UNIVERSITAT DE GIRONA Girona, Spain 7-11 July 2014

Visit the web:

IASC-ERS Summer school on

Compositional Data Analysis

The **IASC-ERS summer school on compositional data analysis**, imparted at the premises of the University of Girona (UdG), is supported by the European Regional Section of the International Association for Statistical Computing.

Objective: To provide an introduction to the theoretical and practical aspects of statistical analysis of compositional data, as well as an informal discussion forum on more advanced modelling topics.

Contents: Compositional data are vectors which components, presented in percentages, ppm, ppb, or the like, show the relative importance of some parts of a whole. Typical examples are: economy (income/expenditure distribution), medicine (body composition: fat, bone, muscle), food industry (food composition: fat, sugar, ...), geochemistry and chemometrics (chemical composition), ecology (abundance of different species), sociology (time-use surveys), and genetics (genotype frequency). This hot topic of research has nowadays a broad impact in these fields. The goal of this summer school is to learn the basic concepts on CoDA and introduce its multivariate techniques (cluster analysis, discriminant analysis, regression models, etc). The course will present the current state of the art and will cover the following topics:

1. Hypothesis underlying statistical data analysis (sample space, scale).
2. The Aitchison geometry of the simplex.
3. Coordinate representation; distributions on the simplex.
4. Exploratory analysis (centering, variation array, biplot, balances-dendrogram).
5. Linear processes in the simplex; regression.
6. Irregular data: missing data, zero values, and oultiers.
7. Introduction to multivariate analysis: cluster and discriminant.

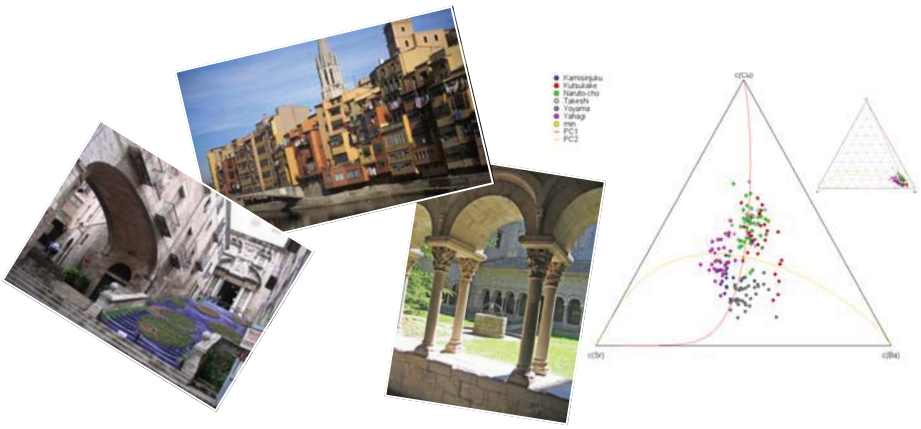
The above topics will be completed with an introduction to the freeware CoDaPack and to particular R-packages. Bring your own data to the open discussion session!

Recommended background:
First semester courses in statistics and basic knowledge in multivariate statistics.

How to apply:
Register on the website: www.compositionaldata.com and fill in the form from the CoDaCourses menu.

Class size is limited!

Special prices for students and IASC members



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