Curriculum Vitae

Name: Chaya Keller (Lubin)
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Date of Birth: 24.3.1983
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Professional Experience:

2019 – today, University of Ariel, Department of Computer Science
Senior faculty member (in tenure track), ranked Lecturer.

2018 – 2019, Technion – Israel Institute of Technology, Department of Mathematics
Research fellow at the Department of Mathematics, hosted by Prof. Rom Pinchasi.

2015 – 2018, Ben Gurion University, Department of Mathematics
Post-Doctoral fellow at the Department of Mathematics, hosted by Prof. Shakhar Smorodinsky.

2013– 2015, Michlala Jerusalem College (Bayit vaGan), Department of Mathematics
Lecturer at the Department of Mathematics (I taught the courses: Metric Spaces and Advanced Topics in Mathematics from a Didactic viewpoint).

2009 – 2014, Hebrew University, Institute of Mathematics
Teaching Assistant at the Institute of Mathematics (I taught the courses: Linear Algebra 2 and Linear Algebra for Physics students).

2006 - 2012, Michlala Jerusalem College (Bayit vaGan), Department of Mathematics
Teaching Assistant at the Department of Mathematics (I taught the courses: Infinitesimal Calculus 1, Graph Theory, Combinatorics, Set Theory, and Topics in Geometry).

2006, 2008, Hebrew University, Institute of Mathematics
Exercise Grader (in the courses: Infinitesimal Calculus 1, Differential and Integral Analysis for Economics students).

Education:

2009 – 2015, Hebrew University, Institute of Mathematics
Ph.D. degree in Mathematics.
Thesis title: **Extremal problems in geometric graphs.**
Advisor: Prof. Micha A. Perles.
Average grade in courses taken: **97.1**

2005 – 2009, Hebrew University, Institute of Mathematics
M.Sc. degree in Mathematics *Magna Cum Laude.*.
Thesis Title: **Characterization of the Minimal Sets Blocking Simple Perfect Matchings in a Convex Geometric Graph.**
Advisor: Prof. Micha A. Perles.
Final grade: **97.**

2002 – 2005, Michlala Jerusalem College for Women (Bayit vaGan), Department of Mathematics and Computer Science
I finished my studies for the B.Ed. degree in Mathematics and Computer Science *Summa Cum Laude,* within the Excellence Program.
Final grade: **98.7**

1998 – 2001, "Horev" High School for Girls, Jerusalem
I finished the Bagrut exams, studying 49 units.
Final average (including bonuses): **117**

Prizes and Awards:

2016 – 2018: The Shulamit Aloni post-doctoral fellowship, awarded by the Israeli Ministry of Science and Technology, in the framework "Advancing Women in Science and Technology".

2016 - 2017: The Kreitman post-doctoral fellowship, Ben Gurion University.

2016: The Noriko Sakurai outstanding Post Doc award, by the center for advanced studies in mathematics at Ben Gurion University.

2014: Award for excellence in teaching, by the Faculty of Exact Sciences of the Hebrew University.

2013: The Shpringer Excellence Prize for Ph.D. students, awarded by the Institute of Mathematics at the Hebrew University.

2013: Award for excellence in teaching, by the Faculty of Exact Sciences of the Hebrew University.

2012 - 2013: Fellowship awarded by the Israeli Ministry of Science and Technology, in the framework "Advancing Women in Science and Technology".

2012 – 2015: The Hoffman Leadership Program for outstanding Ph.D. students at the Hebrew University.

2012: Excellence prize for outstanding female Ph.D. students at the Hebrew University, awarded by the Association of Female Academicians in Israel.

2011: Award for excellence in teaching, by the Faculty of Exact Sciences of the Hebrew University.

2011: The Klein Excellence Prize for Ph.D. students, awarded by the Institute of Mathematics at the Hebrew University.

2009 – 2013: The Arianne de Rotschild fellowship for outstanding female Ph.D. students at the Hebrew University.

2009: Award for excellence in teaching, by the Faculty of Exact Sciences of the Hebrew University.

