Department of Decision Sciences

Statistics Seminar

Estimating a smooth function on a large graph by Bayesian Laplacian regularization

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Thursday, 10th March 2016
12:30pm Room 3-E4-SR03 Via Rontgen 1 Milano

Abstract

In this talk I discuss a paper in which we study a Bayesian approach to estimating a smooth function in the context of regression or classification problems on large graphs. We derive theoretical results that show how asymptotically optimal Bayesian regularization can be achieved under an asymptotic shape assumption on the underlying graph and a smoothness condition on the target function, both formulated in terms of the graph Laplacian. The priors we study are randomly scaled Gaussians with precision operators involving the Laplacian of the graph.

Based on joint work with Alice Kirichenko..

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