

# Course Outline

This course will cover a number of areas of spatial statistics applied to real problems. A tentative list of more specific topics is as follows:

- Introduction to spatial statistics.
- Data in spatial analysis.
- R software for spatial analysis.
- GIS (geographic information systems).
- Introduction to random fields theory.
- Spectral domain methods.
- Estimation and prediction of random fields. Variogram and kriging methods.
- Spatial point processes.
- Estimation of point patterns. Investigating intensity and spatial randomness.
- Simulation of random fields and spatial processes.