Personal Information

Name: Shira Zucker

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Curriculum Vita

Education

- **Ph.D. (Combined Track) – Department of Computer Science, Ben-Gurion University** (2002 – 2009)
    - Thesis Research: Anticoloring problems on graphs.
    - Advisors: Prof. Daniel Berend and Prof. Ephraim Korach.
- **B.Sc. (Cum Laude) – Department of Computer Science Bar Ilan University** (1998 – 2001)
    - Received university president award of excellence

Employment

- **Senior Faculty Member** - Computer Science department, Sapir academic college (2009 – Current)
    - Member, Undergraduate Teaching Committee
    - Member, Faculty Curriculum Committee
- **Instructor and teaching Assistant** - Computer Science Department, Ben-Gurion University (2002 – 2009)
- **Development Engineer** - Amdocs (2000 - 2001)

Honors, Awards and Scholarships

- **Ph.D. (Combined Track):**
    - The Friedman award for outstanding achievements, Ben-Gurion University of the Negev, 2008.

- o Kreitman Foundation Fellowships for Ph.D students, Ben-Gurion University of the Negev, 2004.
  - o Computer Science Department fellowship for Ms.c. students.
- **B.Sc.:**
  - o The president prize for excellent students, Bar Ilan University, 1999.
- **Additional Awards:**
  - o Best student presentation - in SOFSEM - Slovakia, 2008.

Professional Academic Activities and Service

- **Editorial board member** - American Journal of Systems and Software.

- **Reviewer of journal and conference publications** – Theoretical Computer Science, Elsevier publications; Open Journal of Discrete Mathematics (OJDM).

Courses Taught

- Calculus 2
- Databases management
- Lab - Computer science 101
- System programming
- File organization
- UNIX management systems
- Design of algorithms
- Data structures
- Introduction to computer Science
- Java programming
- Operating systems
- Advanced algorithms

Journal Publications

- D. Berend, S. Zucker, The Asymptotics of Useless Hint Sequences in Nonograms, Journal of Integer Sequences, 21:18.4.2, https://cs.uwaterloo.ca/journals/JIS/VOL21/Zucker/zucker2.html, 2018.

- D. Berend, R. Brafman, S. Cohen, S. E. Shimony, S. Zucker, Optimal Ordering of Statistically Dependent Tests, Discrete Applied Mathematics, https://doi.org/10.1016/j.dam.2017.04.009, 2017.
- D. Berend, R. Brafman, S. Cohen, S. E. Shimony, S. Zucker, Optimal Ordering of Independent Tests with Precedence Constraints, Discrete Applied Mathematics, 162:115—127, 2014.
- S. Zucker, The Black-and-White Coloring Problem on Chordal Graphs, Journal of Graph Algorithms and Applications, 16/2:261—281, 2012.
- D. Berend, E. Korach and S. Zucker, Tabu Search for the BWC Problem, Journal of Global Optimization: 54/4:649--667, DOI: 10.1007/s10898-011-9783-1, 2012.
- D. Berend, E. Korach and S. Zucker, Anticoloring and separation of graphs, Discrete Mathematics, 310/3:390—399, 2010.
- D. Berend and S. Zucker, The Black-and-White Coloring Problem on Trees, Journal of Graph Algorithms and Applications, 13/2:133—152, 2009.
- D. Berend, E. Korach and S. Zucker, Anticoloring of a family of grid graphs, Discrete Optimization, 5/3:647--662, 2008.

Conference Publications

- S. Zucker, An Apppproximation Algorithm for the BWC Problem, Proceedings of the 17th International Conference on Mathematical Methods in Science and Engineering (CMMSE'17) ISBN: 978-84-617-8694-7, Cadiz, Spain, 2063-2066, 2017.
- D. Berend and S. Zucker, On the Number of Forceless Hint Sequences in Paint-by-Numbers Puzzles, Proceedings of the 28th Canadian Conference on Computational Geometry (CCCG'16), Vancouver, Canada, 266-269, 2016.
- D. Berend, S. Cohen, E. Shimony and S. Zucker, Optimal Ordering of Tests with Extreme Dependencies, Modelling, Computation and Optimization in Information Systems and Management Sciences, Advances in Intelligent Systems and Computing, 359:81-91, 2015.
- S. Zucker, The d-distance anticoloring Problem, Computability In Europe (CIE'13), Milan, Italy, 2013

- D. Berend and S. Zucker, An improved Algorithm for the Black-and-White Coloring Problem on Trees, Proceedings of the 19th International Workshop on Combinatorial Algorithms, (IWOCA'08), Japan, 173--181, College Publications, 2008.
- D. Berend, E. Korach and S. Zucker, A Reduction of the Anticoloring Problem to Connected Graphs, ENDM 28:445--451, 2006.
- D. Berend, E. Korach and S. Zucker, Two-anticoloring of planar and related graphs, DMTCS Proceedings, AD:335--342, 2005.
- D. Berend, E. Korach and S. Zucker, Tabu search for the BWC problem, Proceedings of SOFSEM08: Theory and Practice of Computer Science, 34th Conference on Current Trends in Theory and Practice of Computer Science, Novy Smokovec, Slovakia, Vol. II, 22—33, 2008.

Conferences' Presentations

- CMMSE'17 - the 17th International Conference on Mathematical Methods in Science and Engineering, Cadiz, Spain, July 2017.
- CCCG2016 - the 28th Canadian Conference on Computational Geometry, Vancouver, Canada, August 2016.
- MCO2015 - Modelling, Computation and Optimization in Information Systems and Management Sciences, Metz, France, May 2015.
- CIE2013 – Computability In Europe, Milan, Italy, July 2013.
- IWOCA'08 – International Workshop on Combinatorial Algorithms, Nagoya, Japan, September 2008.
- CCA2008 - Compression and Combinatorial Algorithms, Haifa, Israel, July 2008.
- SOFSEM'08 - Current Trends in Theory and Practice of Computer Science, Novy Smokovec, Slovakia, January 2008.
- SwSTE'07 - The Third IEEE International Conference on Software Science, Technology & Engineering, Herzliya, ISRAEL, October 2007.
- CS06 - Sixth Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications, Prague, Czech Republic, July 2006.

- AOFA'05 – 2005 International Conference on the Analysis of Algorithms. Barcelona, Spain, June 2005.

- ORSIS 2005 conference – Operations Research Society – Israel

  Caesarea, Israel, May 2005.

- CRI 2004 – Fourth Haifa Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Algorithms. Haifa, Israel, May 2004.