

ELIGIBILITY

The applicants for the Summer School are expected to have at least a Master's degree in economics and/or econometrics or in relevant subjects with a strong background in economics and currently be engaged in academia. Some may be chosen from outside academia (e.g., government, private sector, NGOs), if they have the minimum academic qualification and relevant experience. In the description of the course, there is an indication of the background in econometrics, finance, economic theory or other subjects that participants should possess in order to take full advantage of the course. In addition, participants must have a good knowledge of the English language.

All these are, however, basic guidelines, and all cases will be considered on their own merits.

IMPORTANT DATES

April 1, 2010	Application deadline
May 1, 2010	Notification of acceptance
June 1, 2010	Deadline for payment of fees
July 1, 2010	Deadline for cancellation
August 1-8, 2010	Summer school duration

SCIENTIFIC COMMITTEE

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McMaster University, Canada

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University of Crete, Greece

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eCONOMICS & eCONOMETRICS

5TH ADVANCED SUMMER SCHOOL



Semiparametric and Nonparametric Econometrics

Prof. Jeffrey S. Racine

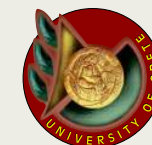
Department of Economics, McMaster University, Canada

Rethymno, Crete, Greece

August 1-8, 2010



University of Crete
Faculty of Social Sciences
Department of Economics



website >>> <http://www.soc.uoc.gr/assee/>

“This is a wonderful time to be a young economist. I urge you all to rush through graduate training in some or all of neurology, biochemistry, cognitive psychology, and anthropology, and with the full toolkit this provides, get to work on completing the new science of pleasure, and the enlightened perspectives this will bring to economic policy and the well-being of consumers.”

D. McFadden

The New Science of Pleasure-Consumer Behavior and the Measurement of Well-Being

Overview

Since 2006 the Department of Economics of the University of Crete is successfully running its Advanced Summer School in Economics and Econometrics. The broader objective of this series of events is to provide advanced training for young researchers from all over Europe and beyond on important disciplines of economics and econometrics. The Summer School follows a traditional structure: lectures in the morning and computer practical sessions in the afternoon. The specialized topic varies from year to year and reflects issues that are currently lively areas of new research and policy interest. The faculty is comprised of leaders in the field, and offers an overall coverage of the specialist area.

The 5th Advanced Summer School in Economics and Econometrics will be held in August 1-8, 2010 at the University Campus in Rethymno, Crete. The topic of the School is "Semiparametric and Nonparametric Econometrics". The lectures of the Summer School will provide an up-to-date coverage of nonparametric and semiparametric kernel-based analysis.

Professor Jeffrey S. Racine (McMaster University, Department of Economics) will be the Distinguished Guest Professor.

Up to 26 students will be accepted to the program.

Course Description

Objectives

In this course we shall study a unified framework for nonparametric and semiparametric kernel-based analysis. We focus on kernel-based methods capable of handling the mix of categorical (nominal and ordinal) and continuous datatypes one typically encounters in the course of applied data analysis. Applications will be emphasized throughout, and we shall use R for data analysis (<http://www.R-project.org>).

Material will be taken mainly from Li, Q. and J. S. Racine (2007), *Nonparametric Econometrics: Theory and Practice*, Princeton University Press, ISBN: 0691121613 (768 Pages). The np package for R (<http://www.r-project.org>) will be used for the nonparametric and semiparametric analysis, and is available directly from the Comprehensive R Archive Network (<http://cran.r-project.org>).

Outline

Day 1 During the first lecture we will introduce nonparametric methods, present a number of illustrative examples, compare and contrast nonparametric and parametric models, and then study the underpinnings of nonparametric density estimation. The workshop will introduce students to the R environment and the np package and have them conduct some rudimentary analysis.

Day 2 During this lecture we will build on the density estimation framework and then move into a regression framework. Motivating examples will be presented, then we will study in detail the local constant and local linear estimators.

The workshop will involve the use of parametric and nonparametric regression models in the R environment.

Day 3 During this lecture we will build on the regression framework and will look at constructing partial regression and gradient surfaces, assessing variability and conducting forecasts. We then will

consider consistent hypothesis testing in a nonparametric framework.

The workshop will continue to develop students' competence with R and will consider methods for assessing relative performance of parametric and nonparametric regression models.

Day 4 During this lecture we will consider a range of popular semiparametric regression models and then consider nonparametric methods for estimating binary and count outcome models and quantile models.

The workshop will encourage students to begin working with their own datasets.

Day 5 During this lecture we will consider imposing constraints on nonparametric models and testing the validity of such constraints. We will also discuss nonparametric estimation of production frontiers.

The workshop will encourage students to explore the range of nonparametric methods developed during the course.

Instructor

Jeffrey S. Racine, holds the Senator William McMaster Chair in Econometrics in the Department of Economics at McMaster University. Professor Racine's research interests are in the areas of nonparametric estimation and inference, cross-validated model selection, and entropy-based measures of dependence and their statistical underpinnings. He is also interested in parallel distributed computing paradigms and their application to computationally intensive nonparametric estimators. He has published widely in the area and his recent book with Q. Li *Nonparametric Econometrics: Theory and Practice*, Princeton University is becoming an important reference in many graduate econometric courses. Professor Racine completed his Ph.D at the University of Western Ontario under Professor Aman Ullah's supervision.

Readings

Material will be taken mainly from Li, Q. and J. S. Racine (2007), *Nonparametric Econometrics: Theory and Practice*, Princeton University Press, ISBN: 0691121613 (768 Pages).