

Paz Carmi – Curriculum Vitae

Personal Details

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Current position

Post Doctoral Fellow at the School of Computer Science,
Carleton University, Ottawa, Canada

Education

Ph.D. with distinction		2002 – 2006
	Department of Computer Science Ben-Gurion University of the Negev Beer-Sheva, Israel	
Title:	Approximation Algorithms for Geometric Problems in Wireless Communication Networks	
Advisor:	Prof. Matthew J. Katz	
Pre-Doc program		2001 – 2002
	Department of Computer Science Federal Institute of Technology, ETH Zurich, Switzerland	
M.Sc. with distinction		1999 – 2001
	Department of Computer Science Ben-Gurion University of the Negev Beer-Sheva, Israel	
Title:	Minimizing the Convex Hull via Local Transfers	
Advisor:	Prof. Matthew J. Katz	
B.Sc.		1996 – 1999
	Mathematics and Computer Science Ben-Gurion University of the Negev Beer-Sheva, Israel	

Employment

- 2006 – present:** Post Doctoral Fellow at the School of Computer Science,
Carleton University, Ottawa, Canada
- 2000 – 2006:** Instructor and Teaching Assistant in the Computer Science
Department, Ben-Gurion University of the Negev
- [2002 – 2005] Principles of Programming Languages – Instructor
- [2000, 2001] Computer Architecture and Assembly Languages – Teaching Assistant
- [2000, 2001] Principles of Programming Languages – Teaching Assistant
- [2000] Object Oriented Design, C++ and Operating Systems – Instructor

Honors and Awards

- Ontario Post-Doctoral Fellowship program,
Province of Ontario ministry of Research and Innovation Post Doctoral Fellowship
- Award for excellence in teaching at the Department of Computer Science,
Ben-Gurion University of the Negev (2004–2005)
- Kreitman Foundation Fellowship for Ph.D. students,
Ben-Gurion University of the Negev
- Vatat (Israeli high-education planning and budgeting committee)
Excellence in HI-Tech Research Fellowship
- Ph.D. thesis with distinction, Ben-Gurion University of the Negev
- M.Sc. with distinction Ben-Gurion University of the Negev

Additional Information

Program Committee: CCCG 2008

Editor: CCCG 2007, Special Issue with Prosenjit Bose

Organizing Committee: CCCG 2007

Referee: SIAM Journal on Computing (SICOMP)
Computational Geometry: Theory and Applications (CGTA)
International Journal of Computational Geometry and Applications (IJCGA)
Systems, Man and Cybernetics
Conferences: SoCG, WADS, ISAAC, CCCG, PODC

Presentations at international conferences and workshops

April 2008:	The 8th Latin American Theoretical Informatics Symposium, Bzios
December 2007:	The 18th International Symposium on Algorithms & Computation, Sendai
October 2007:	The 5th Workshop on Approximation and Online Algorithms, Eilat
August 2007:	The 10th Workshop on Algorithms and Data Structures, Halifax
June 2006:	The 22nd Annual Symposium on Computational Geometry, Sedona
August 2005:	The 9th Workshop on Algorithms and Data Structures, Waterloo
August 2005:	The 17th Canadian Conference on Computational Geometry, Windsor
March 2005:	The 21st European Workshop on Computational Geometry, Eindhoven
July 2004:	The 9th Scandinavian Workshop on Algorithm Theory, Humlebæk
January 2004:	The 6th Workshop on Algorithm Engineering & Experiments, New Orleans
March 2003:	The 19th European Workshop on Computational Geometry, Bonn
March 2001:	The 17th European Workshop on Computational Geometry, Berlin

Research Experience and Collaboration

June 2008:	Research visit at Simon Fraser University, B.C. host: Prof. Binay Bhattacharya
February 2004:	Research visit at Stony Brook University, N.Y. host: Prof. Joseph S.B. Mitchell
2000 – 2001:	Member of a team within the LSRT MAGNET Consortium
2001 – 2002:	Member of the pre-doc program of the Berlin-Zurich Graduate Program, ETH Zurich

