

Atish Das Sarma

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Education Georgia Institute of Technology

5th Year Ph.D. student, Computer Science (Algorithms, Combinatorics & Optimization).

Advisor: Prof. Richard J. Lipton

Minor: Quantitative and Computational Finance

Indian Institute of Technology (IIT) - Bombay

B-Tech + M-Tech.(Dual Degree), Computer Science and Engineering, 2005. GPA: 9.01/10

Experiences

- 2008 - **Co-founder** Shout Velocity (<http://shoutvelocity.com>) - an Online Social Interaction and Voting Platform; along with Dr. Anish Das Sarma, Dr. Sreenivas Gollapudi, and Dr. Rina Panigrahy.
- 2009 **Summer Intern, Yahoo! Research** - Santa Clara, Mentored by Dr. Ravi Kumar.
- 2007 - 2008 **Visitor, Microsoft Research Bangalore** - December 2007, July 2008, with Dr. Ravi Kannan.
- 2007 **Summer Intern, Microsoft Research** - Search Labs, Silicon Valley - Mentored by Dr. Ariel Fuxman and worked with Dr. Sreenivas Gollapudi, Dr. Rina Panigrahy.
- 2006 **Summer Intern, Microsoft Search Labs** - Silicon Valley, Mentored by Dr. Rakesh Agrawal.
- 2005 - **Teaching Assistant, Georgia Institute of Technology** - (Fall 2005, 2006, Spring 2008) Teaching assistant for undergraduate and graduate algorithms classes.
- 2005 - **Research Assistant, Georgia Institute of Technology** - Research Assistant (Spring 2006, 2007, Fall 2007), ACO Fellowship Research Assistant (Summer 2008, Fall 2008), ARC Fellowship Research Assistant (Spring 2009, Fall 2009).
- 2003 **Summer Research Internship, University of Toronto.**

Selected Academic Honors

- 2008 **Best Paper Award** at the 27th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (**PODS 2008**).
- 2009 **Top 50 fbFund Finalist** for Shout Velocity in competition organized by Facebook for promising start-ups.
- 2009 **ARC Fellowship** for Spring and Fall 2009, with the Algorithms & Randomness Center at Georgia Tech.
- 2008 **ACO Fellowship** for Summer and Fall 2008, with the Algorithms, Combinatorics & Optimization Program at Georgia Tech.

Research Interests: Algorithms for Massive Data Sets (Streaming and Online Algorithms, Parallel, and Distributed Algorithms), Databases, Search, Ranking and Data Mining, and study of Social Networks.

Major Conference Publications

- Anish Das Sarma, Atish Das Sarma, Sreenivas Gollapudi, Rina Panigrahy: **Ranking Mechanisms in Twitter-Like Forums**; To appear in the Third ACM International Conference on **Web Search and Data Mining (WSDM), 2010**.
- Atish Das Sarma, Sreenivas Gollapudi, Mark Najork, Rina Panigrahy: **A Sketch-Based Distance Oracle for Web-Scale Graphs**; To appear in the Third ACM International Conference on **Web Search and Data Mining (WSDM), 2010**.

- Atish Das Sarma, Ashwin Lall, Danupon Nanongkai, Jun Xu: **Randomized Multi-pass Streaming Skyline Algorithms**; 35th International Conference on **Very Large Data Bases (VLDB)**, 2009.
- Atish Das Sarma, Danupon Nanongkai, Gopal Pandurangan: **Fast Distributed Random Walks**; 28th Annual ACM Symposium on **Principles of Distributed Computing (PODC)**, 2009.
- Atish Das Sarma, Sreenivas Gollapudi, Rina Panigrahy: **Sparse Cut Projections on Graph Streams**; 17th Annual **European Symposium on Algorithms (ESA)**, 2009.
- Mostafa Ammar, Deeparnab Chakrabarty, Atish Das Sarma, Subrahmanyam Kalyanasundaram, Shiva Kintali, Richard J. Lipton: **Algorithms for Message Ferrying on Sparse and Disconnected Mobile ad hoc Networks**; 29th Annual Conference on **Foundations of Software Technology and Theoretical Computer Science (FSTTCS)**, 2009.
- Atish Das Sarma, Sreenivas Gollapudi, Rina Panigrahy: **Estimating PageRank on Graph Streams**; 27th ACM SIGMOD-SIGACT-SIGART Symposium on **Principles of Database Systems (PODS)**, 2008, (**Best Paper Award**), (*Invited to the Journal of the Association for Computing Machinery (JACM)*).
- Atish Das Sarma, Sreenivas Gollapudi, Samuel Jeong: **Bypass Rates: Reducing Query Abandonment using Negative Inferences**; Proceedings of the 14th ACM SIGKDD International Conference on **Knowledge Discovery and Data Mining (KDD 2008)**.

