

INLABRU WORKSHOP

Jafet Belmont, Sara Martino and Janine Illian

1 Welcome to the course!

- Welcome to the `inlabru` workshop!
- The aim of this workshop is to introduce you to a range of statistical modelling approaches, in particular the temporal, spatial and spatio-temporal modelling as implemented in the `inlabru` package.
- Workshop materials are available in the github repository
- **Important!** Please use the instructions provided [here](#) to install and check your installation *before* the course start.

2 Learning Objectives for the workshop

At the end of the workshop, participants will have an understanding of:

- the motivation for and the challenges of analysing and modelling spatial data
- statistical models used to analyse spatial and spatio-temporal data
- the implementation of these models in the `inlabru` package
- how to independently analyse spatial data with `inlabru`

3 Intended audience

The workshop aims to cater for participants with a range of different backgrounds, who is interested in analysing data with modern spatial and spatio-temporal statistical modelling approaches.

4 Prerequisites

Participants should be familiar with the R environment, and general statistical approaches for modelling such as regression, analysis of (co)variance, and generalized linear models.

No knowledge of R-INLA or `inlabru` is required.

5 Schedule

5.0.1 Day 1

: {`.striped` `.hover`}

5.0.2 Day 2

: {`.striped` `.hover`}

5.0.3 Day 3

: {striped .hover}

5.0.4 Day 4

: {striped .hover}

5.0.5 Day 5

: {striped .hover}

6 In preparation for the workshop

Participants are required to follow the below steps ahead of the first day of the workshop:

1. Check your R version, it should be at least 4.3....
2. Install **R-INLA**
3. Install inlabru (available from CRAN)

```
# Enable universe(s) by inlabru-org
options(repos = c(
  inlabruorg = "https://inlabru-org.r-universe.dev",
  INLA = "https://inla.r-inla-download.org/R/testing",
  CRAN = "https://cloud.r-project.org"
))

# Install some packages
install.packages("inlabru")
```

3. Make sure you have the latest R-INLA, inlabru and R versions installed.
4. Install the following libraries: