

Study and Simulation of Models of Growth and Pollution

Research Assistant Internship in the Department of Economics and Finance

1. Tutor

- Prof. Fausto Gozzi, fgozzi@luiss.it

2. Skills and Experience required

- Languages: English
- Skills required:
 - Courses: “Mathematical Methods” and “Probability”
 - Math Software (e.g. Matlab/Mathcad/Octave/Mathematica)
 - Statistics, econometrics
 - Statistical software (e.g. R/STATA/etc)
 - Knowledge on how to find and get data from main data sources
 - Ability/Availability to learn basic knowledge in PDEs/SDEs/Stochastic Processes/Optimal Control.

3. Job description: “Study and Simulation of Models of Growth and Pollution”

The objective of this research project is to study mathematical models of growth and pollution (see e.g. [Boucekkine-Fabbri-Federico-Gozzi, WP, 2018]). Such problems are written as Optimal Control Problems. The project will start from a review of the actual literature and then develop and study the mathematical model. The model will then be simulated. Then data on growth and pollution will be used, if possible, to calibrate the model.

The intern will be involved in the review of the literature and in the process of simulation/calibration.