



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Vision and Robotics Seminar

Room 1 ,Ziskind Building  
on Thursday, Nov 12, 2015  
at 12:15

Joint Machine Learning & Vision Seminar

Nathan Srebro  
TTI Chicago

Optimization, Regularization and Generalization in Multilayer Networks

Abstract:

What is it that enables learning with multi-layer networks? What causes the network to generalize well? What makes it possible to optimize the error, despite the problem being hard in the worst case? In this talk I will attempt to address these questions and relate between them, highlighting the important role of optimization in deep learning. I will then use the insight to suggest studying novel optimization methods, and will present Path-SGD, a novel optimization approach for multi-layer RELU networks that yields better optimization and better generalization.

Joint work with Behnam Neyshabur, Ryota Tomioka and Russ Salakhutdinov.