2008: The Klein Excellence Prize for M.Sc. students, awarded by the Institute of Mathematics at the Hebrew University.

2006: Excellence prize, awarded by the Michlala Jerusalem College.

2002-2005: Full tuition grant during the B.Ed. studies, as part of the Excellence Project of the Ministry of Education.

2002: Letter of recognition from the General Director of the Ministry of Education, Ms. Ronit Tirosh, for outstanding success in the Bagrut exams.

Refereeing

Program Committee member at: SoCG 2019 conference.

Refereed papers for the journals: Discrete and Computational Geometry, SIAM journal on Discrete Mathematics, Discrete Mathematics.

Refereed papers for the conferences: SODA, SoCG, EuroCG.

Selected Talks at Conferences and Seminars

1. Bar Ilan University Combinatorics seminar [scheduled]   January 2020

2. Hebrew University Combinatorics seminar [scheduled]   January 2020

3. SODA 2020 conference, Salt Lake City [scheduled]   January 2020

4. EUROCOMB 2019 conference, Bratislava   August 2019

5. Discrete Geometry Days 2 conference, Budapest   July 2019

6. Haifa Conference on Interdisciplinary Applications of Graph Theory, Haifa University   June 2019

7. Combinatorics Session, Annual Meeting of the Israel Mathematical Union   June 2019

8. Computer Science Colloquium, Ariel University — March 2019

9. Tel Aviv University Combinatorics Seminar — March 2019

10. Mathematics Colloquium, Open University — February 2019

11. ERC workshop: Adventures in Combinatorial Geometry, Ein Gedi — January 2019

12. Computer Science Colloquium, Ben Gurion University — January 2019

13. Weizmann Institute Theoretical Computer Science Seminar — January 2019

14. Ben Gurion University Combinatorics Seminar — January 2019

15. Technion Combinatorics Seminar — November 2018

16. Mathematics Colloquium, Hebrew University of Jerusalem — November 2018

17. Tel Aviv University Computational Geometry Seminar — October 2018

18. International Symposium on Computational Geometry (SoCG), Budapest — June 2018

19. Young Researchers Forum (YRF) at the International Symposium on Computational Geometry (SoCG), Budapest — June 2018

20. ERC workshop: Geometric transversals and epsilon-nets, Ein Gedi — March 2018

21. Mathematics Colloquium, Ben Gurion University — March 2018

22. SIAM Annual Symposium on Discrete Algorithms (SODA) 2018, New Orleans — January 2018

23. Mathematics Colloquium, Holon Institute of Technology — December 2017

24. Ben Gurion University Combinatorics Seminar — November 2017

25. Bar Ilan University Combinatorics seminar — November 2017

26. Tel Aviv University Computational Geometry Seminar — June 2017

27. Haifa Conference on Interdisciplinary Applications of Graph Theory, Haifa University — June 2017

28. SIAM Annual Symposium on Discrete Algorithms (SODA) 2017, Barcelona — January 2017

29. Ben Gurion University Computational Geometry Seminar	December 2016
30. Haifa Conference on Interdisciplinary Applications of Graph Theory, Haifa University.	June 2016
31. Bar Ilan University Combinatorics seminar	June 2016
32. Hebrew University Combinatorics seminar	May 2016
33. Ben Gurion University Computational Geometry Seminar	January 2016
34. Haifa Conference on Interdisciplinary Applications of Graph Theory, Haifa University.	June 2015
35. Technion Combinatorics Seminar.	April 2015
36. Mathematics Colloquium, Holon Institute of Technology.	April 2015
37. Hebrew University Combinatorics Seminar.	March 2015
38. Bar Ilan University Combinatorics Seminar.	January 2015

Publications

Journal papers – published/accepted

1. C. Keller and M. A. Perles, Blockers for simple Hamiltonian paths in convex geometric graphs of odd order, *Discrete and Computational Geometry*, to appear. Available at arxiv:1806.02178.

2. C. Keller and S. Smorodinsky, Conflict-free coloring of intersection graphs of geometric objects, *Discrete and Computational Geometry*, to appear. Preliminary version appeared at the SODA 2018 conference. Available at arxiv:1704.02018.

