economy*, *Operations Research*, *Management Science*, *ACM Transactions on Economics and Computation*, *ACM Transactions on Internet Technology*, *ACM Transactions on Networking*, *Data Mining and Knowledge Discovery*, *ACM Computing Surveys*, *IEEE Transactions on Knowledge and Data Engineering*, *Computational Intelligence*, *Quantitative Finance*, *Mathematical Finance*, *Physica A*.

Selected University Service

Co-Director, CAHMP Serve as PI for one of GMU's five transdisciplinary, cross-school Centers, providing strategic direction and leadership.

Cluster Hiring Initiative Co-led (with Christopher Carr, Chief Diversity Officer) a successful \$2.5M, competitively awarded internal proposal for an interdisciplinary cluster of new faculty in "AI, Social Justice, and Public Policy" at GMU.

Steering Committee Chair Division of Computational and Data Sciences, Washington University. 2017–2020. Led the planning and proposal for a new Ph.D. granting division and program. Served as the Chair of the Steering Committee of the Program in its first year of existence.

Strategic Planning Committee Member School of Engineering and Applied Sciences, Washington University. Led the "Data Sciences for Humanity" whitepaper (2016-17).

Steering Committee Member McKelvey Hall (new CSE and Data Sciences building at Washington University) Planning Committee (2017–2020);

Faculty Search Committees George Mason University CS (2020-21, 21-22, 22-23), Schar School and School of Computing (2021-22), Department of Philosophy and School of Computing (2022-23). Washington University CSE (2015-16, 2017-18); Virginia Tech CS (2012-13); Washington University Political Science (Methods) (2017-18).

PhD Administrative Committee member Brown School, Washington University (2018-20).

Committee Member Level 2 Promotion and Tenure Committee, GMU College of Engineering and Computing (2022-24).

Committee Member Graduate Studies Committee, Computer Science Department, GMU (2021-22, 2022-23).

Committee Member Danforth Campus Standing Committee on Work/Life Balance, Washington University (2018-20).

Committee Member School of Engineering and Applied Sciences Tenure Clock Committee (2018).

Publications

Edited Volumes

- [1] Kate Larson, Michael Winikoff, Sanmay Das, and Edmund H. Durfee, eds. *AAMAS '17: Proceedings of the 16th Conference on Autonomous Agents and MultiAgent Systems*. Sao Paulo, Brazil: International Foundation for Autonomous Agents and Multiagent Systems, 2017.
- [2] Peter Coles, Sanmay Das, Sébastien Lahaie, and Boleslaw K. Szymanski, eds. *Auctions, Market Mechanisms, and Their Applications: Selected Papers From the Second International Conference*. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering. Springer, 2012.
- [3] Sanmay Das, Michael Ostrovsky, David Pennock, and Boleslaw Szymanski, eds. *Auctions, Market Mechanisms and Their Applications: Selected Papers From the First International Conference*. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering. Springer, 2009.

Journal Articles

- [4] Amanda R Kube, Sanmay Das, and Patrick J Fowler. "Community- and data-driven homelessness prevention and service delivery: Optimizing for equity". In: *Journal of the American Medical Informatics Association* 30.6 (Apr. 2023), pp. 1032–1041. ISSN: 1527-974X. DOI: 10.1093/jamia/ocad052.
- [5] Amanda R. Kube, Sanmay Das, and Patrick J. Fowler. "Fair and Efficient Allocation of Scarce Resources Based on Predicted Outcomes: Implications for Homeless Service Delivery". In: *Journal of Artificial Intelligence Research* 76 (2023), pp. 1219–1245. DOI: 10.1613/jair.1.12847.
- [6] Sanmay Das, Betsy Sinclair, Steven W. Webster, and Hao Yan. "All (Mayoral) Politics is Local?" In: *The Journal of Politics* 84.2 (2022), pp. 1021–1034.
- [7] Hao Yan, Ellen E Fitzsimmons-Craft, Micah Goodman, Melissa Krauss, Sanmay Das, and Patricia Cavazos-Rehg. "Automatic detection of eating disorder-related social media posts that could benefit from a mental health intervention". In: *International Journal of Eating Disorders* 52.10 (2019). Awarded IJED's 2019 Best Original Research Paper by an Early Career Scholar award., pp. 1150–1156.
- [8] Patrick J. Fowler, Peter S. Hovmand, Katherine E. Marcal, and Sanmay Das. "Solving homelessness from a complex systems perspective: Insights for prevention responses". In: *Annual Review of Public Health* 40 (2019), pp. 465–486.
- [9] Sanmay Das, Allen Lavoie, and Malik Magdon-Ismail. "Manipulation Among the Arbiters of Collective Intelligence: How Wikipedia Administrators Mold Public Opinion". In: *ACM Transactions on the Web* 10.4 (2016), 24:1–24:25.

