

# **climAPCREGION-01a: Regional Climate Variability (Exercises) (climAPC) (500018)**

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# online – exercise climAPCREGION-01a: Regional Climate Variability

**01.06.** online assignment of time series analysis methods

2 weeks to familiarize yourself with analysis methods and hand in code samples for all to use for assignment.

**15.06.** assignment of climate indices to students

2 weeks to acquire data / do analysis / write preliminary analysis

**01.07.** upload preliminary poster and start commenting on each others works

instead of lecture: **6.7.** final poster presentation and last feedback (in person optional)

instead of lecture: **13.7.** deadline for 6-9 min cut video for assigned climate index

## **climAPCREGION-01a: Regional Climate Variability (Exercises) (climAPC) (500018)**

statistical methods code (python or matlab): (20% of final mark)

Hand in a code (function) that performs the assigned statistical analysis to an unknown time series data set. The unknown test dataset will be either one time series, two timeseries, or a 2D temporal changing field, depending on the assigned statistical method. The code should be written in Python or Matlab and only use standard libraries that do not require extra installations / licenses.

Publish the code on a public repository and hand in the link. (e.g. github, ...)

All codes have to be public for all to use for the following analysis.

Codes are marked only if running and giving correct results (with a flawless test dataset). Marks will be given for good commentary and explanations within the code and error-robustness (with datasets with errors, gaps).

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Poster/Handput A4. 20% of final mark

Use the code from anyone in the group (reference correctly) to perform analysis of a climate index. Compare your index with publically created downloadable indices if appropriate. Then create a poster that shows your results and covers the contents of the video to come. Incorporate ideas of the storyline you want to explain and put emphasis on good visualization material.

Find a layout that is appropriate (e.g. double folded leaflet) as handout to interested audience.

Textsize should not be below 12pt. you may put references / overview map other art / ideas on the back side.

See the handout as possibility to test your storyline for the video. You will receive feedback on the poster from the whole group to improve your story. Feel free to test more experimental approaches to reach your audience and explain the observed climate variability.

Upload the poster to an online co-working space (e.g. google docs) where others can comment on your poster. Marks will be given half for the completeness of the poster and half for participating and giving constructive improvement suggestions to the online posters / storylines.

# **climAPCREGION-01a: Regional Climate Variability (Exercises) (climAPC) (500018)**

6-9min documentary / explanation Video. 60% of final mark

Create an outreach video about the assigned climate index. Ensure that the video addresses also lay audience and is cut appropriately. You are encouraged to use animations and images, graphs, maps extensively. The video should be in English. Please obey current copyright rules concerning image and sound. Upload video to a platform and hand in the link. (e.g. youtube / vimeo ...)

Cover the following topics, if applicable, and not limited to :

**What data is this climate index based on?**

**What is the best mathematical method to analyse this data? Other possibilities?**

**How much variability in the area/location is due to this index/variability?**

**What are the regional / far away impacts of this index?**

**Is climate change impacting / masking / being masked by this index?**