

Yunhong Zhou

Work Address

Information Services & Process Innovation Lab
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Education

6/99 - 12/2000 Washington University, St. Louis, MO
D.Sc. in Computer Science
Thesis title: Shape Sensitive Geometric Complexity
Advisor Subhash Suri.

1/98 - 5/99 Washington University, St. Louis, MO
M.S. in Computer Science

8/96 - 12/97 Washington University, St. Louis, MO
A.M. in Mathematics

9/93 - 7/96 Beijing University, Beijing, China
B.S. in Mathematics

Employment

05/2002 – present HP Labs, Palo Alto, CA
Senior Researcher

12/2000 - 5/2002 Compaq Systems Research Center (SRC), Palo Alto, CA
Member of Research Staff

9/2000 - 12/2000 University of California, Santa Barbara, CA
Postgraduate Researcher

8/1997 - 8/2000 Washington University, St. Louis, MO
Research/Teaching Assistant

Research Interest

- Sponsored Search Auctions, Procurement Auctions, Auction Algorithms and Theory, Electronic Commerce, Game Theory, Computational Finance, etc.
- Data Mining for Advertising, Recommendation Systems, Machine Learning, Data Streams, Sensor Networks, Social Network, P2P System, etc.

- Applied Algorithms, especially **efficient** algorithms and data structures, Combinatorial Optimization, Graph Algorithms, Approximation and Randomized Algorithms, Internet Algorithms, Job Scheduling, Resource Allocation, etc.
- Computational Geometry, Bioinformatics, Computer Graphics, Information Visualization, Programming Language Methodology, Software Verification,

Short Summary of Research Work

With a core expertise in algorithms design, analysis and implementation, and a strong drive to learn new things quickly and make real-world impact, I have led or collaborated on many research projects spanning many different areas. I believe my expertise is well-suited for Internet Search Engine Companies who are focusing on building scalable and effective algorithms to improve search quality and monetization effectiveness. Furthermore, combined with my newly acquired expertises on data mining and machine learning techniques, I am eager to make immediate impact on large scale data processing in the context of online advertising, recommendation systems, social networking, auction and e-commerce etc.

During the last eight years, I have written about 40 papers published in top-tier journals and conferences, and have about one dozen patent applications pending. I am one of the core founding members of the applied algorithms team of HP Labs, and have either supervised or co-supervised seven intern students during the last four years. Following are a few highlights of my research work.

- **Recommendation Systems.** Leading a team from HP Labs to participate in the Netflix challenge and get into top-30 leaderboard (approximately) with a RMSE score 0.8957. We use Parallel Matlab, deploying a 32-node cluster to conduct large sparse matrix SVD with Tikhonov regularization, combining with other approaches, including neural network and neighborhood based methods. Expect to move much further by combining with other machine learning techniques. Meanwhile, working with other colleagues to improve the recommendation system component of HP projects/products.
- **Keyword Auction.** Lauching and leading the keyword bidding optimization project, with the goal of automating the bidding process for large advertisers with budget constraints and maximizing ROI over a set of keywords. We built bidding agents to interact with real keyword auction platforms, designed simple and effective bidding algorithms with provably optimal performance guarantee, and tested our bidding algorithms with both real-world and synthetical datasets. We also explore strategical bidding behaviors of advertisers and analyze the equilibrium solutions by modelling keyword bidding as a game. See [16, 13, 19].
- **Procurement Auctions.** Proposing expressive bidding languages in procurement auctions and designing efficient algorithms to solve the corresponding winner determination problems. Also explore practical side constraints arising in such environments. See [20, 17].
- **Graph Algorithms.** Designing new algorithms for the parametric maximum flow problem with applications to the product portfolio optimization problem of HP. See [18, 15].

- **Scheduling.** Leading the job scheduling project for animation rendering using “Shrek 2” trace data, which is one of the key initiatives of HP’s service utility effort. The work is currently under investigation by HP divisions for productization. See [22, 23, 24].
- **P2P and Game Theory.** Applying game theory to P2P load balancing, inventing a new method to bound the price of anarchy which was subsequently used broadly for the analysis of congestion games and routing games. See [3, 26, 25, 28].
- **Social Network.** Leading the relationship paths project, with the potential to offer a web service for people to find multiple relationship paths to other people, offering alternative solutions without compromising people’s privacy.
- **Game Theory and Mechanism Design.** Co-developing the leveled commitment contract theory, which lays the foundation of electronic contracting. See [11, 36].
- **Bioinformatics, Computer Graphics, Visualization.** Co-inventing the first sub-quadratic time algorithm to reconstruct phylogenetic trees, and co-developing a scalable phylogenetic tree visualization and navigation system which is widely used by biologists. See [31, 30].
- **Computational Geometry.** Solving an open problem in combinatorial geometry, which leads to many subsequent breakthroughs in geometric transversal theory and results in the first AMS meeting dedicated to geometric transversal theory. See [8, 7, 34].