Publications

Journal Publications

1. Tetsuo Asano, Prosenjit Bose, Paz Carmi, Anil Maheshwari, Chang Shu, Michiel H. M. Smid, Stefanie Wuhler. A Linear-Space Algorithm for Distance Preserving Graph Embedding. *Accepted to Computational Geometry: Theory and Applications (CGTA)*
2. Boris Aronov, Paz Carmi and Matthew J. Katz. Minimum-Cost Load-Balancing Partitions. *Accepted to Algorithmica*, 2007
3. Paz Carmi, Matthew J. Katz and Nissan Lev-Tov. Polynomial time approximation schemes for piercing and covering with applications in wireless networks. *Accepted to Computational Geometry: Theory and Applications*, 2007
4. Paz Carmi, Matthew J. Katz, Michael Segal and Hanan Shpungin. Fault-tolerant power assignment and backbone in wireless networks. *Accepted to Ad Hoc & Sensor Wireless Networks*, 2007
5. Boaz Ben-Moshe, Paz Carmi and Matthew J. Katz. Approximating the visible region of a point on a terrain. *Accepted to GeoInformatica*, 2007
6. Paz Carmi and Matthew J. Katz. Power assignment in radio networks with two power levels. *Algorithmica* 47(:2) (2007), 183–201

7. Paz Carmi, Matthew J. Katz and Joseph S.B. Mitchell. The minimum-area spanning tree problem. *Computational Geometry: Theory and Applications* 35(:3) (2006), 218–225
8. Paz Carmi, Sariel Har-Peled and Matthew J. Katz. On the Fermat-Weber center of a convex object. *Computational Geometry: Theory and Applications*, 32 (2005), 188–195
9. Paz Carmi, Shlomi Dolev, Sariel Har-Peled, Matthew J. Katz and Michael Segal. Geographic quorum system approximations. *Algorithmica*, 41 (2005), 233–244
10. Boaz Ben-Moshe, Paz Carmi and Matthew J. Katz. Computing all large sums-of-pairs in \mathbb{R}^n and the discrete planar two-watchtower problem. *Inf. Proc. Letters* 89 (2004), 137–139
11. Amos Beimel, Paz Carmi, Kobbi Nissim and Enav Weinreb. Private Approximation of Search Problems. *Accepted pending revision to: SIAM Journal on Computing (SICOMP)*
12. Prosenjit Bose, Paz Carmi, Mathieu Couture, Anil Maheshwari, Pat Morin and Michiel Smid. Spanners of Complete k -Partite Geometric Graphs. *Accepted pending revision to: SIAM Journal on Computing (SICOMP)*
13. Prosenjit Bose, Paz Carmi, Mathieu Couture, Anil Maheshwari, Michiel Smid and Norbert Zeh. Geometric Spanners With Small Chromatic Number. *Accepted pending revision to: Computational Geometry: Theory and Applications (CGTA)*

Submitted

- Paz Carmi, Matthew Katz and Nissan Lev-Tov. Covering Points by Unit Disks of Fixed Location. *Invited to the special issue of International Journal of Computational Geometry and Applications (IJCGA 2007)*, 2007
- Michel Barbeau, Prosenjit Bose, Paz Carmi, Mathieu Couture and Evangelos Kranakis. Location Oblivious Distributed Unit Disk Graph Coloring. *Submitted to: Algorithmica*
- Prosenjit Bose, Paz Carmi, Mathieu Couture, Michiel Smid and Daming Xu. On a family of strong geometric spanners that admit local routing strategies. *Submitted to: Discrete Applied Mathematics (DAM)*
- Amos Beimel, Boaz Ben-Moshe, Yehuda Ben-Shimol, Paz Carmi, Eldad Chai, Itzik Kitroser, Eran Omri. Matrix Columns Allocation Problems. *Submitted to: Theoretical Computer Science (TCS)*
- Paz Carmi, Vida Dujmovic, Pat Morin, and David R. Wood. Distinct distances in graph drawings. *Submitted to: The Electronic Journal of Combinatorics*
- Prosenjit Bose, Paz Carmi, Mohammad Farshi, Anil Maheshwari and Michiel Smid. Computing the greedy spanner in near-quadratic time. *Submitted to: Algorithmica*

