

Ice2ice statistics workshop for PhDs (and others)

Week 8, 19-23 February 2018

Copenhagen, DK

venue TBD

Organisers:

Martin Miles, Uni Research, Bergen

Ida Margrethe Ringgaard, University of Copenhagen / Danish Meteorological Institute

Lecturers:

Martin Miles, Uni Research, Bergen

Francesco Muschitiello, Uni Research, Bergen

“Statistics is a fascinating subject – unfortunately, its teaching is often excruciatingly dull.”

– Foreword in a classic statistics textbook.

The ice2ice statistics workshop aims – in contrast – to be an *interesting, illustrative and interactive* environment, in which we present and explore the use of statistics and other quantitative methods in climate, paleoclimate, paleoceanography and other geosciences.

We will have a few formal lectures, complemented by lots of informal learning and interactive exchanges between lecturers and participants, and between participants. We will work hands-on in small groups and individually on some example data and our own data sets (paleo proxy, observations and/or model data), trying out different methods on the data sets. We will use “R”, a free and comprehensive software environment for statistical computing and graphics: <https://www.r-project.org/>

Lectures will cover introductory to advanced concepts and methods, adapted to the interests of the participants. Preliminary topics include:

- *Inferential statistics I and II*: Theory and methods of univariate and multivariate statistics, including significance and resampling statistics, e.g., bootstrapping and Monte Carlo simulation methods
- *Time series analysis*: time-, frequency- and time-frequency domain (e.g., wavelets)
- *Spatial analysis*: geostatistics and more, including spatial autocorrelation and its impacts

The workshop is intended primarily for ice2ice PhD students, and will span 3 or 4 days during week 8 (19-23 February), including a social evening of course. Participation by others from ice2ice is also welcome: Remember you can always learn more statistics!

Please send an email to express your interest: martin.miles@uni.no or iri@dmi.dk. Please include any relevant comments (personal goals for the workshop, special topics of interest, partial attendance, etc.).