



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Vision and Robotics Seminar

Room 1 ,Ziskind Building
on Thursday, Jun 18, 2015
at 12:15

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Elementary Algorithms for High Dimensional Structured Optimization

Abstract:

Many scientific and engineering problems are challenged by the fact they involve functions of a very large number of variables. Such problems arise naturally in signal recovery, image processing, learning theory, etc. In addition to the numerical difficulties due to the so-called curse of dimensionality, the resulting optimization problems are often nonsmooth and nonconvex.

We shall survey some of our recent results, illustrating how these difficulties may be handled in the context of well-structured optimization models, highlighting the ways in which problem structures and data information can be beneficially exploited to devise and analyze simple and efficient algorithms.