

PHD SHORT COURSE ON COMPOSITIONAL DATA ANALYSIS (MARCH, 4-6, 2013)

ORGANIZED BY THE DOCTORAL SCHOOL IN STATISTICS, DEPARTMENT OF ECONOMICS, QUANTITATIVE METHODS AND BUSINESS STRATEGY, UNIVERSITY OF MILANO-BICOCCA (ITALY)

COURSE OBJECTIVES

The purpose of this course is to give an introduction to the theoretical and practical aspects of statistical analysis of compositional data, as well as an informal discussion forum on more advanced modeling topics.

COURSE DESCRIPTION

The course will cover the following topics:

- Hypothesis underlying statistical data analysis (sample space, scale).
- The Aitchison geometry of the simplex.
- Coordinate representation; distributions on the simplex.
- Exploratory analysis (centering, variation array, biplot, balances-dendrogram).
- Linear processes in the simplex; regression.
- CoDa-discriminant analysis and logistic regression.
- Introduction to CoDaPack, a user-friendly freeware; discussion of case studies.

PREREQUISITES

The recommended background is a first semester courses in statistics, algebra and calculus, as well as basic knowledge in multivariate statistics.

COURSE ORGANIZATION

This is a 15-hours course, March 4th - 6th 2013:

- March 4th 2013: 13.30 – 18.30 lab ex 237, 2nd floor, building U7
- March 5th 2013: 9.30 – 14.30 lab ex 237, 2nd floor, building U7
- March 6th 2013: 9.30 – 14.30 lab ex 237, 2nd floor, building U7

The teaching language will be English.

INSTRUCTORS

Prof. Dr. Vera Pawlowsky-Glahn

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REGISTRATION

Students/Researchers who intend to participate should send an email to the course administrator (dottorato.statistica@unimib.it).