- [10] Florentin Butaru, Qingqing Chen, Brian J. Clark, Sanmay Das, Andrew W. Lo, and Akhtar R. Siddique. “Risk and Risk Management in the Credit Card Industry”. In: *Journal of Banking and Finance* 72 (2016), pp. 218–239.
- [11] Rostyslav Korolov, Justin Peabody, Allen Lavoie, Sanmay Das, Malik Magdon-Ismael, and William Wallace. “Predicting Charitable Donations Using Social Media”. In: *Social Network Analysis and Mining* 6.1 (2016), pp. 1–10.
- [12] Yinon Nahum, David Sarne, Sanmay Das, and Onn Shehory. “Two-Sided Search With Experts”. In: *Autonomous Agents and Multi-Agent Systems* 29.3 (2015), pp. 364–401.
- [13] Meenal Chhabra, Sanmay Das, and David Sarne. “Expert-mediated sequential search”. In: *European Journal of Operational Research* 234.3 (2014), pp. 861–873.
- [14] Elliot Anshelevich, Sanmay Das, and Yonatan Naamad. “Anarchy, Stability, and Utopia: Creating Better Matchings”. In: *Autonomous Agents and Multi-Agent Systems* 26.1 (2013), pp. 120–140.
- [15] Sanmay Das and Malik Magdon-Ismael. “A Model for Information Growth in Collective Wisdom Processes”. In: *ACM Transactions on Knowledge Discovery from Data* 6.2 (2012), 6:1–6:10.
- [16] Sahin Cem Geyik, S. Yousaf Shah, Boleslaw K. Szymanski, Sanmay Das, and Petros Zerfos. “Market mechanisms for resource allocation in pervasive sensor applications”. In: *Pervasive and Mobile Computing* 8.3 (2012), pp. 346–357.
- [17] Teruhiko Yoneyama, Sanmay Das, and Mukkai Krishnamoorthy. “A Hybrid Model for Disease Spread and an Application to the SARS Pandemic”. In: *Journal of Artificial Societies and Social Simulation* 15.1 (2012).
- [18] Aditya Sehgal, Sanmay Das, Keith Noto, Milton H. Saier Jr., and Charles Elkan. “Identifying Relevant Data for a Biological Database: Handcrafted Rules Versus Machine Learning”. In: *IEEE/ACM Transactions on Computational Biology and Bioinformatics* 8.3 (2011), pp. 851–857.
- [19] Sanmay Das and John N. Tsitsiklis. “When is it Important to Know You’ve Been Rejected? A Search Problem With Probabilistic Appearance of Offers”. In: *Journal of Economic Behavior and Organization* 74 (2010), pp. 104–122.
- [20] Sanmay Das. “A Learning Market-Maker in the Glosten-Milgrom Model”. In: *Quantitative Finance* 5.2 (Apr. 2005), pp. 169–180.
- [21] Barbara J. Grosz, Sarit Kraus, David Sullivan, and Sanmay Das. “The Influence of Social Norms and Social Consciousness on Intention Reconciliation”. In: *Artificial Intelligence* 142.2 (Nov. 2002), pp. 147–177.

Refereed Conference Papers

- [22] Andrew Estornell, Yatong Chen, Sanmay Das, Yang Liu, and Yevgeniy Vorobeychik. “Incentivizing Recourse through Auditing in Strategic Classification”. In: *Proceedings of the International Joint Conference on Artificial Intelligence*. Forthcoming. 2023.
- [23] Andrew Estornell, Sanmay Das, Yang Liu, and Yevgeniy Vorobeychik. “Group-Fair Classification with Strategic Agents”. In: *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency*. 2023, pp. 389–399. DOI: 10.1145/3593013.3594006.
- [24] Andrew Estornell, Sanmay Das, Brendan Juba, and Yevgeniy Vorobeychik. “Popularizing Fairness: Group Fairness and Individual Welfare”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 37. 6. 2023, pp. 7485–7493.
- [25] Angeela Acharya, Siddhartha Sikdar, Sanmay Das, and Huzefa Rangwala. “GenSyn: A Multi-stage Framework for Generating Synthetic Microdata using Macro Data Sources”. In: *IEEE International Conference on Big Data*. 2022, pp. 685–692. DOI: 10.1109/BigData55660.2022.10021001.

- [26] Amanda Kube, Sanmay Das, Patrick J Fowler, and Yevgeniy Vorobeychik. “Just Resource Allocation? How Algorithmic Predictions and Human Notions of Justice Interact”. In: *Proceedings of the ACM Conference on Economics and Computation*. 2022, pp. 1184–1242.
- [27] Tasfia Mashiat, Xavier Gitiaux, Huzefa Rangwala, Patrick J Fowler, and Sanmay Das. “Trade-offs between Group Fairness Metrics in Societal Resource Allocation”. In: *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency*. 2022, pp. 1095–1105.
- [28] Sanmay Das. “Local Justice and the Algorithmic Allocation of Scarce Societal Resources”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Awarded Best Blue Sky Paper. 2022, pp. 12250–12255.
- [29] Zehao Dong, Sanmay Das, Patrick Fowler, and Chien-Ju Ho. “Efficient Nonmyopic Online Allocation of Scarce Reusable Resources”. In: *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems*. 2021, pp. 447–445.
- [30] Quan Nguyen, Sanmay Das, and Roman Garnett. “Scarce Societal Resource Allocation and the Price of (Local) Justice”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2021, pp. 5628–5636.
- [31] Andrew Estornell, Sanmay Das, and Yevgeniy Vorobeychik. “Incentivizing Truthfulness Through Audits in Strategic Classification”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2021, pp. 5347–5354.
- [32] Andrew Estornell, Sanmay Das, Edith Elkind, and Yevgeniy Vorobeychik. “Election Control by Manipulating Issue Significance”. In: *Proceedings of the Conference on Uncertainty in Artificial Intelligence*. 2020, pp. 340–349.
- [33] Andrew Estornell, Sanmay Das, and Yevgeniy Vorobeychik. “Deception through Half-Truths”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2020, pp. 10110–10117.
- [34] Hao Yan, Sanmay Das, Allen Lavoie, Sirui Li, and Betsy Sinclair. “The Congressional Classification Challenge: Domain Specificity and Partisan Intensity”. In: *Proceedings of the ACM Conference on Economics and Computation*. 2019, pp. 71–89.
- [35] Zhuoshu Li, Kelsey Lieberman, William Macke, Sofia Carrillo, Chien-Ju Ho, Jason Wellen, and Sanmay Das. “Incorporating Compatible Pairs in Kidney Exchange: A Dynamic Weighted Matching Model”. In: *Proceedings of the ACM Conference on Economics and Computation*. 2019, pp. 349–367.
- [36] Amanda Kube, Sanmay Das, and Patrick J. Fowler. “Allocating Interventions Based on Predicted Outcomes: A Case Study on Homelessness Services”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2019, pp. 622–629.
- [37] Zhuoshu Li and Sanmay Das. “Revenue Enhancement Via Asymmetric Signaling in Interdependent-Value Auctions”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2019, pp. 2093–2100.
- [38] Zhuoshu Li, Neal Gupta, Sanmay Das, and John P. Dickerson. “Equilibrium Behavior in Competing Dynamic Matching Markets”. In: *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*. 2018, pp. 389–395.
- [39] Meenal Chhabra, Sanmay Das, and Ilya Ryzhov. “The Promise and Perils of Myopia in Dynamic Pricing With Censored Information”. In: *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*. 2018, pp. 4994–5001.
- [40] Zhuoshu Li, Zhitang Chen, Pascal Poupart, Sanmay Das, and Yanhui Geng. “Faster Policy Adaptation in Environments with Exogeneity: A State Augmentation Approach”. In: *Proceedings of the 17th Conference on Autonomous Agents and MultiAgent Systems (AAMAS)*. 2018, pp. 1035–1043.
- [41] Mithun Chakraborty, Kai Yee Phoebe Chua, Sanmay Das, and Brendan Juba. “Coordinated Versus Decentralized Exploration In Multi-Agent Multi-Armed Bandits”. In: *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*. 2017, pp. 164–170.

