Financial Intermediation and Information Technologies
J.C.Rochet (syllabus)

The course will cover recent models explaining the role of public and private monies in an economy with financial frictions, and their impact on consumption, growth and welfare.

First lecture is a refresher on diffusion processes and HJB equations with an application to the Merton model of portfolio selection in continuous time.

Second lecture discusses the mean field games techniques introduced by Achdou et al (2022) with an application to the continuous time version of the growth model of Huggett (1997).

Third lecture gives an introduction to dynamic contract theory (Sannikov 2008) with applications to corporate finance.

The fourth lecture uses these techniques to extend the Merton model to a set up where the investor delegates the management of his portfolio of assets to a large number of managers, based on Biais-Gersbach-Rochet-Thadden-Villeneuve(2024).

The final lecture extends the BGRTV model to study the potential role of cryptocurrencies when governments become extortive, based on Biais-Rochet-Villeneuve (2024).