

MERAV PARTER

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EDUCATION

- 2015 - CURRENT POSTDOCTORAL FELLOW
 CSAIL, MIT
 Host: Prof. Nancy Lynch
- 2014 - 2015 POSTDOCTORAL FELLOW
 Weizmann Institute, Rehovot, Israel
 Host: Prof. David Peleg
- 2010 - 2014 PH.D IN COMPUTER SCIENCE
 Weizmann Institute, Rehovot, Israel
 Thesis: The Topology of Wireless Communication
 Advisor: Prof. David Peleg
- 2005 - 2008 M.SC. IN BIOINFORMATICS
 Weizmann Institute, Rehovot, Israel
 Thesis: The Effect of Varying Environments on Biological Designs
 Advisor: Prof. Uri Alon
 GPA: 98.1, Thesis exam grade: 100.
- 2003 - 2005 B.SC. IN BIOINFORMATICS
 Bar-Ilan University, Ramat-Gan, Israel
 GPA: 98.1, *summa cum laude*

EMPLOYMENT

- WINTER 2012 TEACHING ASSISTANT, WEIZMANN INSTITUTE
 Advanced Algorithms
- 2008 - 2010 SOFTWARE ENGINEER, CHECKPOINT SOFTWARE TECHNOLOGIES
 VPN Infrastructures Team

RESEARCH INTERESTS

- ◇ Distributed Computing.
- ◇ Fault Resilient Graph Structures.
- ◇ Wireless Communication.
- ◇ Bio-Inspired Distributed Algorithms.

AWARDS AND HONORS

- ◇ Israel National Postdoctoral Award for Women in Science offered by the Weizmann Institute, 2015.
- ◇ Dimitris N. Chorafas Prize, 2015.
- ◇ Fulbright fellowship for postdoctoral studies, 2015.
- ◇ Rothschild fellowship for postdoctoral studies, 2015.
- ◇ Feder Prize, first place award in the competition for best student work in communications technology, 2015.
- ◇ Best student paper, DISC 2014.
- ◇ Google European Doctoral Fellowship in Distributed Computing, 2012.
- ◇ Recipient of Dean's award for excellence at the Weizmann Institute of Science, 2008.
- ◇ Recipient of the Wolf prize for undergraduate students, 2006.
- ◇ Recipient of the Israeli parliament award for university students, 2006 and 2007.
- ◇ Recipient of the Rector's award for excellence, 2006.
- ◇ First place at Deans list, 2005 and 2006.

PROFESSIONAL ACTIVITIES

Conference Committees. ALGOSENSORS'15, PODC'16, SPAA'16, SIROCCO'16, SSS'16, ICDCN'17, IPDPS'17 and the upcoming PODC'17, ICALP'17, and BDA'17.

Journal Reviews. Algorithmica, TALG, SICOMP, IEEE/ACM Transactions on Networking, Journal of Discrete Algorithm, Ad-Hoc Networks.

Conference Reviews. SODA'17, FOCS'16, STOC'16, SODA'16, ICALP'15, PODC'15, STOC'15, SODA'15, ESA'14, SIROCCO'14, SPAA'13, PODC'13, ESA'12, PODC'12, SPAA'12.

INVITED TALKS

- ◇ Theory Seminar, John Hopkins University, 2016.
- ◇ Theory Seminar, Stanford University, 2016.
- ◇ Workshop on **Advances in Distributed Graph Algorithms**, DISC 2015.
- ◇ China Theory Week, 2014.
- ◇ Dagstuhl Seminar of **Algorithms for Wireless Communication**, 2014.
- ◇ TADDS workshop on **Computation in Dynamic Wireless Networks**, 2013.
- ◇ WRAWN workshop on **Realistic Models for Algorithms in Wireless Networks**, 2011.

- ◇ Weizmann-Warwick workshop, 2010.
- ◇ *Theory Seminars in Israeli Universities (2011-2014)*: Weizmann Institute, Tel-Aviv University, Bar-Ilan University, Hebrew University, Technion, Ben-Gurion University and Haifa University.

JOURNAL PUBLICATIONS

- [J1] **M. Parter**. Fault-Tolerant Logical Network Structures. *Bulletin of the EATCS*, 2016.
- [J2] C. Avin, A. Choen, Y. haddad, E. Kantor, Z. Lotker, **M. Parter** and D. Peleg. SINR Diagram with Interference Cancellatio. *Ad Hoc Networks*, 2016.
- [J3] **M. Parter** and D. Peleg. Sparse Fault-Tolerant BFS Trees. *TALG*, 2016.
- [J3] **M. Parter** and D. Peleg. Fault Tolerant Approximate BFS Structures. *TALG*, 2016.
- [J4] S. Chechik, M.P. Johnson, **M. Parter** and D. Peleg. Secluded Connectivity Problems. *Algorithmica*, 2016.
- [J5] E. Kantor, Z. Lotker, **M. Parter** and D. Peleg. The Topology of Wireless Communication. *JACM*, 2015.
- [J6] **M. Parter**. Vertex Fault Tolerant Additive Spanners. *Distributed Computing (DC)*, 2015.
- [J7] C. Avin, M. Borokhovich, Y. Haddad, E. Kantor, Z. Lotker, **M. Parter** and D. Peleg. Testing the Irreducibility of Nonsquare Perron-Frobenius Systems. *IPL*, 728–733, 2014.
- [J8] P. Fraigniaud, M. Goos, A. Korman, **M. Parter**, D. Peleg. Randomized distributed decision. *Distributed Computing (DC)*, 419–434, 2014.
- [J9] N. Kashtan, **M. Parter**, E. Dekel, U. Alon. Extinctions in heterogeneous environments and the evolution of modularity. *Evolution*, 1964–1975, 2009.
- [J10] **M. Parter***, N. Kashtan*, and U. Alon. **Equal contribution*. Facilitated variation: How evolution learns from past environments to generalize to new environments. *PLoS Computational Biology*, 2008. *Special Issue in Nature Reviews Genetics*.
- [J11] **M. Parter**, N. Kashtan, and U. Alon. Environmental variability and modularity of bacterial metabolic networks. *BMC evolutionary biology*, 2007.

