

CURRICULUM VITAE

Dr. NOAM SHENTALEDUCATION and EMPLOYMENT

- Oct 2008: Faculty member candidate at the Computer Science Dept.,
The Open University, Raanana, Israel.
- Jan - Sep 2008: Head of Bioinformatics division, Immunarray Inc., Rehovot, Israel.
- 2004 - Dec 2007: Post-doctoral fellow, with Prof. Eytan Domany,
Dept. of Physics of Complex Systems, Weizmann Institute of Science, Rehovot, Israel.
- 1999 - 2004: Ph.D. at the Interdisciplinary Center for Neural Computation, Hebrew University.
"From Unsupervised Learning to Semi-Supervised Learning: Algorithms and Applications".
Supervisor: Prof. Daphna Weinshall (computer science).
- 1991 - 1998: Military service in the Air-force as an officer (rank - captain).
- 1991: B.A. in Physics and Mathematics, Tel-Aviv University (Magna Cum Laude).

AWARDS

- 2009: Best Student Paper of the Year 2008 in Signal Processing and Coding for Data Storage.
Awarded by the IEEE Communications Society Data Storage Technical Committee.
- 2004 - 2006: Dean of Faculty of Physics postdoctoral fellowship. Weizmann Institute of Science.
- 1999 - 2004: Hebrew university in Jerusalem, Interdisciplinary Center for Neural Computation.
Full stipend as a Ph.D student.

REFERENCE LIST

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PUBLICATIONS

N. Shental[^], A. Amir and O. Zuk (2010), Identification of rare alleles and their carriers using compressed sequencing, *Nucleic Acids Research*, 38(19):e179 ([^]Corresponding author)

I. Fattal*, N. Shental*, D. Mevorach, J.M. Anaya, E. Sahar, A. Livneh, P. Langevitz, G. Zandman-Goddard, R. Pauzner, M. Lerner, Blank M., M.E. Hincapie, U. Gafter, Y. Naparstek, Y. Shoefeld, E. Domany and I.R. Cohen (2010), An antibody core signature of Systemic Lupus Erythematosus detected by antigen microarray, *Immunology* (130): 337-343. (* Equal contribution)

N. Shental, A. Bar-Hillel, T. Hertz and D. Weinshall (2008), Gaussian Mixture Models with Equivalence Constraints, in "Constrained Clustering: Advances in Algorithms, Theory, and Applications", edited by S. Basu, I. Davidson, and K.L. Wagstaff, Chapman & Hall/CRC Data Mining Series.

O. Shental*, N. Shental*, S. Shamai (Shitz), I. Kanter, A. J. Weiss, and Y. Weiss (2008), Discrete-input two-dimensional Gaussian channels with memory: Estimation and information rates via graphical models and statistical mechanics, *IEEE Transactions on Information Theory*, 54(April): 1500-1513. Awarded best student paper on Data Storage for the year 2008 by IEEE Communications Society Technical Committee on Data Storage. (* Equal contribution)

G. Getz, N. Shental* and E. Domany (2005), Semi-Supervised Learning - A Statistical Physics Approach, Workshop on "Learning with Partially Classified Training Data", 22nd International Conference on Machine Learning (ICML 2005). (* Equal contribution)

O. Shental, N. Shental and S. Shamai (Shitz) (2005) On the Achievable Information Rates of Finite-State Input Two-Dimensional Channels with Memory, *International Symposium For Information Theory*, (ISIT 2005).

A. Bar Hillel, T. Hertz, N. Shental and D. Weinshall(2005) Learning a Mahalanobis metric from equivalence constraints, *Journal of Machine Learning Research* 6(Jun): 937-965.

O. Shental, N. Shental, A.J. Weiss and Y. Weiss (2004) Generalized Belief Propagation Receiver for Near-Optimal Detection of Two-Dimensional Channels with Memory, *IEEE Information Theory Workshop* (ITW 2004).

N. Shental, A. Bar-Hillel, T. Hertz and D. Weinshall (2003) Computing Gaussian Mixture Models with EM using Equivalence constraints, *Neural Information Processing Systems* (NIPS 2003).

N. Shental, A. Zomet, T. Hertz and Y. Weiss (2003) Pairwise Clustering and Graphical Models, *Neural Information Processing Systems* (NIPS 2003).

N. Shental, A. Zomet, T. Hertz and Y. Weiss (2003) Learning and Inferring Image Segmentations Using the GBP Typical Cut, *9th International Conference on Computer Vision* (ICCV 2003).

N. Shental, A. Bar-Hillel, T. Hertz and D. Weinshall (2003) Computing Gaussian Mixture Models with EM using Side Information, *Workshop on "The Continuum from Labeled to Unlabeled Data in Machine Learning and Data Mining"*, 20th International Conference on Machine Learning (ICML 2003).

A. Bar-Hillel, T. Hertz, N. Shental and D. Weinshall (2003) Learning Distance Functions Using Equivalence Relations, *20th International Conference on Machine Learning* (ICML 2003).

T. Hertz, A. Bar-Hillel, N. Shental and D. Weinshall (2003) Enhancing Image and Video Retrieval: Learning Via Equivalence Constraints, *IEEE Conf. on Computer Vision and Pattern Recognition* (CVPR 2003).

N. Shental, T. Hertz, D. Weinshall and M. Pavel (2002) Adjustment Learning and Relevant Component Analysis, *7th European conference of Computer Vision* (ECCV 2002).

Y. Gdalyahu, N. Shental and D. Weinshall (2000) Perceptual Grouping and Segmentation by Stochastic Clustering, *Conference on Computer Vision and Pattern Recognition* (CVPR 2000).

Invited papers

Y. Erlich, N. Shental, A. Amir and O. Zuk (2009) Compressed Sensing Approaches for High Throughput Carrier Screen, Invited paper for 47th Allerton Conference on Communication, Control, and Computing, University of Illinois at Urbana-Champaign

N. Shental A. Amir and O. Zuk (2010) Compressed Sensing-based Pooling Experiments Using Next Generation Sequencing, Invited paper for Information Theory and Applications (ITA), UCSD.