Seminario su
"Statistical analysis of questionnaires"

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Titolo: Statistical analysis of questionnaire: basics of Item Response Theory and some extensions

Durata: 5 ore (3 ore di lezione teorica e 2 ore di esercitazione in laboratorio)

Abstract:

Item Response Theory (IRT) represents a popular model-based approach for the analysis of questionnaire item responses, mainly in the presence of categorical (binary and ordinal) items. Aim of this seminar is the illustration of fundamentals and some relevant generalizations of IRT models, with a special focus on the formulation based on latent classes. More in detail, the following main topics will be illustrated:

1) Approaches for the analysis of questionnaire: classical test theory and IRT
2) Basics of IRT models for binary and ordered polytomously-scored items: Rasch model, 2PL model, partial credit model, graded response model; details on the estimation methods and diagnostics are also provided;
3) IRT models under the assumption of discrete latent traits;
4) IRT models in presence of multiple latent traits and individual covariates.

The theoretical illustration is accompanied by examples on data, implemented through softwares Stata and R.

Riferimento bibliografico:
Bartolucci F., Bacci S., Gnaldi M. (2015), *Statistical analysis of questionnaires: a unified approach based on R and Stata*, Chapman & Hall, CRC Press.