Awards and Honors

- Invited panelist at the 2007 Winter Conference on Business Intelligence, University of Utah, Feb 22-24, 2007. Plenary Panel: Opportunities and Challenges in Business Intelligence for Search Auction/Marketing.
- HP eAward, September 22, 2006. This award recognizes Yunhong Zhou for his contribution to recruiting young researchers for HP Labs China. His efforts have made a significant difference for the fledgling lab. Nominated by Meichun Hsu, director of HP Labs China.
- HP Five Year Service Award, 2005.
- Invited talks at AMS session meeting on Geometric Transversal Theory, Geometry Seminar at NYU Courant Institute, Microsoft Research Asia, HP Labs Computer System Colloquium, Lucent Bell Labs, AT&T Labs, Xerox PARC, University of Notre Dame, etc.
- Invited visits to UC Santa Barbara from 2001 to 2005. My host was Subhash Suri and my travel expenses were covered by NSF fund. Together with Suri and his students, we worked on several research projects, including resource allocation in grid networks, P2P load balancing from game-theoretic perspective, efficient data stream processing, and wireless multi-path routing algorithms.
- Dean’s Honor, School of Mathematics, as one of four students to graduate one year in advance, Beijing University, 1996.

- Won the 2nd Prize in the 33rd *International Mathematics Olympiad (IMO)* Chinese Training Team, 1992. The first prize winners (totally six) represented China to participate in the 33rd IMO held in Moscow, Russian and all of them won gold medals.
- National Champion, winner of the 3rd *Shiing-Shen Chern Cup* representing Hunan province with two other students, China, 1992.
- Ranked 8th nationally in *Chinese Mathematics Olympiad (CMO)*, 1991.
- Numerous awards and honors while in middle school, including being selected to the IMO training class organized by Ministry of Education of P.R.China hosted in the High School Attached to Tsinghua University. I was the only student with full mark in the entrance selection exam. Subsequently entered Beijing University for undergraduate study waived of college entrance exams. I also won numerous first place prizes in Hunan province, and was selected to the experimental class in the High School Attached to Hunan Normal University.

Media Coverage of Research Work

- *GenomeWeb* interviewed me and three other researchers at HP Labs doing bioinformatics related research and published an article titled “Bioinformatics Blooms (Relatively Speaking) at Post-Acquisition HP Labs” on 11/20/02. URL <http://genomeweb.com/articles/view-article.asp?Article=2002112010132>.
- *ACM SIGACT News* article titled “Computational Geometry Column 41”, 32(1), 53 - 55, March 2001. This also appears on *Int. J. Comput. Geometry Appl.* 11(2): 239-242 (2001). This column was written by Joseph O’Rourke, and it mostly describes our result (Zhou & Suri) that a sufficiently large number of disjoint unit balls accept at most *four* geometric permutations.

Publications

Journal Publications

1. Anshul Kothari, Subhash Suri, and **Yunhong Zhou**. Bandwidth-Constrained Allocation in Grid Computing. *Algorithmica*, accepted, to appear, 2007.
2. Kamalika Chaudhuri, Anshul Kothari, Rudi Pendavingh, Ram Swaminathan, Robert Tarjan, and **Yunhong Zhou**. Server Allocation Algorithms for Tiered Systems. *Algorithmica*, special issue for CoCoon’05, 48:129–146, Springer, 2007.
3. Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Selfish Load Balancing and Atomic Congestion Games. *Algorithmica*, 47(1):79–96, 2007.
4. Rajeev Joshi, Greg Nelson and **Yunhong Zhou**. Denali: A practical algorithm for automatically generating optimal code. *ACM Transactions on Programming Languages and Systems (TOPLAS)*, 28(6):967–989, November, 2006.

5. Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Range Counting over Multidimensional Data Streams. *Discrete and Computational Geometry*, 36:633–655, 2006.
6. Tamara Munzner, François Guimbretière, Serdar Tasiran, Li Zhang and **Yunhong Zhou**. TreeJuxtaposer: Scalable Tree Comparison using Focus+Context with Guaranteed Visibility. *ACM Transactions on Graphics* 22(3): 453-462, 2003.
7. **Yunhong Zhou** and Subhash Suri. Geometric Permutations of Balls with Bounded Size Disparity. *Computational Geometry: Theory and Applications*, 26(1):3-20, 2003.
8. Meir Katchalski, Subhash Suri and **Yunhong Zhou**. A constant bound for geometric permutations of disjoint unit balls. *Discrete and Computational Geometry*, 29(2):161-173, 2003.
9. **Yunhong Zhou** and Subhash Suri. Algorithms for a Minimum Volume Enclosing Simplex in Three Dimensions. *SIAM Journal of Computing*, 31(5):1339-1357, 2002.
10. K. Rustan M. Leino, Arnd Poetzsch-Heffter and **Yunhong Zhou**. Using data groups to specify and check side effects. *ACM SIGPLAN Notices* 37(5): 246-257, May 2002.
11. Tuomas Sandholm and **Yunhong Zhou**. Surplus equivalence of leveled commitment contracts. *Artificial Intelligence*, 142(2):239-264, 2002.
12. **Yunhong Zhou** and Subhash Suri. Analysis of a bounding box heuristic for object intersection. *Journal of the ACM*, 46(6):833–857, November 1999.

Conference Papers

13. **Yunhong Zhou** and Rajan Lukose. Vindictive Bidding in Keyword Auctions. In *Proc. 9th International Conference on Electronic Commerce (ICEC'07)*, Minneapolis, MN, August 19-22, 2007 (**invited session on sponsored searches**).
14. Chiranjeeb Buragohain, Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Improved throughput bounds for routing in wireless networks. The 13th Annual International Computing and Combinatorics Conference (COCOON'07), LNCS 4598, pp. 210–221, Banff, Alberta, Canada, July 16-19, 2007.
15. Maxim Babenko, Jonathan Derryberry, Andrew Goldberg, Robert Tarjan, and **Yunhong Zhou**. Experimental Evaluation of Parametric Max-Flow Algorithms. The 6th Workshop on Experimental Algorithms (WEA'07), LNCS 4525, pp. 256–269, Rome Italy, June 6-8, 2007.
16. Deeparnab Chakrabarty, **Yunhong Zhou** and Rajan Lukose. Budget Constrained Bidding in Keyword Auctions and Online Knapsack Problems. The 3rd Workshop on Sponsored Search Auctions (SSA'07), Banff, Canada, May 8, 2007.
17. **Yunhong Zhou**. Improved Multi-unit Auction Clearing Algorithms with Interval (Multiple-Choice) Knapsack Problems. In *17th International Symposium on Algorithms and Computation (ISAAC'06)*, LNCS 4288, pp. 494–506, Kolkata, India, December 18-20, 2006.

