

Institute of Statistics



STAT3221 Advanced linear models

[15h] 3 credits

This course is taught in the 2nd semester

Teacher(s): Philippe Lambert
Language: English
Level: Third cycle

Aims

This is a third cycle course giving a critical overview of recent scientific developments in the field. It will deal with present extensions of linear and generalised linear models. The considered extensions will be of two types :

- an explicit modelling of dispersion as a function of available covariates.
- an amendment of (generalised) linear models to deal with clustered or longitudinal data.

These techniques will be illustrated by the analysis of datasets using SAS or S-Plus.

Main themes

- Review of generalised linear models
- Dispersion models
- Linear mixed models.
- Generalised linear mixed models.
- Autoregressive models.
- Marginal models and generalised estimating equations.

Content and teaching methods

- Review of generalised linear models
- Dispersion models
- Linear mixed models.
- Generalised linear mixed models.
- Autoregressive models.
- Marginal models and generalised estimating equations.

Programmes in which this activity is taught

STAT3DA Diplôme d'études approfondies en statistique

Other credits in programs

STAT3DA	Diplôme d'études approfondies en statistique	(3 credits)	
STAT3DA/B	diplôme d'études approfondies en statistique (biostatistique et épidémiologie)	(3 credits)	
STAT3DA/E	diplôme d'études approfondies en statistique (statistique et économétrie)	(3 credits)	
STAT3DA/M	Diplôme d'études approfondies en statistique (méthodologie de la statistique)	(3 credits)	
STAT3DA/P	diplôme d'études approfondies en statistique (pratique de la statistique)	(3 credits)	Mandatory