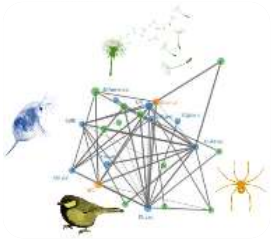

EVENET – An eco-evolutionary network of biotic interactions

Introduction to Bayesian data analysis using STAN

Workshop @ Ecology Across Borders; the Joint Annual Meeting of the British Ecological Society (BES), the Gesellschaft für Ökologie (GfÖ) and NecoV, in association with the European Ecological Federation (EEF).

ICC Ghent, Wednesday 13th December 2017, 13.15-14.45

The aim of this workshop is to arm the participants with working knowledge of data analysis using Bayesian approaches in STAN. Bayesian data analysis provide multiple advantages for the analysis of ecological data, such as being able to deal with small datasets and uncertainties but also allowing flexible models to be built.

STAN has recently emerged as a powerful probabilistic language to specify, fit, check and compare Bayesian models. In this workshop, participants will be given a brief introduction into the specificities of Bayesian approaches focusing on issues specific to ecological datasets and questions. Then models of increasing complexities will be fitted using R in an interactive session covering a broad range of typical models, such as linear models, logistic regressions and mixed-effect models. In this session, all aspects of model building in a Bayesian framework will be discussed from model building to model fitness check and model comparison. Finally the workshop will end with small discussion groups where participants will be given the opportunity to discuss issues related to specific questions and/or data, such as including uncertainty in meta-analysis, how to set complex random effect structures, or fitting ODEs to data.

All ecologists with working knowledge of statistics and interest in Bayesian data analysis are welcome to join. The workshop will be at an introductory level but the discussion groups at the end could foster discussions on more advanced topics.

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