## Exercises - GEO4902-01 - General modeling concepts

**The assignment is due by Wednesday, Sep. 16, 2021**

***[Save as jupyter notebook, with your name in the filename, and upload on canvas]***

### Exercise 01b - Compare forecasts of global and regional forecast system:

**Use:**

<https://github.com/maltemuellerm/GEO4902_exercises/blob/master/01/Weather_Forecasts_GlobalVSregional.ipynb>

This script plots the precipitation forecast of the regional model (AROME MetCoOp) and global model ECMWF, for the extreme precipitation event which occurred in 2014. More information on this event can be found here: <https://www.nrk.no/emne/oktoberflaumen-2014-1.12012052>

1. Explore the convective and large-scale precipitation in the ECMWF model system.
2. Zoom into the west coast system. Plot as maps and point forecasts (e.g. for Flåm) What are the differences between the models, and what might be a major reason for the differences in the precipitation maps?
3. Plot also temperature and winds of the two model forecasting systems. Compare, interpret, and describe your findings.

You shall also access the forecasts of the Polar Low from February 4, 2020 from the global ECMWF system:

1. Modify the code, so that the files for February 04 are read in. Compare the forecasts of the two forecasting systems as maps and point forecasts. What are the main differences and what could be the cause for it?