- [42] Mithun Chakraborty and Sanmay Das. “Trading On A Rigged Game: Outcome Manipulation In Prediction Markets”. In: *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*. 2016, pp. 158–164.
- [43] Shamin Kinathil, Scott Sanner, Sanmay Das, and Nicolás Della Penna. “A Symbolic Closed-form Solution to Sequential Market Making with Inventory”. In: *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*. 2016, pp. 3609–3615.
- [44] Zhuoshu Li and Sanmay Das. “An Agent-Based Model of Competition Between Financial Exchanges: Can Frequent Call Mechanisms Drive Trade Away from CDAs?” In: *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)*. 2016, pp. 50–58.
- [45] Mithun Chakraborty and Sanmay Das. “Market Scoring Rules Act As Opinion Pools For Risk-Averse Agents”. In: *Advances in Neural Information Processing Systems*. Selected for a spotlight presentation. 2015, pp. 2350–2358.
- [46] Sara Moein, Hao Yan, Sanmay Das, Matthew Hall, and Pirooz Eghtesady. “Prediction of Systemic-to-Pulmonary Artery Shunt Surgery Outcomes Using Administrative Data”. In: *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*. 2015, pp. 737–741.
- [47] Rostyslav Korolov, Justin Peabody, Allen Lavoie, Sanmay Das, Malik Magdon-Ismael, and William Wallace. “Actions Are Louder Than Words in Social Media”. In: *Proceedings of the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*. 2015, pp. 292–297.
- [48] Sanmay Das, John P. Dickerson, Zhuoshu Li, and Tuomas Sandholm. “Competing Dynamic Matching Markets”. In: *Proceedings of the Conference on Auctions, Market Mechanisms and Their Applications (AMMA)*. 2015.
- [49] Shani Alkoby, David Sarne, and Sanmay Das. “Strategic Free Information Disclosure for Search-Based Information Platforms”. In: *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*. 2015, pp. 635–643.
- [50] Mithun Chakraborty, Sanmay Das, and Justin Peabody. “Price Evolution in a Continuous Double Auction Prediction Market With a Scoring-Rule Based Market Maker”. In: *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*. 2015, pp. 835–841.
- [51] Sanmay Das and Zhuoshu Li. “The Role of Common and Private Signals in Two-Sided Matching with Interviews”. In: *Web and Internet Economics (WINE)*. Springer, 2014, pp. 492–497.
- [52] Sanmay Das and Allen Lavoie. “Automated inference of point of view from user interactions in collective intelligence venues”. In: *Proceedings of the International Conference on Machine Learning (ICML)*. 2014, pp. 82–90.
- [53] Sanmay Das and Allen Lavoie. “The Effects of Feedback on Human Behavior in Social Media: An Inverse Reinforcement Learning Model”. In: *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*. 2014, pp. 653–660.
- [54] Meenal Chhabra, Sanmay Das, and David Sarne. “Competitive Information Provision in Sequential Search Markets”. In: *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems*. 2014, pp. 565–572.
- [55] Sanmay Das, Allen Lavoie, and Malik Magdon-Ismael. “Manipulation Among the Arbiters of Collective Intelligence: How Wikipedia Administrators Mold Public Opinion”. In: *Proceedings of the ACM Conference on Information and Knowledge Management*. 2013, pp. 1097–1106.
- [56] Elliot Anshelevich, Meenal Chhabra, Sanmay Das, and Matthew Gerrior. “On the Social Welfare of Mechanisms for Repeated Batch Matching”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2013, pp. 60–66.
- [57] Mithun Chakraborty, Sanmay Das, Allen Lavoie, Malik Magdon-Ismael, and Yonatan Naamad. “Instructor Rating Markets”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. 2013, pp. 159–165.

