Bocconi

Università Commerciale Luigi Bocconi

Department of Decision Sciences

De Finetti Risk Seminar

Optimal transport and the principal-agent problem

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Abstract

The optimal transport problem consists in finding the finding the most effective way of moving mass distributions from one place to another, minimizing the transportation cost. Such a concept has been found very useful in understanding various mathematical, physical, and social/economics phenomena.
In this expository talk we'll first discuss the general features of optimal transport. Then, we'll see how the issue of the regularity of optimal transport maps has found applications in the principal-agent problem, giving conditions on the cost functions that make it theoretically and computationally tractable and which allow to derive uniqueness and stability of the principal's optimum strategy.