



METHODS AND TOOLS FOR MACROECONOMISTS

6TH - 8TH JUNE

**DEPARTMENT OF ECONOMICS
UNIVERSITY OF OXFORD**



Professor Jesus Fernandez-Villaverde from the University of Pennsylvania will be teaching a hands-on course on “Methods and Tools for Macroeconomists.”

TOPICS COVERED:

- Heterogenous-agent models in discrete and continuous time
- Solution techniques for heterogenous agent models
- Introduction to Continuous Time Models
- Dynamic programming in Continuous Time
- Machine Learning applied to macroeconomic models
- Empirical Methods in Machine Learning

This course will be held in the Department of Economics, at Oxford University.

Manor Road Building, Manor Road, OX1 3UQ.



PROFESSOR JESÚS FERNÁNDEZ-VILLAVERDE

Jesus is a professor of Economics at the Department of Economics, University of Pennsylvania. He is the director of the Penn Initiative for the Study of Markets as well as the Co-Director of The Business, Economic, and Financial History Project. His primary research interests are in the formulation of dynamic equilibrium models, their efficient computation, and their estimation, in particular using machine learning.



FRANCESCO ZANETTI

Francesco Zanetti is an Associate Professor in the Department of Economics at the University of Oxford and the David Richards Fellow of Wadham College. Before joining Oxford in September 2012, he spent eight years in the Bank of England, first as an Economist, Senior Economist and Advisor in the Monetary Analysis Section. His research interests are in the fields of Macroeconomics, Monetary Economics and Applied Econometrics.

TIMETABLE



	TUESDAY	WEDNESDAY	THURSDAY
09:00-09:30	Registration	Refreshments	Refreshments
09:30-10:45	Lecture	Lecture	Lecture
10:45-11:00	Break	Break	Break
11:00-12:15	Lecture	Lecture	Lecture
12:15-13:15	Lunch		
13:15 -14:30	Lecture	Lecture	Lecture
14:30-14:45	Break	Break	Break
14:45-16:00	Applied Session (In person only)	Applied Session (In person only)	Applied Session (In person only)
	Drinks reception	Free evening	Departure from Oxford

TIMETABLE

TUESDAY 6TH JUNE

09:30 - 10:45 Introduction to Heterogeneous Agent Models

10:45 - 11:00 Break

11:00 - 12:15 Heterogeneous Agent Models: Ayagari

12:15 - 13:15 Lunch

13:15 - 14:30 Heterogeneous Agent Models: Krussell-Smits

14:30 - 14:45 Break

14:45 - 16:00 Heterogeneous Agent Models: Applications (In person only)

WEDNESDAY 7TH JUNE

09:30 - 10:45 Introduction to Continuous Time Models: the Ramsey and DMP Models

10:45 - 11:00 Break

11:00 - 12:15 Dynamic Programming in Continuous Time I

12:15 - 13:15 Lunch

13:15 - 14:30 Dynamic Programming in Continuous Time II

14:30 - 14:45 Break

14:45 - 16:00 Dynamic Programming in Continuous Time III: Applications (In person only)

THURSDAY 8TH JUNE

09:30 - 10:45 Introduction to Machine Learning for Economic Models

10:45 - 11:00 Break

11:00 - 12:15 Empirical Methods in Machine Learning I: Estimating Models

12:15 - 13:15 Lunch

13:15 - 14:30 Empirical Methods in Machine Learning II: Text Analysis and Other Non-Structured

14:30 - 14:45 Break

14:45 - 16:00 Empirical Methods in Machine Learning III: Applications (In person only)

WHO CAN ATTEND?

The course is open to students and practitioners in macroeconomics and aims to introduce participants to cutting edge methods and tools to develop macroeconomic models that account for heterogeneity.

REQUIREMENTS

- No established knowledge in computing is required since the course will cover the basics and revision material will be offered in advance.
- However, familiarity with a scripting language such as Matlab, R, Stata, or Python would be an advantage.
- Participants are required to bring their own laptop equipped with MatLab and Julia.

FEES

- Professionals: £1650
- Students and Academics: £1045
- Online only fee: £950

Please note we can only accept payment for the summer school via MasterCard, Visa credit card, Maestro or Visa debit card.

APPLICATION PROCESS

Once your application has been submitted, it will be reviewed by the course tutors. Please ensure that you provide all the necessary information to help us process your application as quickly as possible.

You will then receive an email notification to confirm whether or not you have been accepted onto the course. Please note this can take up to 3 weeks.

For those that have been offered a place, you will receive the link to pay the tuition fee and accommodation fee via a secure portal. Please note we require fee payment to confirm your place.

Once payment has been received, you will receive confirmation of your place on the course(s), and further information so you have everything you need.

ACCOMMODATION

There are a limited number of rooms available at the Oxford Easyotel. A link to book a room will be provided in your offer letter with the course fees. Please contact summerschools@economics.ox.ac.uk if you require any help with this.



Please note there is no parking at the hotel, and breakfast is not included.

GENERAL ENQUIRIES

We would be delighted to answer your questions about our Summer School. For general queries, including payment and application, please email summerschools@economics.ox.ac.uk





FOR FURTHER INFORMATION PLEASE VISIT:

<https://www.economics.ox.ac.uk/september-summer-school>

CONTACT:

Emma Lane at summerschools@economics.ox.ac.uk