



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Machine Learning and Statistics Seminar

Room 1 ,Ziskind Building  
on Wednesday, Mar 09, 2016  
at 11:15

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New Results at the Crossroads of Convexity, Learning and Information Theory

Abstract:

I will present three new results: (i) the Cramer transform of the uniform measure on a convex body is a universal self-concordant barrier; (ii) projected gradient descent with Gaussian noise allows to sample from a log-concave measure in polynomial time; and (iii) Thompson sampling combined with a multi-scale exploration solves the Bayesian convex bandit problem. The unifying theme in these results is the interplay between concepts from convex geometry, learning and information theory. Joint work with Ronen Eldan, and for (ii) with Joseph Lehec.