Conference Papers

1. Glenn Hickey, Paz Carmi, Anil Maheshwari and Norbert Zeh. NAPX: A polynomial time approximation scheme for the Noah's ark problem. *Accepted to the 8th Workshop on Algorithms in Bioinformatics (WABI 2008)*, 2008
2. Prosenjit Bose, Paz Carmi and Mathieu Couture. Spanners of Additively Weighted Point Sets. *Accepted to the 11th Scandinavian Workshop on Algorithm Theory (SWAT 2008)*, 2008
3. Prosenjit Bose, Paz Carmi, Mohammad Farshi, Anil Maheshwari and Michiel Smid. Computing the greedy spanner in near-quadratic time. *Accepted to the 11th Scandinavian Workshop on Algorithm Theory (SWAT 2008)*, 2008
4. Prosenjit Bose, Paz Carmi, Mathieu Couture, Anil Maheshwari, Pat Morin and Michiel Smid. Spanners of Complete k -Partite Geometric Graphs. *Accepted to the 8th Latin American Theoretical Informatics Symposium (LATIN 2008)*, 2008
5. Paz Carmi, Matthew Katz and Nissan Lev-Tov. Covering Points by Unit Disks of Fixed Location. *Accepted to the 18th International Symposium on Algorithms and Computation (ISAAC 2007)*, 2007
6. Prosenjit Bose, Paz Carmi, Mathieu Couture, Anil Maheshwari, Michiel Smid and Norbert Zeh. Geometric Spanners With Small Chromatic Number. *Accepted to the 5th Workshop on Approximation and Online Algorithms (WAOA 2007)*, 2007
7. Tetsuo Asano, Prosenjit Bose, Paz Carmi, Anil Maheshwari, Chang Shu, Michiel Smid and Stefanie Wuhler. Linear-Space Algorithms for Distance Preserving Embedding. *Proc. of the 19th Annual Canadian Conference on Computational Geometry (CCCG 2007)*, 2007
8. Prosenjit Bose, Paz Carmi, Mathieu Couture, Michiel Smid and Daming Xu. On a family of strong geometric spanners that admit local routing strategies. *Proc. of the 10th Workshop on Algorithms and Data Structures (WADS 2007)*, 2007, 300–311
9. Mathieu Couture, Michel Barbeau, Prosenjit Bose, Paz Carmi, Evangelos Kranakis, Location Oblivious Distributed Unit Disk Graph Coloring. *Proc. of the International Colloquium on Structural Information and Communication (SIROCCO 2007)*, 2007, 222–233
10. Amos Beimel, Paz Carmi, Kobbi Nissim and Enav Weinreb. Private approximation of search problems. *Proc. of the 38th ACM Symposium on Theory of Computing (STOC 2006)*, 2006, 119–128
11. Paz Carmi, Matthew J. Katz, Michael Segal and Hanan Shpungin. Fault-tolerant power assignment and backbone in wireless networks. *Proc. of the 4th annual IEEE International Conference on Foundation and Algorithms for Wireless Networking (FAWN 2006)* 2006, 80
12. Boris Aronov, Paz Carmi and Matthew J. Katz. Minimum-cost load-balancing partitions. *Proc. the 22nd Annual ACM Symposium on Computational Geometry (SOCG 2006)* 2006, 301–308
13. Paz Carmi, Matthew J. Katz and Joseph S. B. Mitchell. The minimum-area spanning tree problem. *Proc. 9th Workshop on Algorithms and Data Structures (WADS 2005)*, 2005, 195–204

14. Paz Carmi and Matthew J. Katz. Power assignment in radio networks with two power levels. *Proc. 9th Scandinavian Workshop on Algorithm Theory (SWAT 2004)*, 2004, 431–441
15. Boaz Ben-Moshe, Paz Carmi and Matthew J. Katz. Approximating the visible region of a point on a terrain. *Proc. Algorithm Engineering and Experiments (ALENEX 2004)*, 2004, 120–128. (See also *Proc. 19th European Workshop on Computational Geometry*, 2003, 121–124)
16. Paz Carmi, Thomas Erlebach and Yoshio Okamoto. Greedy edge-disjoint paths in complete graphs. *Proc. 29th Workshop on Graph Theoretic Concepts in Computer Science (WG 2003)*, 2003 143–155
17. Paz Carmi, Yefim Dinitz, Shahar Golan and Guy Rozenwald. An $O(|V||E|)$ algorithm for the *AND/OR* scheduling problem: The general case. *Third Haifa Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Algorithms*, 2003
18. Paz Carmi and Matthew J. Katz. Minimizing the convex hull via local transfers. *Proc. 17th European Workshop on Computational Geometry*, 2001, 105–108

Additional Activities

- Organizer of the algorithms open problem session at Carleton university
- Team member of the cultural and educational program committee of the Kreitman Foundation
- Organizer of an adults roller hockey group for amateurs