

**Título del curso:** INTRODUCTION TO R-INLA and APPLICATIONS

R-INLA es una librería de R que permite realizar modelización estadística especialmente desde un punto de vista completamente Bayesiano. El curso combina clases teóricas y prácticas.

**Descripción:**

This 2-day course with practical sessions aims to give an introduction to the R package INLA, which provides a simple way to perform Bayesian inference for latent Gaussian models (LGMs). LGMs are among the most commonly used classes of models in statistical applications and include generalized linear models, generalized additive models, smoothing spline models, linear state space models, log-Gaussian Cox processes and more. One major benefit of INLA over traditional Markov chain Monte Carlo algorithms is that precise estimates are available in seconds or minutes without requiring any sampling. The “formula” framework of R is used to specify a wide variety of models in a familiar and streamlined way which only requires small changes in the code to add or remove random effects, temporal effects, spatial effects and so on.

Topics of the course include:

- Introducing the class of latent Gaussian models
- Describing the "big picture" of the INLA algorithm
- Introducing the basic elements of the R package INLA, such as model definition and output inspection
- Implementing different (including user-specific) hyper prior choices
- Prediction and model choice
- Implementing joint models in R-INLA
- Outlining further advanced features

Examples will be presented from the fields of biostatistics, spatial statistics, measurement error analysis etc.

Required background: Basic knowledge in Bayesian modelling and R

**Ponente:** Dra. ANDREA RIEBLER

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**IDIOMA:** Inglés y castellano

**Días:** 1 y 2 de Diciembre de 2015

**Horario:**

9:30 - 11:00

11:30 - 13:30

15:00 - 17:00

**Lugar:** Sala de Informática del Dpto de Estadística e I.O.

**PARA APUNTARSE AL CURSO ESCRIBIR A:**

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Plazas limitadas (15 asistentes máximo).