

# Introduction for MT Week 5 – HT Week 8

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Oxford MFE

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# Lecture Schedule

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- 9.00 - 9.40 Lecture
- 9.40 - 9.45 **Break**
- 9.45 - 10.30 Lecture
- 10.30 - 10.50 **Coffee**
- 10.50 - 11.35 Lecture
- 11.35 - 11.40 **Break**
- 11.40 - 12.30 Lecture

Please be ready for the lecture to begin at 9. If you are running late, please enter from the back. Handouts will always be placed at the back so that any latecomers will not need to interrupt the lecture.

# Preliminaries

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## Course grading:

- Final exam: 60%
  - ▶ Exam in week 0 TT
  - ▶ Quizzes in HT week 1
- Two applied projects, 10% and 10%
  - ▶ Due weeks 5 and 9 of HT
- Weekly assignments: 20% total
  - ▶ Crucial that you keep on top of the weekly theory questions
  - ▶ Must successfully complete 10 out of 16 for full marks

# More Preliminaries

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## MATLAB

- Problem sets have been distributed
  - Answers coming out according to set schedule
- Formal and informal ML continues in HT
- Lots of code by **me** on the course website
- Pages will be posted on the website explaining how to tackle problems as needed
- Econometrics is about working with data ... but theory aids understand in the results we produce

# Brief Outline and Approximate Plan

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## Michaelmas Term

- Week 5: Linear Regression
- Week 6: Advanced topics in Linear Regression
- Week 7: Univariate Time Series: Stationary
- Week 8: Univariate Time Series: Nonstationary and Nonlinear

## Hilary Term

- Week 1: Multiple Time Series: Stationary
- Week 2: Multiple Time Series: Non-Stationary
- Week 3: Univariate Volatility
- Week 4: Realized Volatility
- Week 5: Value-at-Risk
- Week 6: Density Estimation
- Week 7: Multivariate Volatility and Copulas
- Week 8: Panel Data

# Typo Bounty

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- I hate typos in my notes, but I'm sure there are some there
- Economist Solution: Pay for corrections
  - ▶ Simple typo, wrong word, grammatical error: £.50
  - ▶ "Matho", a typo in a mathematical expression £1
  - ▶ Serious math error: £5
  - ▶ **Note**: Only one in 3 years



# Typo Policy and Incentive Scheme Rules

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- Contest status updated each week
- <http://www.kevinsheppard.com/wiki/Typos>
- Rules:
  - ▶ Email me the typos, first to spot a typo gets credit, up-to-date list will be maintained on the website.
  - ▶ Slides and notes count
  - ▶ Real-time discovery in slides during lecture doesn't count
  - ▶ Repeated typos due to copy and paste errors earn double, but no more (i.e. only the first count if there are more than 2).
  - ▶ In the event of a question whether a math mistake is a matho or a serious mistake, my judgement will be final