

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

relatore:

[Michael J. Greenacre](#)

**Departament d'Economia i Empresa,
Universitat Pompeu Fabra, Barcelona, Spain**

11/12 giugno 2009

ABSTRACT SEMINARIO 2

Power Transformations in Correspondence Analysis

Correspondence analysis (CA) is a versatile method for analyzing a data matrix where all data elements are on the same scale. The method can be defined equivalently as the SVD of the standardized residuals (i.e., observed value minus expected value, then divided by square root of expected value) or as the SVD of the double-centred and weighted matrix of contingency ratios (i.e., observed value divided by expected value).

In these two respective definitions, a power transformation can be applied to the original values or to the contingency ratios. I will show that as the power parameter tends to zero, these two versions of CA tend respectively to the unweighted and weighted alternatives of log-ratio analysis (LRA). This means that we can get arbitrarily close to the results of an unweighted or weighted LRA using CA.