18. Robert Tarjan, Julie Ward, Bin Zhang, **Yunhong Zhou**, and Jia Mao. Balancing Applied to Maximum Network Flow Problems. In *14th European Symposium on Algorithms (ESA '06)*, LNCS 4168, pp. 612–623, ETH Zurich, Switzerland, September 11–15, 2006.
19. **Yunhong Zhou** and Rajan Lukose. Vindictive Bidding in Keyword Auctions. In *Proc. 2nd Workshop on Sponsored Search Auctions (SSA '06)*, Ann Arbor, Michigan, June 11, 2006.
20. Anshul Kothari, Subhash Suri and **Yunhong Zhou**. Interval Subset-Sum and Uniform-Price Auction Clearing. In *the Eleventh International Computing and Combinatorics Conference (CoCoon'05)*, LNCS 3595, pp. 608–620, Springer, August 16–19, 2005, Kunming, Yunnan, China.
21. Kamalika Chaudhuri, Anshul Kothari, Rudi Pendavingh, Ram Swaminathan, Robert Tarjan, and **Yunhong Zhou**. Server Allocation Algorithms for Tiered Systems. In *the Eleventh International Computing and Combinatorics Conference (CoCoon'05)*, LNCS 3595, pp. 632–643, Springer, August 16–19, 2005, Kunming, Yunnan, China.
22. **Yunhong Zhou**, Terence Kelly, Janet Wiener and Eric Anderson. An Extended Evaluation of Two-Phase Scheduling Methods for Animation Rendering. In *Proceedings of 11th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP'05)*, LNCS 3834, pp. 123–145, Springer, June 19, 2005, Cambridge, MA.
23. Eric Anderson, Dirk Beyer, Kamalika Chaudhuri, Terence Kelly, Norman Salazar, Pano Santos, Ram Swaminathan, Robert Tarjan, Janet Wiener and **Yunhong Zhou**. Value-Maximizing Deadline Scheduling and its Application to Animation Rendering. In *Proceedings of 17th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA '05)*, pages 299–308, Las Vegas, July 17–20, 2005.
24. Eric Anderson, Dirk Beyer, Kamalika Chaudhuri, Terence Kelly, Norman Salazar, Pano Santos, Ram Swaminathan, Robert Tarjan, Janet Wiener and **Yunhong Zhou**. Deadline Scheduling for Animation Rendering. In *Proceedings of ACM Sigmetrics* (poster), pages 384–385, Banff, Canada, June 6–10, 2005.
25. Anshul Kothari, Subhash Suri, Csaba Tóth and **Yunhong Zhou**. On a Server Selection Game among Selfish Clients. In *Workshop on Combinatorial and Algorithmical Aspect of Networking (CAAN'04)*, LNCS 3045, pages 13–27, Springer, Banff International Research Station (BIRS), Alberta, Canada, August 5–7, 2004.
26. Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Selfish Load Balancing and Atomic Congestion Games. In *Proc. 16th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA '04)*, Pages 188–195, Barcelona, Spain, June 28–30, 2004.
27. Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Range Counting over Multidimensional Data Streams. In *Proc. 20th ACM Annual Symposium on Computational Geometry (SoCG'04)*, ACM Press, Pages 160–169, New York, NY, June 9–11, 2004.
28. Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Uncoordinated Load Balancing and Congestion Games in P2P Systems. In *Proc. 3rd Int. Workshop on Peer-to-Peer Systems (IPTPS'04)*, LNCS 3279, Springer, Pages 123–130, San Diego, CA, February 26–27, 2004.

29. Anshul Kothari, Subhash Suri and **Yunhong Zhou**. Bandwidth-Constrained Allocation in Grid Computing. *Proc. 8th Workshop on Algorithms and Data Structures (WADS'03)*, July 30 - August 1, 2003, Ottawa, Canada. LNCS 2748, pages 67–78, Springer-Verlag, 2003.
30. Tamara Munzner, François Guimbretière, Serdar Tasiran, Li Zhang and **Yunhong Zhou**. TreeJuxtaposer: Scalable Tree Comparison using Focus+Context with Guaranteed Visibility. In *Proc. SIGGRAPH'03*, pages 453–462, San Diego, CA, July 27-31, 2003.
31. Valerie King, Li Zhang and **Yunhong Zhou**. On the Complexity of Distance-based Evolutionary Tree Reconstruction. In *the Fourteen Annual ACM-SIAM Symposium of Discrete Algorithm (SODA'03)*, pages 444–453, Baltimore, MD, January 12-14, 2003.
32. K. Rustan M. Leino, Arnd Poetzsch-Heffter and **Yunhong Zhou**. Using data groups to specify and check side effects. In *ACM/SIGPLAN 2002 Conference on Programming Language Design and Implementation (PLDI'02)*, pages 246–257, Berlin, Germany, June 17-19, 2002.
33. **Yunhong Zhou** and Subhash Suri. Geometric Permutations of Balls with Bounded Size Disparity. In *13th Canadian Conference on Computational Geometry (CCCG'01)*, pages 177–180, University of Waterloo, Canada, August 13-15, 2001.
34. **Yunhong Zhou** and Subhash Suri. Shape sensitive geometric permutations. In *the Twelfth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA'01)*, pages 234–243, Washington, DC, January 7-9 2001.
35. **Yunhong Zhou** and Subhash Suri. Collision detection using bounding boxes: Convexity helps. In *the 8th Annual European Symposium on Algorithms (ESA'00), Lecture Notes in Computer Science 1879*, pages 437–448, Saarbrcken, Germany, September 5-8 2000.
36. Tuomas Sandholm and **Yunhong Zhou**. Surplus equivalence of leveled commitment contracts. In *the Fourth International Conference on Multi-Agent Systems (ICMAS'00)*, pages 247–254, Boston, MA, July 7-12, 2000.
37. **Yunhong Zhou** and Subhash Suri. Algorithms for minimum volume enclosing simplex in R^3 . In *the Eleventh Annual ACM-SIAM Symposium on Discrete Algorithms (SODA'00)*, pages 500–509, San Francisco, CA, 2000.
38. Tuomas Sandholm and **Yunhong Zhou**. Revenue equivalence of leveled commitment contracts. In *AAAI-99 Workshop on Negotiation: Settling conflicts and identifying opportunities*, pages 38–43, Orlando, FL, 1999.
39. **Yunhong Zhou** and Subhash Suri. Analysis of a bounding box heuristic for object intersection. In *the Tenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA'99)*, pages 830–839, Baltimore, MD, 1999.

