A course in programming and conducting economic experiments with oTree

Università degli Studi di Torino
Dipartimento di Culture, Politica e Società

Matteo Ploner

Università di Trento, Dipartimento di Economia e Management, Via Inama 5, 38123 Trento (TN)
matteo.ploner@unitn.it
https://matteoploner.eco.unitn.it/

Description

The course provides participants with essential tools for setting up economic experiments on a web platform developed in the oTree environment. The experiments can be conducted both in a controlled laboratory environment and remotely via the Web.

The course provides an introduction to the oTree software for designing and conducting online experiments. Participants will be guided in the experiment's management, from the planning phase to the data collection and management phase.

The approach includes a short introduction to online experiment programming followed by the study of paradigmatic experimental situations.

Contents

The course consists of 6 interdependent modules, described below. In each module, practical examples will be provided, and participants will be asked to experience the experimental situations firsthand.

1) Programming and management of experiments in oTree

- Management of comouterized economic experiments
- Software for programming and conducting experiments

- oTree vs. z-Tree
- Installation of oTree and production
- Basic programming
  - Python
  - Django
  - HTML

2) Fundamental components of an experiment

- Design an experiment
  - Repetitions, matching, roles, values
- One-shot and repeated experiments in oTree
- Matching in oTree
- Roles and values

3) Questionnaires and individual decision making

- Different families of input
- User interface
  - Radio, button, slider, table ...
- Implementing a questionnaire
- Implementatin an individual decision-making scheme with monetary incentives

4) Strategic interaction

- Development of a strategic interaction scheme
  - Voluntary contribution game, repeated and one shot, with different forms of grouping
  - Development of controlled manipulation
- Use of Live pages for real-time interactions

5) Graphical elements and online implementation

- JavaScript elements for defining the user interface
- Presentation of the software for an online experiment
- Implementation of the experiment in live mode on Prolific
  - Illustration of the steps for conducting the experiment
- Data collection and data organization through R Markdown

6) Participants' projects

- Implementation of the participants' projects
    - The code will be shared with the teacher and uploaded to a private server
    - Course participants will take part in the experiments of the other participants

Objectives

The aim of the course is to provide the tools to manage a simple experiment, from the design phase to the data collection and organization phase using the oTree software.

Teaching methods

The teaching will take place through online lectures and interactive simulations of experiments.

The lectures take place on the Cisco Webex Meetings platform.

Details about the course and teaching material can be found on the course's Moodle platform https://elearning.unito.it/scuolacle/course/view.php?id=2095.

Teaching material will be made available before each lecture on the Moodle platform.

Participants will be asked to develop the oTree code of an experimental project. Participants will be provided with support for the online implementation of their experimental project.

Calendar

Lecture	Day	Time	Platform	Topic
1	Fri 30/10	14:00-17:00	webex	Programming and management of experiments in oTree
2	Fri 6/11	14:00-17:00	webex	Fundamental components of an experiment
3	Fri 13/11	14:00-17:00	webex	Questionnaires and individual decision making
4	Fri 20/11	14:00-17:00	webex	Strategic interaction
5	Fri 27/11	14:00-17:00	webex	Graphical elements and online implementation

Lecture	Day	Time	Platform	Topic
6	Fri 4/12	14:00-17:00	webex	Participants' projects