

Statistical Genomics for Medical Research

September 10th – 11th, 2012
Faculty of Computer Science
“Alexandru Ioan Cuza” University of Iasi
Romania
<http://thor.info.uaic.ro/~rng/>

Description

This short course will introduce statistical methods devoted to genomic-oriented data analyses for biomedical research. Topics will include an overview of high-through put microarray technologies, an introduction to genetic epidemiology and genetic statistics, GWAS-association studies, multiple testing problem, integrative genomics studies (e.g. gene signature). Real examples in clinical oncology and human infectious diseases will be used to illustrate the concepts discussed.

Intended Audience

This short course is intended for biostatisticians, bioinformaticians and clinicians interested in genomic/genetic data analysis.

An introductory course on statistical methods is sufficient as a prerequisite for the short course.

Invited Professors

Philippe BROET, MD, Ph.D.

Full Professor of Biostatistics and Public Health, University of Paris-Sud, France.

Hervé PERDRY, Ph.D.

Associate Professor of Biostatistics , University of Paris-Sud, France.

Cyril DALMASSO, Ph.D.

Associate Professor of Biostatistics, Université d'Evry-Val-d'Essonne, France.

Biographic Details

The group develops new statistical models and methods devoted to genomic-oriented data analyses and transfer the results of this methodological research to bioclinical research. Three topics are investigated by the team that relate to class comparison, class prediction and class discovery. In particular, the team focuses on clinical cancer research and investigates the prognostic interest of combining markers from genome, transcriptome, and proteome for predicting clinical outcome. More precisely, we recently proposed an integrative genomic signature for refining the assessment of recurrence risk in early stage of non-small cell lung cancer.

Outline and Schedule

Day One: Monday, 10th September

- 09:00 - 10:30 **Genetic Epidemiology & Population Genetics (part I)**
- 10:30 - 11:00 *Break*
- 11:00 - 12:30 **Genetic Epidemiology & Population Genetics (part II)**
- 12:30 - 13:30 *Lunch*
- 13:30 - 15:00 **Genomic studies: Goal, pre-processing, multiple testing (part I)**
- 15:00 - 15:30 *Break*
- 15:30 - 17:00 **Genomic studies (part II)**

Day Two: Tuesday, 11th September

- 09:00 - 10:30 **GWAS-Association studies with real examples (HIV study)**
- 10:30 - 11:00 *Break*
- 11:00 - 12:30 **Cancer genomics (part I)**
- 12:30 - 13:30 *Lunch*
- 13:30 - 15:00 **Cancer genomic studies with real examples (Oncology studies) (part II)**
- 15:00 - 15:30 *Break*
- 15:30 - 17:00 **Other examples & Discussion**

Registration (the fees will be used to cover the course costs):

ISCB member/UMF member/UAIC member: 60 Euro

Non-ISCB member: 80 Euro

Online version available

Deadline for registration: 25st August 2012

Interested participants can confirm the course attendance at the address: avitcu@yahoo.com

or avitcu@info.uaic.ro

Project Director
Anca Vitcu, Ph.D.
Assistant Professor
Faculty of Computer Science
“Alexandru Ioan Cuza” University of Iasi
Romania