Séminaire de Probabilités et Statistiques

Vendredi 17 Février à 11h00
Laboratoire Dieudonné
Salle de Conférences

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Regularization Methods for Large Scale Machine Learning

Regularization techniques originally developed to solve linear inverse problems can be extended to derive nonparametric machine learning methods. These methods perform well in practice and can be shown to have optimal statistical guarantees, however, computational requirements can prevent application to large scale scenarios. In this talk, I will describe attempts to tackle this challenge. In particular, I will discuss and study stochastic extensions of two well known regularization schemes, namely iterative regularization (early stopping) and projection regularization. Indeed, I will show how using these techniques optimal statistical guarantees can be preserved, while substantially reducing time/memory requirements.