

Sanmay Das

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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

- 2007–present **Assistant Professor** Rensselaer Polytechnic Institute, Troy, NY
Department of Computer Science
- 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

- 2001–2002 Presidential Fellow, Massachusetts Institute of Technology.
- 2001 Thomas T. Hoopes Prize for Excellence in Undergraduate Research for senior honors thesis, 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.

Service

- Program Co-Chair First Conference on Auctions, Market Mechanisms and Their Applications (AMMA 2009).
- Session Organizer Session on “Computational Intelligence in Financial and Prediction Markets” at INFORMS 2008.
- Program committees ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2009), Conference on Intelligent Data Engineering and Automated Learning (IDEAL 2008), IEEE International Conference on Data Mining (2008, 2009), SIAM International Conference on Data Mining (2008).
- Proposal reviewing US National Science Foundation, Israel Science Foundation, US-Israel Binational Science Foundation.
- Other reviewing Review panelist for the National Science Foundation Graduate Research Fellowship Program, textbook proposal reviewer for Cambridge University Press.
- Paper reviewing Refereeing for many journals and conferences, including *IEEE Conference on Decision and Control*, *Data Mining and Knowledge Discovery*, *IEEE Transactions on Knowledge and Data Engineering*, *Computational Intelligence*, *Quantitative Finance*, *Physica A*, *ACM SIGIR 2007*.

Publications

Journal Articles

- [1] Sanmay Das and John N. Tsitsiklis. When is it important to know you’ve been rejected? a search problem with probabilistic appearance of offers. *Journal of Economic Behavior and Organization*, 2009. To appear.
- [2] 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. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2009. To appear.
- [3] Sanmay Das. A learning market-maker in the Glosten-Milgrom model. *Quantitative Finance*, 5(2):169–180, April 2005.
- [4] Barbara J. Grosz, Sarit Kraus, David Sullivan, and Sanmay Das. The influence of social norms and social consciousness on intention reconciliation. *Artificial Intelligence (Special Issue on Multi-Agent Systems)*, 142(2):147–177, November 2002.

Archival Conference Papers

- [5] Elliot Anshelevich, Sanmay Das, and Yonatan Naamad. Anarchy, stability, and utopia: Creating better matchings. In *Proceedings of the Second Symposium on Algorithmic Game Theory (SAGT)*, 2009. To appear.
- [6] Sanmay Das and Malik Magdon-Ismael. Adapting to a market shock: Optimal sequential market-making. In *Advances in Neural Information Processing Systems (NIPS)*, pages 361–368, 2008.
- [7] Sanmay Das. The effects of market-making on price dynamics. In *Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multi-Agent Systems*, pages 887–894, Estoril, Portugal, May 2008.
- [8] Sanmay Das, Milton H. Saier, Jr., and Charles Elkan. Finding transport proteins in a general protein database. In *Proceedings of the Eleventh European Conference on Principles and Practice of Knowledge Discovery in Databases*, pages 54–66, Warsaw, Poland, September 2007.

- [9] Sanmay Das. Learning to trade with insider information. In *Proceedings of the Ninth International Conference on Electronic Commerce*, pages 169–176, Minneapolis, MN, August 2007.
- [10] Sanmay Das and Emir Kamenica. Two-sided bandits and the dating market. In *Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence*, pages 947–952, Edinburgh, UK, August 2005.
- [11] Sanmay Das, Barbara Grosz, and Avi Pfeffer. Learning and decision-making for intention reconciliation. In *Proceedings of the First International Joint Conference on Autonomous Agents and Multi-Agent Systems*, pages 1121–1128, Bologna, Italy, July 2002.
- [12] Sanmay Das. Filters, wrappers, and a boosting-based hybrid for feature selection. In *Proceedings of the Eighteenth International Conference on Machine Learning*, pages 74–81, Williamstown, MA, June 2001.

Newsletters, Submitted Papers, Technical Reports, and Theses

- [13] Sanmay Das and Michael Ostrovsky. Conference announcement: The Conference on Auctions, Market Mechanisms, and Their Applications (AMMA). *ACM SIGECom Exchanges*, 7(3), 2008.
- [14] Eric M. Meisner, Sanmay Das, Volkan Isler, Jeff Trinkle, Selma Sabanovic, and Linnda Caporael. Predictive state representations for grounding human-robot communication. Submitted, 2009.
- [15] Sanmay Das and Malik Magdon-Ismael. Collective wisdom: Information growth in wikis and blogs. Submitted, 2009.
- [16] Sanmay Das. On agent-based modeling of complex systems: Learning and bounded rationality. 2007.
- [17] Sanmay Das. *Dealers, Insiders and Bandits: Learning and its Effects on Market Outcomes*. PhD thesis, Massachusetts Institute of Technology, May 2006.
- [18] Sanmay Das. Intelligent market-making in artificial financial markets. Technical Report Center for Biological and Computational Learning Memo 226 / Artificial Intelligence Lab Technical Report 2003-005, Massachusetts Institute of Technology, June 2003. MIT Master’s Thesis.
- [19] Sanmay Das. Optimal behavior in group environments. Undergraduate thesis, Harvard University, 2001.

Presentations at Refereed Workshops

- [1] Sanmay Das and Malik Magdon-Ismael. Collective wisdom: Information growth in wikis and blogs. Neural Information Processing Systems (NIPS) Workshop: *Beyond Search: Computational Intelligence for the Web*, December 2008. Whistler, BC, Canada.
- [2] Sanmay Das. Learning to trade with insider information. Neural Information Processing Systems (NIPS) Workshop: *Machine Learning in Finance*, December 2005. Whistler, BC, Canada.
- [3] Sanmay Das. An agent-based model of dealership markets. The International Workshop on Complex Agent-Based Dynamic Networks (CABDyN), September 2003. Oxford, UK.

Major Invited Talks

- 2006 Santa Fe Institute (January), University of Massachusetts, Amherst, Department of Computer Science (February), Stanford University, Graduate School of Business: Operations, Information and Technology Group (March).
- 2007 Stony Brook University, Department of Computer Science (March), Rensselaer Polytechnic Institute, Department of Computer Science (March), University of Washington, Department of Computer Science and Engineering (April), INFORMS Annual Meeting (AI Cluster) (November).

2008 INFORMS Annual Meeting (Data-Mining Cluster) (October),

Funding

2009-2013 US-Israel Binational Science Foundation (BSF) grant for \$104,000 with Dr. David Sarne (Bar-Ilan University) as co-PI for a project entitled *Equilibria in Shopping-Agent Mediated Marketplaces*

Advising

Primary advisor Aseem Brahma (2nd year graduate student in Computer Science), Mithun Chakraborty (1st year graduate student in Computer Science), Meenal Chhabra (1st year graduate student in Computer Science).

Committee member Eric Meisner (Ph.D. in Computer Science, Spring 2009), Saeed Salem (Ph.D. in Computer Science, Summer 2009), Mohammad Al-Hasan (Ph.D. in Computer Science, Summer 2009), Bugra Caskurlu (passed candidacy exam in Computer Science), Andrey Sarayev (passed candidacy exam in Computer Science), Gregory Moore (passed candidacy exam in Math), Teruhiko Yoneyama (passed candidacy exam in Multidisciplinary Science), Sahin Geyik (passed research exam in Computer Science), Christos Boutsidis (passed research exam in Computer Science).

September 17, 2009