- [58] Aseem Brahma, Mithun Chakraborty, Sanmay Das, Allen Lavoie, and Malik Magdon-Ismael. “A Bayesian market maker”. In: *Proceedings of the ACM Conference on Electronic Commerce*. 2012, pp. 215–232.
- [59] Yinon Nahum, David Sarne, Sanmay Das, and Onn Shehory. “Two-sided search with experts”. In: *Proceedings of the ACM Conference on Electronic Commerce*. 2012, pp. 754–771.
- [60] Meenal Chhabra, Sanmay Das, and Boleslaw K. Szymanski. “Team Formation in Social Networks”. In: *Proceedings of the International Symposium on Computer and Information Sciences*. 2012, pp. 291–299.
- [61] Mithun Chakraborty, Sanmay Das, and Malik Magdon-Ismael. “Near-Optimal Target Learning With Stochastic Binary Signals”. In: *Proceedings of the Conference on Uncertainty in Artificial Intelligence*. 2011, pp. 69–76.
- [62] Meenal Chhabra and Sanmay Das. “Learning the Demand Curve in Posted-Price Digital Goods Auctions”. In: *Proceedings of the International Joint Conference on Autonomous Agents and Multi-Agent Systems*. Nominated for the Best Student Paper Award (one of three nominees). 2011, pp. 63–70.
- [63] Meenal Chhabra, Sanmay Das, and David Sarne. “Expert-Mediated Search”. In: *Proceedings of the International Joint Conference on Autonomous Agents and Multi-Agent Systems*. 2011, pp. 415–422.
- [64] Sanmay Das and Malik Magdon-Ismael. “Collective Wisdom: Information Growth in Wikis and Blogs”. In: *Proceedings of the ACM Conference on Electronic Commerce*. 2010, pp. 231–240.
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- [66] Elliot Anshelevich, Sanmay Das, and Yonatan Naamad. “Anarchy, Stability, and Utopia: Creating Better Matchings”. In: *Proceedings of the Symposium on Algorithmic Game Theory*. 2009, pp. 159–170.
- [67] Sanmay Das and Malik Magdon-Ismael. “Adapting to a Market Shock: Optimal Sequential Market-Making”. In: *Advances in Neural Information Processing Systems*. 2008, pp. 361–368.
- [68] Sanmay Das. “The Effects of Market-Making on Price Dynamics”. In: *Proceedings of the International Joint Conference on Autonomous Agents and Multi-Agent Systems*. Estoril, Portugal, May 2008, pp. 887–894.
- [69] Sanmay Das, Milton H. Saier Jr., and Charles Elkan. “Finding Transport Proteins in a General Protein Database”. In: *Proceedings of the European Conference on Principles and Practice of Knowledge Discovery in Databases*. Warsaw, Poland, Sept. 2007, pp. 54–66.
- [70] Sanmay Das. “Learning to Trade with Insider Information”. In: *Proceedings of the International Conference on Electronic Commerce*. Minneapolis, MN, Aug. 2007, pp. 169–176.
- [71] Sanmay Das and Emir Kamenica. “Two-Sided Bandits and the Dating Market”. In: *Proceedings of the International Joint Conference on Artificial Intelligence*. Edinburgh, UK, Aug. 2005, pp. 947–952.
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Newsletter and Magazine Articles

- [74] Sven Koenig, Sanmay Das, Rosemary Paradis, Eric Eaton, Yolanda Gil, Katherine Guo, Bojun Huang, Albert Jiang, Benjamin Kuipers, Nicholas Mattei, Amy McGovern, Larry Medsker, Todd Neller, Plamen Petrov, Michael Rovatsos, and David Stork. “ACM SIGAI Activity Report”. In: *AI Matters* 3.3 (2017), pp. 7–11.

- [75] Sanmay Das. “Report on the Career Network Conference”. In: *AI Matters* 1.3 (2015), pp. 6–7.
- [76] Elliot Anshelevich and Sanmay Das. “Matching, Cardinal Utility, and Social Welfare”. In: *ACM SIGECom Exchanges* 9.1 (2010).
- [77] Sanmay Das and Michael Ostrovsky. “Conference Announcement: The Conference on Auctions, Market Mechanisms, and Their Applications (AMMA)”. In: *ACM SIGECom Exchanges* 7.3 (2008).