Technical Reports

40. Chiranjeeb Buragohain, Subhash Suri, Csaba Tóth and **Yunhong Zhou**. Improved Throughput Bounds for Interference-aware Routing in Wireless Networks. UC Santa Barbara Technical Reports 2006-13, November 2006.
41. Kamalika Chadhuri, Anshul Kothari, Ram Swaminathan, Robert Tarjan, Alex Zhang, and **Yunhong Zhou**. Server Allocation Problem for Multi-Tiered Applications. HP Labs Technical Report HPL-2004-151, HP Labs, Palo Alto, CA 2004.
42. Rajeev Joshi, Greg Nelson and **Yunhong Zhou**. The Straight-Line Automatic Programming Problem. HP Labs Technical Report HPL-2003-236, HP Labs, Palo Alto, CA, 2003.
43. Valerie King, Li Zhang and **Yunhong Zhou**. On the Complexity of Distance-based Evolutionary Tree Reconstruction. HP Labs Technical Report HPL-2002-267, HP Labs, Palo Alto, CA, 2002.
44. **Yunhong Zhou**. Shape Sensitive Geometric Complexity. D.Sc. Dissertation, Department of Computer Science, Washington University. Also appears as Technical Report WUCS-00-25, 2000.
45. Tuomas Sandholm and **Yunhong Zhou**. Revenue Equivalence of Leveled Commitment Contracts. Technical Report WUCS-99-03, Washington University, Department of Computer Science, 1999.

Intellectual Properties

Patent Applications (coinventors and other details hidden)

- PA1. Allocating Goods to Bidders in Combinatorial Auctions. (pending since 07/30/2007)
- PA2. Bidding in Online Auctions. (pending since 07/30/2007)
- PA3. Balancing Collections of Vertices in a Network. (pending since 03/08/2007)
- PA4. Identifying a Minimum Cut and/or a Maximum Flow Using Balancing of Vertex Excesses. (pending since 06/09/2006)
- PA5. Allocating Resources in a Multi-tiered System. (pending since 12/09/2005)
- PA6. Method of Scheduling Computer Processing Jobs. (pending since 09/29/2005)
- PA7. Calculating Numbers of Servers for Tiers of a Multi-Tiered System. (pending since 06/16/2005)
- PA8. Allocation of Resources for Tiers of Multi-Tiered System Based on Selecting Items from Respective Sets. (pending since 04/28/2005)
- PA9. Allocating Resources in a System Having Multiple Tiers. (pending since 04/28/2005)

- PA10. Computing Estimated Performance of a Software Application in a Target System. (pending since 04/19/2005)
- PA11. Method of Scheduling Tasks within a Multi-processor Computing Environment. (pending since 02/28/2005)
- PA12. Method of Scheduling Computer Processing Jobs. (pending since 02/28/2005)

Defensive Publications

- DP1. Job Scheduling with Task Dispatching Simulation. **Yunhong Zhou**, Pano Santos and Terence Kelly. *Research Disclosure*, #509023, pages 1176–1178, September 2006.

Advisory Activities

- Postdoc mentor of Rong Pan (Hongkong U. Science & Technology), HP Labs, Fall, 2007.
- Intern Mentor of Victor Naroditskiy (Brown U), HP Labs, Summer 2007.
- Intern Mentor of Jonathan Derryberry (CMU), HP Labs, Summer 2006.
- Intern Mentor of Deeparnab Chakrabarty (Georgia Tech), HP Labs, Summer 2006.
- Intern Mentor of Hai Yu (Duke University), HP Labs, Summer 2005.
- Intern Mentor of Jia Mao (UC San Diego), HP Labs, Summer 2005.
- Intern Mentor of Anshul Kothari (UC Santa Barbara), HP Labs, Spring 2004.
- Intern Mentor of Kamalika Chaudhuri (UC Berkeley), HP Labs, Summer 2004.