CONFERENCE PUBLICATIONS

- [C1] N. Lynch, C. Musco and **M. Parter**. Computational Tradeoffs in Biological Neural Networks: Self-Stabilizing Winner-Take-All Networks. *ITCS*, 2017.
- [C2] M. Ghaffari and **M. Parter**. MST in Log-Star Rounds of Congested Clique. *PODC*, 19–28, 2016. *Invited for PODC 2016’s special issue in DC*.
- [C3] M. Ghaffari and **M. Parter**. A Polylogarithmic Gossip Algorithm for Plurality Consensus. *PODC*, 117–126, 2016.

- [C4] M. Ghaffari and **M. Parter**. Near-Optimal Distributed Algorithms for Fault-Tolerant Tree Structures, *SPAA*, 2016. *SPAA*, 387–396, 2016.
- [C5] **M. Parter**, D. Peleg and S. Solomon. Local-on-Average Distributed Tasks. *SODA*, 220–239, 2016.
- [C6] E. Kantor, Z. Lotker, **M. Parter** and David Peleg. The Minimum Principle of SINR: A Useful Discretization Tool for Wireless Communication. *FOCS*, 330–349, 2015.
- [C7] K. Censor-Hillel, E. Kantor, N.A. Lynch and **M. Parter**. Computing in Additive Networks with Bounded-Information Codes. *DISC*, 405–419, 2015.
- [C8] E. Kantor, Zvi Lotker, **M. Parter** and D. Peleg. Nonuniform SINR+Voronoi Diagrams Are Effectively Uniform. *DISC*, 588–601, 2015.
- [C9] **M. Parter** and D. Peleg. On the Relations Between SINR Diagrams and Voronoi Diagrams. *ADHOC-NOW*, 405–419, 2015.
- [C10] **M. Parter**. Dual Failure Resilient BFS Structure. *PODC*, 481–490, 2015.
- [C11] **M. Parter** and D. Peleg. Fault Tolerant BFS Structures: A Reinforcement-Backup Tradeoff. *SPAA*, 264–273, 2015.
- [C12] **M. Parter**. Vertex Fault Tolerant Additive Spanners. *DISC*, 405–419, 2015. *Best student paper award*.
- [C13] **M. Parter**. Bypassing Erdős’ Girth Conjecture: Hybrid Stretch and Sourcewise Spanners. *ICALP*, 608–619, 2014.
- [C14] **M. Parter** and D. Peleg. Sparse fault-tolerant approximate BFS Trees. *SODA*, 1073–1092, 2014.
- [C15] M. Dinitz and **M. Parter**. Braess’s Paradox in Wireless Networks: The Danger of Improved Technology. *DISC*, 477–491, 2013.
- [C16] **M. Parter** and D. Peleg. Sparse fault-tolerant BFS Trees. *ESA*, 779–790, 2013.
- [C17] S. Chechik, M. Johnson, **M. Parter** and D. Peleg. Secluded Connectivity Problems. *ESA*, 301–312, 2013.
- [C18] C. Avin, M. Borokhovich, Y. Haddad, E. Kantor, Z. Lotker, **M. Parter** and D. Peleg. Generalized Perron–Frobenius Theorem for Multiple Choice Matrices, and Applications. *SODA*, 478–497, 2013.
- [C19] P. Fraigniaud, A. Korman, **M. Parter**, D. Peleg. Randomized distributed decision. *DISC*, 371–385, 2012. *Invited for DISC 2012’s special issue in DC*.
- [C20] C. Avin, A. Cohen, Y. Haddad, E. Kantor, Z. Lotker, **M. Parter** and D. Peleg. SINR diagram with interference cancellation. *SODA*, 502–515, 2012.
- [C21] E. Kantor, Z. Lotker, **M. Parter** and D. Peleg. The topology of wireless communication. *STOC*, 383–392, 2011.
- [C22] Z. Lotker, **M. Parter**, D. Peleg and Y.A. Pignolet. Distributed power control in the SINR model. *INFOCOM*, 2525–2533, 2011.

SUBMITTED

- [S1] O. Grossman and **M. Parter**. Improved Deterministic Distributed Construction of Spanner, 2016.
- [S2] K. Censor-Hillel, **M. Parter** and G. Schwartzman. Derandomizing Local Distributed Algorithms under Bandwidth Restrictions, 2016.
- [S3] G. Bodwin, F. Grandoni, **M. Parter** and V. Vassilevska Williams. New Fault-Tolerant Preservers and Spanners, 2016.