



UNIVERSITAT DE BARCELONA
SCHOOL OF ECONOMICS

Summer
School

Big Data
for Economics

July 2nd-6th, 2018
Barcelona

#1

**Southern
European
University**

According to QS World
University Rankings 2018

9/10

Satisfaction

Summer School
Survey 2017

90%

**International
Participants**

Summer School
Survey 2017

The data revolution

The availability of large-scale administrative data or private sector data challenge the way economists have traditionally conducted empirical analysis. Big data is likely to affect the types of questions economists pose, by allowing for more focus on population variation and the analysis of a broader range of economic activities and interactions. No economist can avoid acquiring a basic knowledge of the large-data statistical methods that have been developed in neighboring fields and that are likely to substitute most classical econometric techniques.

Academic Coordinator for the 2018 edition:
Montserrat Guillen [Universitat de Barcelona & Riskcenter].

Lecturer

Arthur Charpentier holds a PhD in Applied Mathematics from KU Leuven.

He teaches Predictive Modeling, Actuarial Science & Insurance, Financial Mathematics, Networks & Algorithms, Statistics & Econometrics at the University of Rennes 1, where he is a Full Professor.

Meet the lecturer:
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Visit the website for most up-to-date information:

www.ub.edu/school-economics/summer-school

Course outline

The course will look at Big Data problems. We will first consider why it is an important issue for econometricians, and describe several computer Based Techniques.

- Lecture 1:** Introduction :
Why Big Data brings New Questions
- Lecture 2:** Simulation Based Techniques & Bootstrap
- Lecture 3:** Loss Functions : from OLS to Quantile Regression
- Lecture 4:** Nonlinearities and Discontinuities
- Lecture 5:** Cross-Validation and Out-of-Sample diagnosis
- Lecture 6:** Variable and model selection
- Lecture 7:** New Tools for Classification Problems
- Lecture 8:** New Tools for Time Series & Forecasting

The Summer School includes a R Programming Refresher Session taught by Lluís Bermudez [Universitat de Barcelona & Riskcenter].

Schedule

Monday to Friday
9.30h to 13.00h

Tuition fees

General fee	Student fee
615 eur	415 eur

The course will be recognised by the University of Barcelona as 2 ECTS credits.

Applications open until
June 17th, 2018

Scholarships available
for Master and
PhD students