Course on Multilevel Models

Prof. Leonardo Grilli

Dipartimento di Statistica "G. Parenti" – Università di Firenze

Email: grilli@ds.unifi.it

Web: http://www.ds.unifi.it/grilli/

Date and venue

Dates: 28th, 29th February 2012. 1st March 2012. (10:00 – 14:00 h)

Venue: Seminar room, Dpt. of Statistics and Operations Research. Faculty of Mathematics (USC)

Program and schedule

Tuesday, 28th February (10:00 – 14:00)

> *Multilevel linear models: basic theory and examples.*

Wednesday, 29th February (10:00 – 14:00)

> *Multilevel linear models: estimation, further topics and examples*

Thursday, 1st March (10:00 – 14:00)

> *Multilevel models for binary and ordinal responses: theory, estimation and examples.*

Material

The course is based on slides that will be available in advance. To prepare for the course:

- *Quick introduction*: a 5 page entry of the SAGE Encyclopaedia of Social Science Research Methods by T. Snijders. http://stat.gamma.rug.nl/MultilevelAnalysis.pdf
- *Detailed introduction*: Chapter 2 of Hox J (2010) Multilevel Analysis. Techniques and Applications. 2nd edition. Erlbaum. http://joophox.net/mlbook2/Chapter2.pdf
- *Overview (up to complex models)*: Steele, F. and Goldstein, H. (2007) Multilevel models in psychometrics. Handbook of Statistics. C. R. Rao and S. Sinharay. Amsterdam, Elsevier. 26: 401-420. http://www.bristol.ac.uk/cmm/team/hg/full-publications/2006/multilevel-models-in-psychometrics.pdf
- A free web course with theory and tutorials using MLwiN, Stata and R (LEMMA – University of Bristol) http://www.cmm.bris.ac.uk/lemma/

Some textbooks

Snijders, T.A.B. and Bosker, R.J. (2011) Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling, 2nd edition. London: Sage.

Rabe-Hesketh, S. and Skrondal, A. (2008). Multilevel and Longitudinal Modeling Using Stata (Second Edition). College Station, TX: Stata Press.