Conference PC Members and Reviewers

- PC **Co-Chair** and Co-Organizer, the 5th International Conference on Algorithmic Aspects in Information and Management (AAIM'09), San Francisco, June, 2009.
- PC Member, the 9th ACM Conference on Electronic Commerce (ACM EC'08), Chicago, July, 2008.
- PC Member, the 4th International Conference on Algorithmic Aspects in Information and Management (AAIM'08), Shanghai, 2008.
- PC Member, the 13th Annual International Computing and Combinatorics Conference (COCOON'07), July 16-19, 2007, Banff, Canada.
- PC Member, the 3rd Workshop on Sponsored Search Auctions (SSA'07), May 8, 2007, Banff, Canada.
- PC Member, the First International Workshop on Data Mining and Audience Intelligence for Advertising (ADKDD'07), August 12, 2007, San Jose, California.
- Reviewer, ACM-SIAM Symposium on Discrete Algorithms: SODA'07, SODA'04, SODA'02.
- Reviewer, IEEE Symposium on Foundations of Computer Science: FOCS'04, FOCS'01.
- Reviewer, ACM Conference on Electronic Commerce: EC'04.
- Reviewer, Int. Symposium on Algorithms and Computation: ISAAC'05.
- Reviewer, Int. Symposium on Theoretical Aspects of Computer Science: STACS'02.

Journal Referee for

- Journal of the ACM
- Theoretical Computer Science
- Journal of Combinatorial Optimization
- Discrete & Computational Geometry
- Computational Geometry: Theory and Applications
- European Journal of Operations Research
- IEEE Transactions on Signal Processing
- Journal of Heuristics
- International Journal of Computer Mathematics

Presentations

1. HP Labs Machine Learning Talk, October 3, 2007. Title: Collaborative Filtering, the Netflix Prize, and Parallel Matlab.
2. HP Labs DTD Department Meeting, April 30, 2007. Title: Bidding Management for Sponsored Search Auctions.
3. PARC Computing Science Laboratory Colloquium, March 1, 2007. Title: Budget Constrained Bidding in Keyword Auctions and Online Knapsack Problems.
4. The 2007 Winter Conference on Business Intelligence, February 24, 2007. Invited panelist with topic: Opportunities and Challenges in Business Intelligence for Search Auction/Marketing.
5. The 14th Annual European Symposium on Algorithms (ESA'06), ETH Zurich, Switzerland, September 12, 2006. Title: Balancing Applied to Maximum Network Flow Problems.
6. HP Labs Applied Algorithms Seminar, Palo Alto, CA, September 8, 2006. Title: Balancing Applied to Maximum Network Flow Problems.
7. The 2nd Workshop on Sponsored Search Auctions, Ann Arbor, Michigan, June 11, 2006. Title: Vindictive Bidding in Keyword Auctions.
8. Adaptive Enterprise and Information Dynamics Project Review with Dick Lampman, SVP and Director of HP Labs, Palo Alto, CA, April 10, 2006. Title: Auction Algorithms.
9. AMS Sectional Meeting (Special Session on Geometric Transversal Theory), Bard College, NY, October 8-9, 2005. Title: Shape Sensitive Geometric Permutations.
10. IETL Lab Meeting, HP Labs, Palo Alto, CA, October 4, 2005. Title: Server Allocation Algorithms for Tiered Systems.
11. Yahoo Research Labs, Sunnyvale, CA, October 3, 2005. Title: Deadline Scheduling for Animation Rendering.
12. The 11th International Computing and Combinatorics Conference (CoCoon'05), Kunming, Yunnan, China, August 19, 2005. Title: Interval Subset-Sum and Uniform-Price Auction Clearing.