3. C. Keller and S. Smorodinsky, From (p,2)-theorems to tight (p,q)-theorems, *Discrete and Computational Geometry*, to appear. Preliminary version appeared at the SoCG 2018 conference. Available at arxiv:1712.04552.

4. C. Keller and S. Smorodinsky, On the union complexity of families of axis-parallel rectangles with a low packing number, *Electronic Journal of Combinatorics* **25(4)** (2018), P4.32.

5. C. Keller, S. Smorodinsky, and G. Tardos, Improved bounds on the Hadwiger-Debrunner numbers, *Israel Journal of Mathematics* **225(2)** (2018), pp. 925-945. Preliminary version appeared at the SODA 2017 conference.

6. C. Keller and M. A. Perles, Blockers for simple Hamiltonian paths in convex geometric graphs of even order, *Discrete and Computational Geometry* **60(1)** (2018), pp. 1-8.

7. C. Keller and S. Smorodinsky, On piercing numbers of families satisfying the (p,q)_r property, *Computational Geometry: Theory and Applications* **72** (2018), pp. 11-18.

8. C. Keller and Y. Stein, Reverse engineering of the path graph, *Computational Geometry: Theory and Applications* **72** (2018), pp. 1-10.

9. C. Keller and M. A. Perles, On convex geometric graphs with no k+1 pairwise disjoint edges, *Graphs and Combinatorics* **32(6)** (2016), pp. 2497-2514.

10. C. Keller and M. A. Perles, Reconstruction of the geometric structure of a set of points in the plane from its geometric tree graph, *Discrete and Computational Geometry* **55(3)** (2016), pp. 610-637.

11. C. Keller and M. A. Perles, Characterization of co-blockers for simple perfect matchings in a convex geometric graph, *Discrete and Computational Geometry* **50**(2) (2013), pp. 491-502.

12. C. Keller, M. A. Perles, E .Rivera-Campo and V. Urrutia-Galicia, Blockers for non-crossing spanning trees in complete geometric graphs, in: J. Pach (ed.), Thirty Essays on Geometric Graph Theory, Springer-Verlag, 2013, pp. 383-398.

13. C. Keller and M. A. Perles, On the smallest sets blocking simple perfect matchings in a convex geometric graph, *Israel Journal of Mathematics* **187** (2012), pp. 465-484.

Papers published at peer-reviewed conferences

14. C. Keller and S. Smorodinsky A new lower bound on Hadwiger-Debrunner numbers in the plane, proceedings of SODA 2020 conference, to appear. Available at arxiv:1809.06451.

15. C. Keller and S. Smorodinsky, From (p,2)-theorems to (p,q)-theorems, proceedings of Symposium on Computational Geometry (SoCG) 2018 conference, pp. 51:1-51:14.
Invited and accepted to a special issue of *Discrete and Computational Geometry* dedicated to selected papers from SoCG 2018.

16. C. Keller and S. Smorodinsky, Conflict-free coloring of intersection graphs of geometric objects, proceedings of SODA 2018 conference, pp. 2397-2411, SIAM, 2018. An extended version was accepted to *Discrete and Computational Geometry*.

17. C. Keller, S. Smorodinsky, and G. Tardos, On Max-Clique for intersection graphs of sets and the Hadwiger-Debrunner numbers, proceedings of SODA 2017 conference, pp. 2254-2263, SIAM, 2017.
An extended version appeared in *Israel Journal of Mathematics*.

Preprints

18. C. Keller, A. Rok, and S. Smorodinsky, CF coloring of string graphs, conditionally accepted to *Discrete and Computational Geometry*, 2019. Available at arxiv:1712.04524.

19. C. Keller and R. Pinchasi, On sets of n points in general position that determine lines that can be pierced by n points, submitted to *Discrete and Computational Geometry*, 2019. Available at arxiv:1908.06390.

20. C. Keller and Y. Stein, Blockers for triangulations of a convex polygon and a geometric Maker-Breaker game, submitted to *Electronic Journal of Combinatorics*, 2017. Available at arxiv:1801.00324.