Other Papers

- [78] Sanmay Das and Edmund H. Durfee. “Hot Trends in Autonomous Agents and Multiagent Systems”. In: *AAAI What’s Hot Talks*. 2018.
- [79] Sanmay Das, Emir Kamenica, and Renee Mirka. “Reducing Congestion Through Information Design”. In: *Proceedings of the 55th Allerton Conference on Communication, Control, and Computing*. Invited paper. 2017, pp. 1279–1284.
- [80] Hao Yan, Allen Lavoie, and Sanmay Das. “The Perils of Classifying Political Orientation From Text”. In: *IJCAI Workshop on Linked Democracy*. 2017, pp. 38–50.
- [81] Yuan Gao, Sanmay Das, and Patrick J. Fowler. “Homelessness Service Provision: A Data Science Perspective”. In: *AAAI Workshop on AI and Operations Research for Social Good*. 2017, pp. 20–25.
- [82] Sanmay Das. “Multiagent Systems Modeling”. In: *Optimization Challenges in Complex, Networked and Risky Systems*. Ed. by A. Gupta, A. Capponi, J. C. Smith, and H. J. Greenberg. Tutorials in Operations Research. INFORMS, 2016, pp. 207–225.
- [83] Antonio A. Ginart, Sanmay Das, Jenine K. Harris, Roger Wong, Hao Yan, Melissa Krauss, and Patricia A. Cavazos-Rehg. “Drugs or Dancing? Using Real-Time Machine Learning to Classify Streamed “Dabbing” Homograph Tweets”. In: *Proceedings of the Workshop on Health Data Science: Creation, Analysis and Interpretation, In Conjunction with IEEE ICHI*. 2016, pp. 10–13.
- [84] Sanmay Das and Emir Kamenica. “Representations of Information Structures”. In: *Proceedings of the 53rd Allerton Conference on Communication, Control, and Computing*. Invited paper. 2015, pp. 737–743.
- [85] Boleslaw K. Szymanski, S. Yousaf Shah, Sahin Cem Geyik, Sanmay Das, Meenal Chhabra, and Petros Zerfos. “Market mechanisms for Value of Information driven resource allocation in Sensor Networks”. In: *Workshop Proceedings of the Ninth Annual IEEE International Conference on Pervasive Computing and Communications (PerCom Workshops)*. 2011, pp. 20–25.
- [86] Sanmay Das. “On Agent-Based Modeling of Complex Systems: Learning and Bounded Rationality”. Working paper. 2007.

Theses

- [87] Sanmay Das. “Dealers, Insiders and Bandits: Learning and its Effects on Market Outcomes”. Ph.D. Massachusetts Institute of Technology, 2006.
- [88] Sanmay Das. “Intelligent Market-Making in Artificial Financial Markets”. S.M. Massachusetts Institute of Technology, 2003.
- [89] Sanmay Das. “Optimal Behavior in Group Environments”. A.B. Harvard University, 2001.

Selected Invited Talks

2006 Santa Fe Institute; University of Massachusetts, Amherst (Dept. of Computer Science); Stanford University (Graduate School of Business, Operations, Information & Technology Group); Harvard University, Artificial Intelligence Research Group.

- 2007 Stony Brook University (Department of Computer Science); Rensselaer Polytechnic Institute (Department of Computer Science); University of Washington (Department of Computer Science and Engineering).
- 2010 University of Maryland, College Park (Department of Computer Science); Harvard University (Economics and Computer Science Group); Yahoo! Research New York; University of Texas at Austin (Learning Agents Group).
- 2011 University of Maryland, Baltimore County (Department of Computer Science); University of Michigan (Information School); George Washington University (Department of Computer Science).
- 2012 Stevens Institute of Technology (Department of Computer Science); Virginia Tech (Department of Computer Science); AT&T Research; George Mason University (Department of Computational Social Science).
- 2013 University of Illinois at Chicago (Department of Information and Decision Sciences); University of Maryland, College Park (Smith School of Business, Department of Decision, Operations and Information Technologies); Washington University in St. Louis (Department of Computer Science and Engineering); Microsoft Research Faculty Summit
- 2014 Brown University (Department of Computer Science); Harvard University (Artificial Intelligence Research Group); Massachusetts Institute of Technology (Brains, Minds and Machines Seminar).
- 2015 Bar-Ilan Symposium on the Foundations of Artificial Intelligence (keynote).
- 2016 IUPUI (Department of Computer Science); Becker-Friedman Institute Macro Financial Modeling Summer School; INFORMS Tutorial Series.
- 2017 Becker-Friedman Institute Macro Financial Modeling Summer School.
- 2018 Mastercard Tech Talk; Rensselaer Polytechnic Institute (Department of Computer Science); Becker-Friedman Institute Macro Financial Modeling Summer School; University of Southern California (Center for Artificial Intelligence in Society).
- 2019 Stevens Institute of Technology (Computer Science); Rutgers University (Computer Science); International Monetary Fund (Economics Training Program); Johns Hopkins University (Sawyer Seminar); Prepare.ai Annual Conference; NSF Workshop on Computing, Data Science, and Access to Justice.
- 2020 Drexel University (Computer Science), Temple University (Computer Science), Emory University (Computer Science), George Mason University (Computer Science), Brandeis University (Computer Science and Economics), George Washington University ((Computer Science), Tufts University (Computer Science), Penn State University (AI for Social Impact Seminar).
- 2021 George Mason University (Center for Advancing Human Machine Partnership), University of Maryland (Fairness in AI Seminar), University of Southern California (Center for AI in Society Symposium Keynote with Patrick Fowler), BlueVoyant LLC.
- 2022 Catholic University of America (CS-Econ Seminar), University of Virginia Darden School (Dana Clyman Seminar).
- 2023 GMU Provost's Mason Vision Series, Games Agents and Incentives Workshop at AAMAS (keynote).