13. The 11th International Computing and Combinatorics Conference (CoCoon'05), Kunming, Yunnan, China, August 17, 2005. Title: Server Allocation Algorithms for Tiered Systems.
14. The 17th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'05), Las Vegas, NV, July 18-20, 2005. Title: Value Maximizing Deadline Scheduling and its Application to Animation Rendering.
15. Computer Systems Colloquium, HP Labs, Palo Alto, CA, June 24, 2005. Title: Deadline Scheduling for Animation Rendering.
16. IEL Lab Meeting one-hour talk, HP Labs, Palo Alto, CA, May 3, 2005. Title: Value-Maximizing Deadline Scheduling and its Application to Animation Rendering.
17. INFORMS Computing Society Conference (ICS'05), Annapolis, MD, January 7, 2005. Title: Server Allocation Algorithms for Tiered Systems.
18. HP Labs Image Systems Lab, Palo Alto, CA, December 9, 2004. Title: Job Scheduling to Maximize Value in a Service Utility.
19. The Sixteenth ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'04), Barcelona, Spain, June 29, 2004. Title: Selfish Load Balancing and Atomic Congestion Games.
20. IETL Lab Meeting long talk, HP Labs, Palo Alto, CA, March 30, 2004. Title: Selfish Load Balancing and Congestion Games in P2P Systems.
21. Applied Algorithms Portfolio Review with Center Director (Kris Halvorsen, VP), HP Labs, Palo Alto, CA, March 9, 2004. Title: IT Capacity Planning and SASU.
22. The 3rd International Workshop on Peer-to-Peer Systems (IPTPS'04), San Diego, CA, February 26, 2004. Title: Uncoordinated Load Balancing and Congestion Games in P2P Systems.
23. HP Labs Applied Algorithms Seminar, Palo Alto, CA, February 13, 2004. Title: Selfish Load Balancing and Congestion Games in P2P Systems.
24. Microsoft Research Asia, Beijing, China, November 20, 2003. Title: Selfish Load Balancing and Congestion Games in P2P Systems.
25. IETL Lab Meeting short talk, HP Labs, Palo Alto, CA, September 9, 2003. Title: Price of Anarchy in Peer Matching (Nash, Greedy vs Optimal).
26. SRC Meeting center talk, HP Labs, Palo Alto, CA, February 5, 2003. Title: Economics Modeling and Analysis of Dell Entry into Printer Market.
27. Computational Bioscience Day, Hewlett-Packard Laboratories, Palo Alto, CA, October 2, 2002. Title: Distance Based Evolutionary Tree Reconstruction.
28. Courant Institute Geometry Seminar, New York University, New York, NY, March 26, 2002. Title: Geometric Permutations of Disjoint Unit Balls.
29. The 13th Canadian Conference on Computational Geometry (CCCG 2001), University of Waterloo, Canada, August 15, 2001. Title: Geometric Permutations of Balls with Bounded Size Disparity.
30. Compaq Systems Research Center, center talk, March 28, 2001. Title: Surplus Equivalence of Leveled Commitment Contracts.

31. The 8th Annual European Symposium on Algorithms (ESA 2000), Saarbrücken, Germany, September 6, 2000. Title: Collision Detection Using Bounding Boxes: Convexity Helps.
32. Compaq Systems Research Center, Palo Alto, CA, July 31, 2000. Title: Shape Sensitive Geometric Complexity.
33. Xerox PARC, Computer Science Lab, Palo Alto, CA, July 24, 2000. Title: Shape Sensitive Geometric Complexity.
34. AT&T Labs-Research, Florham Park, NJ, July 17, 2000. Title: Shape Sensitive Geometric Complexity.
35. Lucent Technologies, Bell Labs, Mathematical Sciences Research Center, Murray Hill, NJ, July 10, 2000. Title: Shape Sensitive Geometric Complexity.
36. University of Notre Dame, Computer Science and Engineering Department, IN, June 29, 2000. Title: Shape Sensitive Geometric Complexity.
37. The Annual Graduate Research Review, Washington University in St. Louis, MO, April 21, 2000. Title: Algorithms for Minimum Volume Enclosing Simplex in R^3 .
38. The Eleventh Annual ACM-SIAM Symposium on Discrete Algorithms (SODA'00), San Francisco, CA, January 10th, 2000. Title: Algorithms for Minimum Volume Enclosing Simplex in R^3 .
39. The Annual Graduate Research Review, Washington University in St. Louis, MO, September 23, 1999. Title: Analysis of a Bounding Box Heuristic for Object Intersection.

Membership in Professional Organizations

- Association for Computing Machinery (ACM)
- Institute of Electrical and Electronics Engineers (IEEE)
- Center for Discrete Mathematics and Theoretical Computer Science (DIMACS)
- Society for Industrial and Applied Mathematics (SIAM)

Personal Data

Date of Birth: June 7, 1974
 Place of Birth: Shaoyang, Hunan, China
 Visa Status: US Permanent Resident (Green Card)
 Citizenship: P.R. China

References

Available upon requests.