Other Conference and Workshop Publications

- Atish Das Sarma, Danupon Nanongkai: **Best-Order Streaming Model; Theory and Applications of Models of Computation (TAMC 2009)**, (*Invited to Theoretical Computer Science (TCS) Special Issue*).
- Atish Das Sarma, Amit Deshpande, Ravi Kannan: **Finding Dense Subgraphs in $G(n, 1/2)$** ; 7th Workshop on **Approximation and Online Algorithms (WAOA)**, 2009.
- Anirudh Ramachandran, Atish Das Sarma, Nick Feamster: **BitStore: An Incentive-Compatible Solution for Blocked Downloads in BitTorrent**; Joint Workshop on **The Economics of Networked Systems and Incentive-Based Computing (NetEcon+IBC)** in conjunction with ACM Conference on **Electronic Commerce (EC)**, 2007.
- Atish Das Sarma, Deeparnab Chakrabarty, Sreenivas Gollapudi: **Public Advertisement Broker Markets**; The 3rd International **Workshop on Internet And Network Economics (WINE)**, 2007.
- Spyros Angelopoulos, Atish Das Sarma, Avner Magen, Anastasios Viglas: **On-Line Algorithms for Market Equilibria**; 11th International Computing and Combinatorics Conference (**COCOON**), 2005.
- Kedar Bellare, Anish Das Sarma, Atish Das Sarma, Navneet Loiwal, Vaibhav Mehta, Ganesh Ramakrishnan and Pushpak Bhattacharyya: **Generic Text Summarization Using Wordnet**; 4th International Conference on Language Resources and Evaluation (**LREC**), 2004.

Selected Manuscripts

- Atish Das Sarma, Danupon Nanongkai, Gopal Pandurangan, Prasad Tetali: **Almost Tight Bounds on Distributed Random Walks**; *Submitted, 2009*.
- Danupon Nanongkai, Atish Das Sarma, Ashwin Lall, Richard J. Lipton, Jim Xu: **Regret-Minimizing Representative Databases**; *Submitted, 2009*.
- Atish Das Sarma, Arpita Ghosh, Aleksandra Korolova, Ashwin Machanavajjhala: **Utility Privacy Trade-Offs in Social Network Recommendations**; *In Preparation, 2009*.
- Atish Das Sarma, Deepayan Chakrabarti: **Some influence, and some seek: Two modes of information spread in social networks**; *Submitted, 2009*.
- Atish Das Sarma, Kevin Lang: **Distributed Budget Management on Server Clusters**; *Submitted, 2009*.
- Atish Das Sarma, Danupon Nanongkai: **Distributed Streaming: The Power of Communication**; *Submitted, 2009*.

- Atish Das Sarma, Richard J. Lipton, Danupon Nanongkai: **5.24-Approximation Semi-Streaming Algorithm for Weighted Maximum Matching**; *Manuscript, 2008*.
- Atish Das Sarma, Amita Gajewar, Richard J. Lipton, Danupon Nanongkai: **“A New Approach to the Four Color Theorem”**; *A note, 2007*.

Talks:

- September 2009 “Finding Dense Subgraphs in $G(n, 1/2)$ ”, **WAOA Workshop**, Copenhagen, Denmark.
- September 2009 “Sparse Cut Projections on Graph Streams”, **ESA Conference**, Copenhagen, Denmark.
- August-September 2009 “Fast Distributed Random Walks”, **ACM PODC Conference**, Calgary, Canada; and **Georgia Institute of Technology**, Atlanta, USA.
- August 2008 “Bypass Rates: Reducing Query Abandonment using Negative Inferences”, **ACM SIGKDD Conference**, Las Vegas, USA.
- June-Dec 2008 “Estimating PageRank on Graph Streams”, **ACM PODS Conference**, Vancouver, Canada; **Microsoft Research - Bangalore**, Bangalore, India; **Georgia Institute of Technology**, Atlanta, USA; **Purdue University**, Lafayette, USA; and **Yahoo! Research**, Bangalore, India.
- August 2007 “Seeding Click-based Classifiers”, **Microsoft Research - Tech. Talk**, Silicon Valley, USA.
- August 2007 “Seed set generation techniques for Query Classifier”, **Microsoft Corp.**, Silicon Valley, USA.
- August 2006 “Personalized PageRank using Trust Networks”, **Microsoft Search Labs**, Silicon Valley, USA.
- July, August 2005 “Robust Incremental k -Median Clustering”, **Indian Institute of Science (I.I.Sc.)**, Bangalore, India; and **Institute of Mathematical Sciences**, Chennai, India.
- July 2003 “Clustering and Data Streaming Algorithms”, **University of Toronto**; Toronto, Canada.

Extra-Curricular Achievements

- Chess **International Rating FIDE: 2099**. Georgia Tech Team - Board 1 player; **2nd, 1st, 1st, joint 1st, in Georgia Inter-Collegiate-2006, 2007, 2008, 2009** respectively. **Karnataka State Champion (U-25), 2002**. **Best Unrated Player in National Open** at Nagpur, 2005. **IIT-Bombay Institute Champion and Captain of hostel team - won Gold every year**. Participated and won at several other state and national level tournaments in India during 2001-2005.

References:

Prof. Richard J. Lipton
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