Selected Conference Tutorials

- 2016 INFORMS: Multi-agent Systems Modeling (Invited)

- 2019 AAMAS: Optimization and Learning Approaches to Resource Allocation for Social Good (with John Dickerson and Bryan Wilder)
- 2020 AAAI: Optimization and Learning Approaches to Resource Allocation for Social Good (with John Dickerson, Duncan McElfresh, and Bryan Wilder)
- 2020 IJCAI: Optimization and Learning Approaches to Resource Allocation for Social Good (with John Dickerson, Duncan McElfresh, and Bryan Wilder)

Advising

Ph.D. Students

- Meenal Chhabra (Ph.D. in Computer Science from Virginia Tech (transferred from RPI), Spring 2014). Thesis title “Studies in the Algorithmic Pricing of Information Goods and Services”. First position: Square, Inc.
- Allen Lavoie (Ph.D. in Computer Science from WUSTL (transferred from Virginia Tech and RPI), Spring 2016). Thesis title “Automatically Characterizing Product and Process Incentives in Collective Intelligence”. First position: Google.
- Mithun Chakraborty (Ph.D. in Computer Science from WUSTL (transferred from Virginia Tech and RPI), Spring 2017). Thesis title “On the Aggregation of Subjective Inputs from Multiple Sources”. First position: Postdoc, National University of Singapore. Currently Assistant Research Scientist at the University of Michigan, Ann Arbor.
- Zhuoshu Li (Ph.D. in Computer Science from WUSTL, Fall 2018). Thesis title “Computational Explorations of Information and Mechanism Design in Markets”. First position: Google.
- Hao Yan (Ph.D. in Computer Science from WUSTL, Fall 2019). Thesis title “Measuring Partisanship, Ideology, Locality, and Centrality in Political Corpora with Machine Learning”. First position: Facebook.
- Amanda Kube (Ph.D. in DCDS at WUSTL, Spring 2022, co-advised with Patrick Fowler). First Position: Preceptor in Data Science, University of Chicago.
- Andrew Estornell (Ph.D. in Computer Science from WUSTL, co-advised with Yevgeniy Vorobeychik, Summer 2023). First position: ByteDance.
- Tasfia Mashiat (Ph.D. student in CS at GMU)
- Angeela Acharya (Ph.D. student in CS at GMU)
- Gaurab Pokharel (Ph.D. student in CS at GMU)
- Nabit Bajwa (Ph.D. student in CS at GMU)

M.S. Students (Including a Research Component)

- Aseem Brahma (M.S. in Computer Science, 2010 (RPI)). First position: Qualcomm, Inc.
- Jeffrey Gaston (M.S. in Computer Science, 2012 (RPI)). First position: Vecna Technologies
- Justin Peabody (M.S. in CSE, 2015 (WUSTL)). First position: Boeing.
- Dina Elreedy (M.S. in CSE, 2016; co-advised with Roman Garnett (WUSTL)).
- Andrew Cukierwar (M.S. in CSE, 2018 (WUSTL)). First position: MRM//McCann.

