

3457 A.V.Williams Bldg,
University of Maryland,
College Park, 20742, USA

1-240-898-6141
lijian@cs.umd.edu
<http://www.cs.umd.edu/~lijian>

Jian Li

Education

Bachelor of Science: 2000-2004: Department of City & Resource Planning, Sun Yat-sen University, P.R.China

Master of Science: 2004-2007: Department of Computer Science & Engineering, Fudan University, P.R.China (**Advisors:** Rudolf Fleischer and Hong Zhu)

Ph.D.: 2007-present: Department of Computer Science, University of Maryland, College Park, USA. (**Advisors:** Amol Deshpande and Samir Khuller)

Research Interests Algorithmic Game Theory, Combinatorial and Stochastic Optimization, Probabilistic Databases, Query Processing and Optimization, Wireless Sensor Networks.

Publications

Journal Articles

1. A Unified Approach to Ranking in Probabilistic Databases. Jian Li, Barna Saha, Amol Deshpande. *The VLDB Journal*, 2011 (accepted).
2. When LP is the Cure for Your Matching Woes: Improved Bounds for Stochastic Matchings. Nikhil Bansal, Anupam Gupta, Jian Li, Julian Mestre, Viswanath Nagarajan, Atri Rudra. *Algorithmica*, 2011 (accepted subject to minor revisions).
3. The Load-Distance Balancing Problem. Edward Bortnikov, Samir Khuller, Jian Li, Yishay Mansour and Seffi Naor. *Networks*, 2010 (accepted).
4. Algorithms for Core Stability, Core Largeness, Exactness, and Extendability of Flow Games. Qizhi Fang, Rudolf Fleischer, Jian Li, and Xiaoxun Sun. In *Frontier of Math in China*, 2009.
5. An $O(\log n / \log \log n)$ Upper Bound on the Price of Stability for Undirected Shapley Network Design Games. Jian Li. In *Information Processing Letters (IPL)*, 2009.
6. More Efficient Algorithms and Analyses for Unequal Letter Cost Prefix-Free Coding. Mordecai Golin, Jian Li. In *IEEE Transactions on Information Theory*, 2008
7. (Chinese Paper) Improved Approximation Algorithms for Snow Blower Problem. Jian Li, Haitao Wang and Hong Zhu. In *Journal of the Jilin University*, 2007

Articles in Refereed Conferences

1. Generalized Machine Activation Problems. Jian Li, Samir Khuller. In *the ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2011.
2. Ranking Continuous Probabilistic Datasets. Jian Li, Amol Deshpande. In *the 36th International Conference on Very Large Data Bases (VLDB)*, 2010.

3. New Models and Algorithms for Throughput Maximization in Broadcast Scheduling. Chandra Chekuri, Avigdor Gal, Sungjin Im, Samir Khuller, Jian Li, Richard McCutchen, Benjamin Moseley, Louiqa Raschid. In *the 8th Workshop on Approximation and Online Algorithms (WAOA)*, 2010.
4. Densest k -Subgraph Approximation on Intersection Graphs. Danny Z. Chen, Rudolf Fleischer, Jian Li. In *the 8th Workshop on Approximation and Online Algorithms (WAOA)*, 2010.
5. When LP is the Cure for Your Matching Woes: Improved Bounds for Stochastic Matchings. Nikhil Bansal, Anupam Gupta, Jian Li, Julian Mestre, Viswanath Nagarajan, Atri Rudra. In *the 18th Annual European Symposium on Algorithms (ESA)*, 2010. (Best Paper Award)
6. Clustering with Diversity. Jian Li, Ke Yi, Qin Zhang. In *the 37th International Colloquium on Automata, Languages and Programming (ICALP)*, 2010.
7. On Computing Compression Trees for Data Collection in Sensor Networks. Jian Li, Amol Deshpande, Samir Khuller. In *the 29th Conference on Computer Communications (INFOCOM)*, 2010.
8. Energy Efficient Scheduling via Partial Shutdown. Samir Khuller, Jian Li, Barna Saha. In *the ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2010.
9. A Unified Approach to Ranking in Probabilistic Databases. Jian Li, Barna Saha, Amol Deshpande. In *the 35th International Conference on Very Large Data Bases (VLDB)*, 2009. (Best Paper Award)
10. Consensus Answers for Queries over Probabilistic Databases. Jian Li, Amol Deshpande. In *the 28th ACM Symposium on Principles of Database Systems (PODS)*, 2009.
11. Minimizing Communication Cost in Distributed Multi-query Processing. Jian Li, Amol Deshpande, Samir Khuller. In *Proceedings of the 25th International Conference on Data Engineering (ICDE)*, 2009.
12. More Efficient Algorithms and Analyses for Unequal Letter Cost Prefix-Free Coding. Mordecai Golin, Jian Li. In *Proceedings of the 18th International Symposium on Algorithms and Computation (ISAAC)*, 2007.
13. Approximating the Maximum Sharing Problem. Amitabh Chaudhary, Danny Chen, Rudolf Fleischer, Jian Li, Xiaobo S. Hu, Michael Niemier, Zhiyi Xie, Hong Zhu. In *Proceedings of 10th Workshop on Algorithms and Data Structures (WADS)*, 2007.
14. Algorithms for core stability, core largeness, exactness, and extendability of flow games. Qizhi Fang, Rudolf Fleischer, Jian Li, Xiaoxun Sun. In *Proceedings of the 13th Annual International Computing and Combinatorics Conference (COCOON)*, 2007.
15. Efficient Algorithms for k -Disjoint Paths Problems on DAGs. Rudolf Fleischer, Qi Ge, Jian Li, Hong Zhu. In *Proceedings of the 3rd International Symposium on Algorithmic Aspects in Information and Management (AAIM)*, 2007.
16. Approximating the Maximum Simple Sharing Problem. Danny Chen, Rudolf Fleischer, Jian Li, Zhiyi Xie, Hong Zhu. In *Proceedings of the 17th International Symposium on Algorithms and Computation (ISAAC)*, 2006.

