

## PROGRAM

Students must choose one course from each block, for a total of two courses per week, and also choose between attending either one week or two weeks. Notice that no lab/group sessions are given on Saturday afternoon. In most courses, Stata® is the statistical software used. The maximum number of students per class is 30. The Sunday Stata® courses are extra courses and they are independent of courses from other blocks.

**22-27 June 2009**

### COURSE BLOCK 1

8:30-10:30 Lecture 14:00-15:30 Lab/group session

Biostatistics I	Applied Linear Regression	Randomized Clinical Trials
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### COURSE BLOCK 2

11:00-13:00 Lecture 16:00-17:30 Lab/group session

Clinical Epidemiology	Applied Logistic Regression	Causal Inference
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**29 June- 4 July 2009**

### COURSE BLOCK 3

8:30-10:30 Lecture 14:00-15:30 Lab/group session

Epidemiology	Survival Analysis	Monitoring and Evaluation of Health Programs
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### COURSE BLOCK 4

11:00-13:00 Lecture 16:00-17:30 Lab/group session

Biostatistics II	Evidence Based Public Health	Applied Longitudinal Analysis
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**21 June 2009**

### STATA COURSE 1

9:00-17:00

Introduction to Stata	Epidemiology with Stata
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**28 June 2009**

### STATA COURSE 2

9:00-17:00

Analysis of Prospective Studies with Stata	Diagnostic Accuracy with Stata	Regression Modelling Strategies with Stata
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## PROGRAM LOCATION

The school is held at the Brandolini Colombar Castle in Cison di Valmarino, 55 km north of Venice, in Veneto, in the northeast of Italy. The castle is now a hotel with meeting, sporting, recreational and well-being facilities. For more information, visit the homepage [www.castelbrando.it](http://www.castelbrando.it)

### ACCOMMODATION

Standard lodging expenses per person are € 125 per day, including accommodation in the castle and all meals (breakfast, coffee-breaks, lunch, dinner). Accommodation is in double rooms; however, a small number of single rooms are available at an extra charge, on a first-come first-served basis. The castle offers accommodation both inside the castle grounds and within walking distance (at a slightly lower daily rate). Choices can be made only on a first-come first-served basis. Check-in is Sunday afternoon or evening (Saturday afternoon or evening for those attending the Stata course) and check-out is Saturday morning of the following week (Sunday morning for those students attending only the first week course and the second Stata course). If different arrangements are required, they should be made with the hotel administrator in advance. More information can be found in the course application form and in the hotel accommodation form in the application section of the website.

### REGISTRATION FEE

The registration fee includes only the course tuition. The final deadline for registration is **31 May 2009**. Fees depend on whether the applicant is currently a student at an accredited university, or not, number of weeks, and timing of enrollment.

	Registration before 30 March 2009		Registration after 30 March 2009	
	Student	General	Student	General
2 Blocks/1 week	€ 1000	€ 1200	€ 1200	€ 1400
4 Blocks/2 weeks	€ 1800	€ 2200	€ 2100	€ 2500

The Stata courses are independent from the course blocks. The extra cost fee for attending each Stata course is € 200.

Education Administration, Summer School

Debora Rizzuto,

Aging Research Center, Karolinska Institutet,  
Gävlegatan 16, SE-113 30 Stockholm, Sweden

Tel: +46 8 6905368, +46 8 55924862 Fax: +46 8 690 6889

E-mail: [bioepiedu@ki.se](mailto:bioepiedu@ki.se) Website: [www.biostat.epi.org](http://www.biostat.epi.org)



# SUMMER SCHOOL ON MODERN METHODS IN BIostatISTICS AND EPIDEMIOLOGY



**22 JUNE - 4 JULY 2009**

Cison di Valmarino-Treviso, Italy

Castello Brandolini Colombar



## ORGANIZATION

### Scientific Directors:

Marcello Pagano Harvard University  
Juni Palmgren Karolinska Institutet

### Course Directors:

Johanna Adami Karolinska Institutet  
Rino Bellocco University of Milano-Bicocca,  
Karolinska Institutet  
Marco Bonetti Bocconi University  
Roberto Gnesotto Regione del Veneto

**BIOSTATEPI.ORG**

## GOALS AND RATIONALE

The School aims to provide introductory and advanced courses in medical statistics and epidemiology, and their application in etiology research and public health.

