

Professor Virgilio Gómez-Rubio

Title: Inference on Bayesian hierarchical models with INLA and MCMC

Abstract:

In my talk I will describe recent developments [1,2] to fit Bayesian hierarchical models by means of a combination of INLA and MCMC. In particular, I will describe how numerical integration and MCMC methods can be combined with INLA to fit models not implemented in the R-INLA package. I will also show some applications and discuss future work [3,4].

[1] V. Gómez-Rubio and H. Rue (2018). Markov chain monte carlo with the integrated nested laplace approximation. *Statistics and Computing* 28 (5), 1033-1051

[2] V. Gómez-Rubio and F. Palmí-Perales (2019). Multivariate posterior inference for spatial models with the integrated nested Laplace approximation. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*

[3] Virgilio Gomez-Rubio (2017). Mixture model fitting using conditional models and modal Gibbs sampling. ArXiv preprint 1712.09566.

[4] Elena Lázaro, Carmen Armero, Virgilio Gómez-Rubio (2018). Approximate Bayesian inference for mixture cure models. ArXiv preprint 1806.09362.