17. Traversing the Machining Graph. Danny Chen, Rudolf Fleischer, Jian Li, Haitao Wang, Hong Zhu. In *Proceedings of the 14th Annual European Symposium on Algorithms (ESA)*, 2006.
18. Non-metric Multicommodity and Multilevel Facility Location. Rudolf Fleischer, Jian Li, Shijun Tian, Hong Zhu. In *Proceedings of the 2nd International Symposium on Algorithmic Aspects in Information and Management (AAIM)*, 2006.
19. Approximating Spanning Trees with Inner Nodes Cost. Rudolf Fleischer, Jian Li, Shijun Tian, Qi Ge, Haitao Wang. In *Proceedings of the 6th International Conference on Parallel and Distributed Computing, Application and Technology (PDCAT)*, 2005.

**Under
Preparation /
Submitted**

1. Utility Maximization under Uncertainty. Jian Li and Amol Deshpande.
2. Ranking with Multiple Intents and Correlated Contents. Jian Li.

**Honors and
Awards**

1. Best paper award, ESA 2010.
2. NSF travel award, INFOCOM 2010.
3. Best paper award, VLDB 2009.
4. Dean's fellowship, University of Maryland, 2009-2010
5. Gannon graduate research assistant award, University of Maryland, 2008.
6. The first prize scholarship, Fudan University, 2006.
7. The second prize, campus planning contest, Sun Yat-sen University, 2003.
8. The first prize scholarship, Sun Yat-sen University, 2003.
9. Honorable mention, ACM / ICPC, Asia Region, 2002.
10. The first prize scholarship for freshman, Sun Yat-sen University, 2001.
11. The first prize, national physics contest for high school students, 1999.
12. The first prize, national chemistry contest for high school students, 1999.

**Professional
Experiences**

1. Summer, 2010: Research Intern, Data Management, Exploration and Mining Group(DMX), Microsoft Research Lab, Redmond. (Mentor: Arvind Arasu).
2. Spring, 2010: Teaching Assistant, Department of Computer Science, University of Maryland, College Park. CMSC424: Database Design (Lecturer: Amol Deshpande).
3. Fall, 2008: Teaching Assistant, Department of Computer Science, University of Maryland, College Park. CMSC250: Discrete Structures (Lecturers: Larry Herman and Fawzi Emad).
4. Fall, 2007: Teaching Assistant, Department of Computer Science, University of Maryland, College Park. CMSC212: Low Level Programming (Lecturer: Larry Herman).
5. Spring, 2005: Teaching Assistant, Department of Computer Science & Engineering Fudan University. Undergraduate course theory of computation.(Lecturer: Rudolf Fleischer).
6. Fall, 2005: Teaching Assistant, Department of Computer Science & Engineering Fudan University. Undergraduate course algorithm design and analysis.(Lecturer: Rudolf Fleischer).

7. Fall, 2006, Visiting Student at Hong Kong University of Science and Technology. (Supervisor: Mordecai Golin).

Conference Presentations

1. 09/2010: Ranking Continuous Probabilistic Datasets. (Singapore, VLDB10).
2. 09/2010: New Models and Algorithms for Throughput Maximization in Broadcast Scheduling. (Liverpool, WAOA10).
3. 09/2010: When LP is the Cure for Your Matching Woes: Improved Bounds for Stochastic Matchings. (Liverpool, ESA10).
4. 03/2010: On Computing Compression Trees for Data Collection in Wireless Sensor Networks. (San Diego, INFOCOM10)
5. 08/2009: A unified approach to ranking in probabilistic databases. (Lyon, VLDB09)
6. 07/2009: Consensus answers in probabilistic databases. (Providence, PODS09)
7. 01/2009: Minimizing communication cost in distributed multi-query processing. (Shanghai, ICDE09)
8. 12/2007: More Efficient Algorithms and Analyses for Unequal Letter Cost Prefix-Free Coding. (Sendai, ISAAC07)
9. 12/2006: Approximating maximum simple sharing problem. (Kolkata, ISAAC06)
10. 06/2006: Multicommodity and multilevel facility location. (Hong Kong, AAIM06)
11. 12/2005: Approximating spanning trees with inner nodes cost. (Dalian, PDCAT05)

Reviewer

I have served as an external reviewer for the following conferences and journals: SIGMOD, VLDB, ICDE, PODS, SODA, ICALP, ESA, STACS, ISAAC, TAMC, FAW, DCOSS, Algorithmica, IPL, IEEE Transactions on Mobile Computing.

References

1. Amol Deshpande
3221 A.V. Williams Bldg. Department of Computer Science.
University of Maryland, College Park, MD 20742
Email: amol@cs.umd.edu, Phone: 1-(301) 405-2703
2. Samir Khuller
3369 A.V. Williams Bldg. Department of Computer Science.
University of Maryland, College Park, MD 20742
Email: samir@cs.umd.edu, Phone: 1-(301) 405-6765
3. Rudolf Fleischer
Department of Computer Science and Engineering.
Fudan University, Shanghai, China
Email: rudolf@fudan.edu.cn, Phone: 86-21-51355355 Ext. 29
4. Arvind Arasu
One Microsoft Way.
Redmond, WA, USA, 98052.
Email: arvinda@microsoft.com, Phone: 1-(425) 706-0543
5. Julián Mestre
School of IT, J12. Room 4W-410.
The University of Sydney, Australia.
Email: mestre@it.usyd.edu.au, Phone: 61-2-93514276