Bayesian Statistics with R-INLA

University of Zurich, March, 2022

Instructor: Sara Martino

Plan of the course

Introduction

Plan of the course

Plan for this 2-day course

Today

- **9:00-10:45**Introduction and basics concepts of INLA
- **11:00-12:30** Practical session I

Lunch

- **13:30-15:00** R-INLA: Basics
- **15:15-17:00** Practical session II

Plan for this 2-day course

Tomorrow

- **9:00-10:45**??
- **11:00-12:30** Practical session III

Lunch

- **13:30-15:00** ??
- **15:15-16:00** Practical session IV

Introduction

What is inla?

The short answer:

INLA is a fast method to do Bayesian inference with latent Gaussian models and `INLA` *is an* `R`*-package that implements this method with a flexible and simple interface.*

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The (much) longer answer:

- Rue, Martino, and Chopin (2009) "Approximate Bayesian inference for latent Gaussian models by using integrated nested Laplace approximations." *JRSSB*
- Rue, Riebler, Sørbye, Illian, Simpson, Lindgren (2017) "Bayesian Computing with INLA: A Review." *Annual Review of Statistics and Its Application*
- Martino, Riebler "Integrated Nested Laplace Approximations (INLA)" (2021) *arXiv:1907.01248*