Further Topics in Statistics and Probabilities

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Group 1:
Thursday, 18h–19h30 and Friday, 12h–13h30

Group 2 (CMI EFiQuaS):
Friday, 14h–16h50

In this class, we are going to review the fundamental concepts of probability theory and apply them to problems in mathematical economics. We are going to discuss in particular models of interactive knowledge and belief revision as they have been introduced in economics by Robert Aumann's 1976 article "Agreeing to disagree."

Evaluation for this class is based on your preparation of reading assignments and exercises, your participation during the sessions, and your term paper.

Program

Session 1: A review of the fundamental concepts: basics of set theory, σ-algebra
Session 2: The review continued: probability spaces, random variable
Session 3: The review continued: Bayes' Law
Session 4: Modeling information and beliefs about events (Aumann's 1976 model)
Session 5: continued
Session 6: Dynamic processes of belief revision (Geanakoplos and Polemarchakis's 1982 model)
Session 7: continued
Session 8: No-bet theorems (Sebenius and Geanakoplos's 1983 model)
Session 9: continued
Session 10: Discussion