Amit Daniely – Curriculum Vitae

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LAST UPDATED February, 2015

PERSONAL DATA *Born:* August 25, 1985, Jerusalem, Israel

RESEARCH INTERESTS Learning Theory (mainly).

EDUCATION **The Hebrew University of Jerusalem**, Jerusalem, Israel

- B.Sc., Mathematics and Computer Science, October 2009 (Magna Cum Laude).

- M.Sc., Mathematics, October 2010 (Summa Cum Laude). Advisor: Prof. Nati Linial.

- Ph.D. student, Mathematics, October 2010. Advisors: Prof. Nati Linial and Prof. Shai Shalev-Shwartz.

SHORT TERM VISITS
- Research intern, Microsoft Research (Herzliya, Israel), 2015.
- Research intern, Google (Mountain View, CA), 2014. Hosts: Sami Bengio and Yoram Singer.

AWARDS
- Best Student Paper Award, COLT, 2011
- Klein Prize, 2012
- Adams Doctoral Fellowship, 2012 (declined)
- Google European Doctoral Fellowship, 2012
- Perlman Prize, 2013
- Outstanding TA list at HUJI, 2013
- Best Student Paper Award, COLT, 2014
- Outstanding TA list at HUJI, 2014
- Rothschild Postdoctoral Fellowship, 2015 (declined)

PAPERS
1. Amit Daniely and Nati Linial. Tight Products and Graph Expansion. Journal of Graph Theory, 2010.

2. Amit Daniely, Sivan Sabato, Shai Ben-David and Shai Shalev-Shwartz. Multiclass Learnability and the ERM principle. COLT, 2011 (*best student paper*).

3. Amit Daniely, Sivan Sabato and Shai Shalev-Shwartz. Multiclass Learning Approaches: A Theoretical Comparison with Implications. NIPS, 2012 (*spotlight presentation*).

4. Yonatan Bilu , Amit Daniely, N. Linial, and M. Saks. On the practically interesting instances of MAXCUT. STACS, 2013.

5. Amit Daniely, Tom Halbertal. The price of bandit information in multiclass online classification. COLT, 2013.

6. Amit Daniely, Nati Linial and Shai Shalev-Shwartz. More data speeds up training time in learning halfspaces over sparse vectors. NIPS, 2013 (*spotlight presentation*).

7. Amit Daniely, Nati Linial and Shai Shalev-Shwartz. From average case complexity to improper learning complexity. STOC, 2014.

8. Amit Daniely, Nati Linial and Shai Shalev-Shwartz. The complexity of learning halfspaces using generalized linear methods. COLT, 2014 (*best student paper*).

9. Amit Daniely and Shai Shalev-Shwartz. Optimal Learners for Multiclass Problems. COLT, 2014.

10. Maria-Florina Balcan, Amit Daniely, Ruta Mehta, Ruth Urner and Vijay V. Vazirani. Learning Economic Parameters from Revealed Preferences. WINE, 2014.

11. Amit Daniely, Michael Schapira and Gal Shahaf. Inapproximability of Truthful Mechanisms via Generalizations of the VC Dimension. STOC, 2015 (*invited to SICOMP*).

12. Amit Daniely. A PTAS for Agnostically Learning Halfspaces. COLT, 2015.

13. Amit Daniely, Alon Gonen and Shai Shalev-Shwartz. Strongly Adaptive Online Learning. ICML, 2015.

14. Amit Daniely. Complexity theoretic limitations of learning halfspaces. STOC, 2016.

PREPRINTS

1. Amit Daniely, Nati Linial, and M. Saks. Clustering is difficult only when it does not matter.

2. Amit Daniely and Shai Shalev-Shwartz. Complexity theoretic limitations on learning DNF's.

BOOK CHAPTERS

1. Multiclass learnability. A chapter in "Understanding machine learning: From Theory to Algorithms" by Shai Shalev-Shwartz and Shai Ben-David.

TALKS

- Combinatorics Seminar, The Hebrew University of Jerusalem, 2010
- Beyond Worst Case Analysis Workshop, Stanford, 2011
- CS Theory Seminar, The Hebrew University of Jerusalem, 2011
- Machine Learning Seminar, The Hebrew University of Jerusalem, 2011
- Machine Learning Seminar, Technion, 2012
- CS Theory Seminar, The Hebrew University of Jerusalem, 2013
- Machine Learning Seminar, The Hebrew University of Jerusalem, 2013
- Machine Learning Seminar, Technion, 2013
- Mathematics Colloquium, The Hebrew University, 2013
- CS Theory Seminar, Weizmann institute of science, 2014
- Combinatorics Seminar, The Hebrew University of Jerusalem, 2014
- Israel CS Theory Day, The Open University of Israel, 2014
- Algorithms Seminar, Tel-Aviv University, 2014
- Machine Learning Seminar, The Hebrew University of Jerusalem, 2014
- Machine Learning Seminar, Technion, 2014
- CS Theory Seminar, The Hebrew University of Jerusalem, May 2014
- Math of ML, CRM Barcelona, 2014
- CS Theory Seminar, Microsoft Research Silicon Valley, 2014
- CS Theory Seminar, Technion, 2014
- CS Colloquium, Ben-Gurion University, 2014
- Online Algorithms and Learning Workshop, Lorentz Center (Leiden, Holland), 2014
- CS Theory Seminar, The Hebrew University of Jerusalem, December 2014

- CS Colloquium, Bar-Ilan University, 2014
- CS Colloquium, The Hebrew University of Jerusalem, 2014
- Machine Learning Seminar, IBM Research (Tel-Aviv), 2015
- CS Theory Seminar, Tel-Aviv University, 2015
- CS Theory Seminar, Stanford University, 2016
- ML Seminar, Stanford University, 2016
- ML Seminar, Berkeley, 2016
- CS Theory Seminar, Berkeley, 2016
- CS Theory Seminar, Princeton, 2016
- Algorithms Seminar, Tel-Aviv University, 2016
- ML Seminar, The Hebrew University of Jerusalem, 2016

TEACHING

- *Lecturer (The Hebrew University 2014-2015):* Introduction to Machine Learning
- *Teaching Assistant (The Hebrew University 2010-2014):* Fundamental Concepts in Analysis (1) (a graduate course in Functional Analysis), Advanced Infinitesimal Calculus (2), Infinitesimal Calculus (1), Fundamental Concepts in Analysis (2) (a graduate course in Spectral Theory), Advanced Infinitesimal Calculus (1), Fundamental Concepts in Differential Analysis (a graduate course in Distributions, Fourier Transform and Sobolev Spaces), Algebraic structures (2) (a course in Galois theory)
- *Grader (The Hebrew University 2009-2010):* Probability Theory (1), Ordinary Differential Equations.

INDUSTRIAL EXPERIENCE

- Software engineer, Proficiency (Jerusalem, Israel), 2008.

SERVICE

- *Refereeing:* COLT, ICML, NIPS, JMLR, FOCS, SODA, CCC, Israel Journal of Mathematics, Random Structures and Algorithms, Graphs and Combinatorics, SICOMP, Machine Learning, JACM.
- *Program Committee Member:* COLT 2016