Bocconi

Università Commerciale Luigi Bocconi

Department of Decision Sciences

Statistics Seminar

Beating log-Sobolev, one Stein factor at a time

Giovanni Peccati

University of Luxembourg

Thursday, 6th March
12:30pm Room 3-E4-SR03 Via Rontgen 1 Milano

Abstract

Motivated by second order limit theorems arising in the analysis of Gaussian subordinated time series, I will present a new set of functional inequalities involving the following four parameters associated with a given multidimensional distribution: the relative entropy, the relative Fisher information, the 2-Wasserstein distance, and the Stein discrepancy (which naturally appears in the well-known Stein's method for normal approximations). Our results improve the classical log-Sobolev inequality, as well Talagrand's transport inequality. Joint works with M. Ledoux (Toulouse), I. Nourdin (Luxembourg) and Y. Swan (Liège).