

**Ciclo di seminari su:  
*CORRESPONDENCE ANALYSIS, LOG-RATIO ANALYSIS  
AND POWER TRANSFORMATION***

**relatore:**

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**11/12 giugno 2009**

**ABSTRACT SEMINARIO 1**

**Correspondence Analysis and Log-ratio Analysis**

Correspondence analysis (CA) is a member of a wide class of multivariate techniques based on the singular value decomposition (SVD). The SVD provides low-rank matrix approximations of a data matrix (after appropriate transformation), and these approximations provide directly low-dimensional graphical representations of the data matrix -- these are popular ways of exploring multivariate data.

Log-ratio analysis (LRA) also falls into this class of methods, and differs only in the way the data are initially transformed before being decomposed by the SVD. There are two types of LRA: unweighted, as originally proposed by John Aitchison for the analysis of compositional data, and a weighted form, which turns out to be identical to what has been called "spectral mapping" in the biomedical literature.

In this first seminar, I will define the two methods, and show their similarities and differences, as well as the connection to Goodman's RC association models.