Undergraduate Research Advisor or Mentor

- Yonatan Naamad, RPI (→ Ph.D. student at Princeton, now graduated) (Summers of 2008 (co-advised with Elliot Anshelevich) and 2010)
- Matthew Gerior, RPI (Summer 2010; co-advised with Elliot Anshelevich)
- Andrew Bolin, RPI (Summer 2011)
- Kevin Huang, WUSTL (Summer 2014)
- Megan Shearer, University of Arizona (Summer 2014) → Ph.D. student at Michigan CSE, now graduated
- Mark Heimann, WUSTL Class of 2015 → Ph.D. student at Michigan CSE, now graduated
- Xintong (Emily) Wang, WUSTL Class of 2015 → Ph.D. student at Michigan CSE, now graduated
- Phoebe Chua, Messiah College (Summer 2015; co-advised with Brendan Juba) → Ph.D. student at UC Irvine Informatics
- Lise Ho, Stony Brook U. (Summer 2016)
- Tony Ginart, WUSTL (2016) → Ph.D. student at Stanford EE
- Yuan Gao, WUSTL (2016-2017) → M.S. student at CMU, now graduated
- Renee Mirka, WUSTL (2016-2017) → Ph.D. student at UCSD Math → Ph.D. student at Cornell CS
- Gwyneth Pearson, WUSTL (2016-2017)
- Gregg Wilcox, WUSTL (Spring 2017)
- Sirui Li, WUSTL (2017-19) → Ph.D. student at MIT IDSS
- Amanda Kube, WUSTL (2017-18) → Ph.D. student at WUSTL DCDS, now graduated
- Sofia Carillo, Cornell (Summer 2017)
- Kelsey Lieberman, Truman State (Summer 2018; co-advised with Chien-Ju Ho) → Ph.D. student at Duke CS
- William Macke, Tulsa (Summer 2018; co-advised with Chien-Ju Ho) → Ph.D. student at UT Austin
- Brenda Torteya, WUSTL (Summer 2019)
- Yejin Hwang, Smith College (Summer 2019)
- Tanisha Agrawal, Barnard College (Summer 2019)
- Samuel Griesemer, WUSTL (2019-20) → Ph.D. student at University of Southern California

Ph.D. Committee Member

- Eric Meisner (Ph.D. in Computer Science, RPI, Spring 2009)
- Saeed Salem (Ph.D. in Computer Science, RPI, Summer 2009)
- Mohammad Al-Hasan (Ph.D. in Computer Science, RPI, Summer 2009; **SIGKDD Doctoral Dissertation Award Winner**)

- Andrey Sarayev (Ph.D. in Computer Science, RPI, Fall 2009)
- Bugra Caskurlu (Ph.D. in Computer Science, RPI, Spring 2010)
- Teruhiko Yoneyama (Ph.D. in Multidisciplinary Science, RPI, Spring 2010)
- Jon Purnell (Ph.D. in Computer Science, RPI, Fall 2010)
- Gregory Moore (Ph.D. in Math, RPI, Fall 2010)
- Christos Boutsidis (Ph.D. in Computer Science, RPI, Spring 2011)
- Ameya Hate (Ph.D. in Computer Science, RPI, Spring 2012)
- Sahin Geyik (Ph.D. in Computer Science, RPI, Summer 2012)
- Milos Mladenovic (Ph.D. in Civil Engineering, Virginia Tech, Summer 2014)
- Zhixiang (Eddie) Xu (Ph.D. in CSE, WUSTL, Summer 2014)
- Zheng Chen (Ph.D. in CSE, WUSTL, Spring 2015)
- Vynn Huh (Ph.D. in Biomedical Engineering, WUSTL, Fall 2015)
- Paras Tiwari (Ph.D. in CSE, WUSTL, Fall 2015)
- Wenlin Chen (Ph.D. in CSE, WUSTL, Spring 2016)
- Matt Kusner (Ph.D. in CSE, WUSTL, Summer 2016)
- Robert Utterback (Ph.D. in CSE, WUSTL, Summer 2017)
- Dov Lerman-Sinkoff (Ph.D. in Biomedical Engineering, WUSTL, Spring 2018)
- Elena Labzina (Ph.D. in Political Science, WUSTL, Spring 2018)
- Tzai-Shuen Chen (Ph.D. in Economics, WUSTL, Spring 2018)
- Michelle Ichinco (Ph.D. in CSE, WUSTL, Spring 2018)
- Abby Stylianou (Ph.D. in CSE, WUSTL, Fall 2018)
- Katherine Marcal (Ph.D. in Social Work, WUSTL, Spring 2019)
- Michelle Torres (Ph.D. in Political Science, WUSTL, Spring 2019)
- Gustavo Malkomes (Ph.D. in CSE, WUSTL, Summer 2019)
- Muhan Zhang (Ph.D. in CSE, WUSTL, Fall 2019)
- Shali Jiang (Ph.D. in CSE, WUSTL, Spring 2020)
- Liang Tong (Ph.D. in CSE, WUSTL, Spring 2021)
- Jiayi Song (Ph.D. in CSE, WUSTL, Spring 2022)
- Xavier Gitiaux (Ph.D. in CS, GMU, Spring 2022)
- Bedor Alyahya (Ph.D. student in IT, GMU)
- Xu Han (Ph.D. student in IT, GMU)

July 5, 2023