



Biostatnet

SATELLITE WORKSHOP: CGAMLSS WITH R

Copula Generalized Additive Models for Location, Scale and Shape with R

19th January

Santiago de

LIMITED NUMBER OF SPACES AVAILABLE

Description

1-day short course on Copula Additive Models for Location, Scale and Shape.

The course will provide a modern introduction to copula additive models for location, scale and shape based on penalized regression spline smoothing. Topics covered will include: copulae, regression splines, model building and checking, interval estimation, testing and prediction. The lectures will involve a computer session, using the SemiParBIVProbit package in R.

Speaker

The course will be delivered by Giampiero Marra (*Statistical Science, University College London, UK*).

Registration Fees

Biostatnet Members, SEB Members and University Students: 50 Euros
Others: 100 Euros

COURSE TIMETABLE

[15:00-15:30] Introduction. Why a Copula GAMLSS; some motivating examples.

[15:30-16:30] Revision of background. Linear models, generalized linear models, generalized additive models, generalized additive models for location, scale and shape.

[16:30-16:45] Break

[16:45-17:45] CGAMLSS in general. The model and its representation, types of copulae, flexible covariate effects, distributions.

[17:45-18:30] CGAMLSS estimation and checking. The fitting method; checking residuals; checking other assumptions.

[18:30-18:45] Break

[18:45-19:30] Further inference. Interval estimation; hypothesis testing; model comparison; prediction; posterior simulation.

[19:30-20:30] CGAMLSS in practice. Practical use of CGAMLSS with the SemiParBIVProbit package in R.