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PERSONAL DATA Citizenship: Israel

PRESENT Assistant Professor  
 OCCUPATION Department of Computer Science, Columbia University.

EDUCATION **Courant Institute** *September 2015 to December 2016*  
 Simons Society Junior Fellow.  
 Host: Oded Regev

**Princeton University** *September 2010 to May 2015*  
 PhD student at the CS Theory group  
 Advisor: Mark Braverman

**Tel Aviv University**  
 B.Sc in Mathematics and  
 Computer Science, Cum Laude *September 2006 to February 2010*

FELLOWSHIPS AND AWARDS *The NSF CAREER Award.*

- 1844887 CAREER: Information Theoretic Methods in Data Structures  
 Awarded December 2018.

*The Simons Society Junior Fellowship.*  
<https://www.simonsfoundation.org/simons-society-of-fellows/junior-fellows/>

- Awarded for a period of 3 years starting Summer 2015  
 (only computer scientist out of nine awardees).

*Siebel Scholarship.*  
<http://www.siebelscholars.com/about>

- Scholar of the class of 2015.

*Simons-Berkeley Research Fellowship.*  
<http://simons.berkeley.edu/>

- Fellowship awarded for Spring semester 2015.

*Simons Award for Graduate Students in Theoretical Computer Science.*  
<https://simonsfoundation.org>

- Fellowship awarded in 2013.

*CSR'13 Best Paper Award*

- Moscow, 2013 (Yandex award).

*The Foundations of Computing graduate program Fellowship at Tel Aviv University (Awarded annually to two students).*

<http://tq.cs.tau.ac.il/openings.php>

- Fellowship awarded in 2010.

## PUBLICATIONS

- Z.Dvir, A.Golovnev, O.Weinstein. *Data Structure Lower Bounds Imply Rigidity*. STOC'19.
- S.Shinha, O.Weinstein. *Local Decobability of the Burrows-Wheeler Transform*. STOC'19.
- K. Green-Larsen, O.Weinstein, H.Yu. *Crossing the Logarithmic Barrier for Dynamic Boolean Data Structure Lower Bounds*. STOC'18 (**Invited to SICOMP special issue**).
- M. Braverman, Y. Kun Ko, A.Rubinfeld, O.Weinstein. *ETH Hardness for the Densest-k-Subgraph Problem with Perfect Completeness*. In SODA'17.
- A. Golovnev, O. Regev, O. Weinstein. *The Minrank of Random Graphs*. IEEE Transactions on Information Theory (Preliminary version at RANDOM '17).
- T. Roughgarden, O.Weinstein. *On the Communication Complexity of Approximate Fixed Points*. FOCS'16.
- O.Weinstein, H.Yu. *Amortized Dynamic Cell Probe Lower Bounds from Four-Party Communication*. FOCS'16.
- M. Feldman, M. Tennenholtz, O.Weinstein. *Distributed Signaling Games*. ESA'16.
- O. Ordentlich, O. Shayevitz, O.Weinstein. *An Improved Upper Bound on the Most Informative Boolean Function Conjecture*. ISIT'16.
- N. Alon, N. Nisan, R. Raz, O.Weinstein. *Welfare Maximization with Limited Interaction*. In Proceedings of FOCS'15.
- D. Woodruff, O.Weinstein. *The Simultaneous Communication of Disjointness with Applications to Data Streams*. ICALP'15.
- O. Weinstein. *Information Complexity and the Quest for Interactive Compression*. SIGACT News Complexity Column, June 2015 issue.
- M. Braverman, O.Weinstein. *An Interactive Information Odometer with Applications*. STOC'15.

- S. Dobzinski, M.Feldman, I.Talgam-Cohen, O.Weinstein. *Welfare and Revenue Guarantees for Competitive Bundling Equilibrium*. WINE'15.
- M. Braverman, Y. Kun Ko, O.Weinstein. *Approximating the Best Nash Equilibrium in  $n^{o(\log n)}$ -Time Breaks the Exponential Time Hypothesis*. SODA'15.
- D.Gavinsky, O.Meir, O. Weinstein, A.Wigderson. *Toward Better Formula Lower Bounds: An Information Complexity Approach to the KRW Composition Conjecture*. STOC'14 (**Invited to Algorithmica special issue**).
- M. Braverman, A. Rao, O. Weinstein, A. Yehudayoff. *Direct product in Communication Complexity*. FOCS'13.
- M.Braverman, A.Garg, D.Pankratov, O.Weinstein. *From information to exact communication*. STOC'13.
- M. Braverman, A. Rao, O. Weinstein, A. Yehudayoff. *Direct product via round-preserving compression..* ICALP'13.
- M.Braverman, O.Weinstein. *A discrepancy lower bound for information complexity*. In proceedings of RANDOM'12 (accepted to Algorithmic, 2015).
- M.Braverman, A.Garg, D.Pankratov, O.Weinstein. *Information lower bounds via self-reducibility*. CSR'13 (**Best paper award**).
- Z.Karnin, E.Liberty, S.Lovett, R.Schwartz, O.Weinstein. *Unsupervised SVMs: On the complexity of the Furthest Hyperplane problem*. In proceedings of COLT'12.
- D.Ron, R.Rubinfeld, S.Safra, O.Weinstein. *Approximating the Influence of a Monotone Boolean function in  $O(\sqrt{n})$  query complexity*. In proceedings of RANDOM'11.

INVITED TALKS  
AND TUTORIALS

- Dagstuhl workshop on Computational Complexity of Discrete Problems *Germany, March 2019*.
- NYCAC'18 symposium, invited speaker *New York City, October 2018*.
- Invited extended talk at the Simons Institute Program on Lower Bounds in Computational Complexity, *Berkeley, October 2018*.
- Invited keynote speaker at China Theory Week summer school (declined), *Beijing, July 2017*.
- Invited tutorial at the 2017 Banff workshop on Communication Complexity and Applications, *Banff (CA), March 2017*.
- Invited tutorial at the Institute Henri Poincare workshop on the Nexus of Information Theory, *Paris, February 2016*.
- ISIT'15 invited tutorial on communication complexity and interactive compression (co-hosted), *Hong-Kong, June 2015*.

- Invited speaker, *IEEE Allerton Conference, September 2014.*
- Interactive Information Complexity - A Survey,  
*Banff Workshop on Communication Complexity, September 2014.*

PROFESSIONAL  
ACTIVITY

- ICALP'18 Summer School on Data Structure Lower Bounds (main speaker),  
*Prague, July 2018.*
- PC member, *FOCS'17 March 2017.*
- ISIT'15 invited tutorial on communication complexity and interactive compression (co-delivered), *Hong-Kong, June 2015.*
- SIGACT News Complexity Column on "Information Complexity and the Quest for Interactive Compression", *June 2015 issue.*
- The Feder Prize in Information Theory, Committee member *January 2015.*

INDUSTRIAL  
ACTIVITY

Chief Scientist at Vast Data ([vastdata.com](http://vastdata.com)) *July 2017 - July 2018*  
Enterprise SSD storage systems.

MILITARY  
EXPERIENCE

*The Airforce Elite squad, IDF* *November 2001 - May 2005*