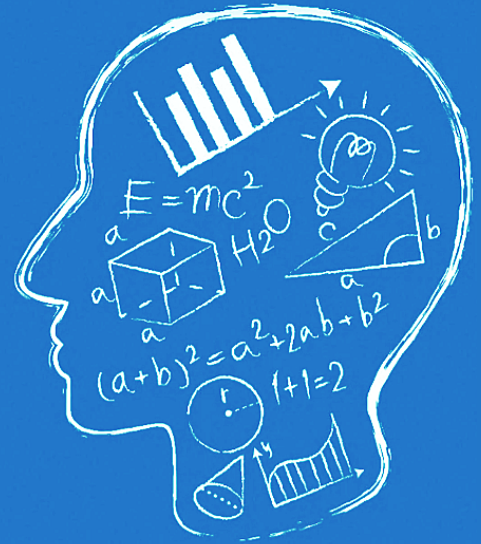


SHORT COURSE

SPATIAL DATA SCIENCE USING R

22 - 24 MARCH 2023

NEW VENUE!
C6, AMPH. 6.1.36



SPATIAL DATA SCIENCE USING R

BY PAULA MORAGA

This short course will cover the following topics:

- Spatial data including areal, geostatistical and point patterns;
- R packages for retrieval, manipulation and visualization of spatial data;
- Statistical methods to describe, analyze, and simulate spatial data;
- Fitting and interpreting Bayesian spatial models using the integrated nested Laplace approximation (INLA) and stochastic partial differential equation (SPDE) approaches;
- Communicating results with interactive dashboards and Shiny web applications.

Prerequisites: It is assumed participants are familiar with R and it is recommended a working knowledge of generalized linear models. Participants should bring their laptops with R and RStudio installed.

Registration, until 17 March 2023. More information, [here](#).



Prof. Paula Moraga is an Assistant Professor of Statistics at King Abdullah University of Science and Technology (KAUST), and the Principal Investigator of the GeoHealth group.

Paula's research focuses on the development of innovative statistical methods and computational tools for geospatial data analysis and health surveillance. She develops spatial and spatio-temporal statistical methods to understand the geographic and temporal patterns of diseases, assess their relationship with potential risk factors, detect clusters, measure inequalities, and evaluate the impact of interventions. She also works on the development of statistical software and interactive visualization applications for reproducible research and communication, and the impact of her work has directly informed strategic policy in reducing the burden of diseases such as malaria and cancer in several countries. She has published extensively in leading journals and is the author of the book "Geospatial Health Data: Modeling and Visualization with R-INLA and Shiny" (2019, Chapman & Hall/CRC).