Modern medical research is becoming increasingly formalized. Today researchers, physicians and health professionals are encouraged to use scientific data, including controlled experiments and well-structured observational data as the source for decision making. Evidence-based medicine is entering into many subspecialties, including public health science.

This School provides participants insight into available critical tools for planning research, handling data and interpreting results. Better understanding of scientific medical papers is a goal and it requires not only knowledge of the topic being investigated but also an understanding of the research methods being used. Examples include proper understanding of the meaning of a hazard ratio or a confidence interval and an understanding of the difference between a randomized controlled trial and a case-control study.

## COURSE DESCRIPTIONS

### ANALYSIS OF PROSPECTIVE STUDIES WITH STATA® R. BELLOCCO

This course is designed to introduce the analysis of cohort studies, managing person-times, estimating counts and incidence rate ratios of both fixed and time-varying exposures and fitting count regression models.

### APPLIED LINEAR REGRESSION - R. BELLOCCO

This introductory course teaches students how to apply and use linear regression models with continuous and categorical predictors.

### APPLIED LOGISTIC REGRESSION - D. WYPIJ

Introduces students to the practice and application of logistic regression modeling. Topics include assessment of confounding and effect modification, use of indicator variables, model building methods, goodness-of-fit assessment, presentation of logistic regression models for reports and publications.

### APPLIED LONGITUDINAL ANALYSIS - G. FITZMAURICE

This course focuses on methods for analyzing longitudinal and repeated measures data. This type of study design encompasses epidemiological follow-up studies as well as clinical trials.

### BIostatISTICS I - M. PAGANO

Introduces the fundamental principles of statistics applied to biomedicine. The topics to be covered include: descriptive statistics, measures of central tendency, probability, diagnostic testing, population and sample, comparison of proportions.

### BIostatISTICS II - M. BONETTI

A course designed to provide the student with an understanding of the foundations of biostatistics and how useful the discipline is in tackling problems in the health sciences.

### CAUSAL INFERENCE - A. ROTNITZKY

The aim of this course is to prepare participants to critically evaluate causal conclusions drawn in the literature and to learn about a number of available methods for drawing causal conclusions from experimental and observational studies.

### CLINICAL EPIDEMIOLOGY - R. GALANTI

This course provides an introduction to epidemiology as scientific base for public health and clinical medicine. The course will introduce basic measures of disease occurrence and association, different study designs, issues of validity and of feasibility in epidemiological studies, as well as principles of data analysis.

### DIAGNOSTIC ACCURACY WITH STATA® - R. D'AMICO

This course is designed to introduce students to basic commands useful for managing and analysing data of diagnostic accuracy studies. Specific topics include estimation of diagnostic accuracy measures, such as: sensitivity, specificity, positive and negative predictive values as well as ROC curves.

### EPIDEMIOLOGY - D. TRICHOPOULOS

The emphasis of this course is on principles and concepts in the design, analysis and interpretation of epidemiological studies.

### EPIDEMIOLOGY WITH STATA® - N. ORSINI

Introduce students to basic commands useful in epidemiologic research. Specific topics include tables and regression models for epidemiologists.

### EVIDENCE BASED PUBLIC HEALTH - E. SAVOIA

Introduce the core concepts of evidence based public health and present studies conducted in Europe, the United States and in the developing world assessing the effectiveness of public health interventions and their relationship with the organizational structures, financing systems, workforce characteristics and delivery mechanisms of various practice settings.

### INTRODUCTION TO STATA® - G. CAPELLI

This course is designed to introduce students to the basics in Stata®. By the end of this one-day course, the student should be capable of using Stata® proficiently.

### MONITORING AND EVALUATION OF HEALTH PROGRAMS M. PAGANO

This course covers the basic statistical tools necessary for monitoring and evaluation of health programs.

### RANDOMIZED CLINICAL TRIALS - S. LAGAKOS

With an aim of improving one's ability to critically evaluate published results about clinical trials, this course will provide an introduction to the methods used in the design, interim monitoring, and analysis of clinical trials.

### REGRESSION MODELLING STRATEGIES WITH STATA® N. ORSINI

Provides methods for estimating the shape of the relationship between predictors and response using linear and restricted cubic spline construction within the general framework of generalized linear models.

### SURVIVAL ANALYSIS - P. DICKMAN

The course aim is to introduce statistical methods for describing how epidemiological cohort studies can be analysed in the framework of survival analysis.