

Growth optimality and recent applications to probability

Prof. Constantinos Kardaras

*London School of Economics and Political Sciences, UK
Email: k.kardaras@lse.ac.uk*

Timetable: 10 hrs. First lecture on April 3rd, 2017, 16:30 (dates already fixed see calendar), Torre Archimede, Room 2BC/30.

Course requirements: Probability and Stochastic Calculus

Examination and grading: Written examination (short essay or exercises)

SSD: MAT/06 e SECS-S/06

Aim: This course aims at providing an overview on recent developments in the Mathematical Finance research field, having as a central idea in mind the role of the growth optimal portfolio.

Course contents:

These lectures will touch upon recent developments in the applied probability, and more precisely mathematical finance. The vessel that is used to connect different topics is that of growth optimality, a notion that has proved extremely fruitful. A representative collection of what will be covered are applications in arbitrage theory, constrained optimisation, filtration enlargement, and semimartingale theory. Other areas of application, such as economics, robust optimisation, and even functional analysis, will be also discussed (if time permits).