

SEMINARIO

CONJUNTO OPTIMIZACIÓN Y EQUILIBRIO – MODELAMIENTO ESTOCÁSTICO

Speaker:

Julio Backhoff

Probability and Mathematical Finance Group, University of Vienna

Title:

On optimal transport under the causality constraint

Abstract:

In this talk we shall examine causal transports and the associated optimal transportation problem under the causality constraint (Pc). Loosely speaking, causal transports are a relaxation of adapted processes in the same sense as Kantorovich transport plans are the extension of Monge-type transport maps. We will establish a simple primal-dual picture of both (Pc) and the so-called bicausal transportation problem (whereby causality runs in both directions) in euclidean space or equiv. for discrete-time processes. Together with this, we provide a dynamic programming principle which allows us to identify an optimal bicausal transport under given conditions, and prove that sometimes this solution is also optimal causal. Finally, applications to functional inequalities will be given if time permits.

Miércoles 28 a las 16:30 hrs. Sala de Seminarios DIM, quinto piso, Beauchef 851, Torre Norte.

