

## “Further skills for job placement” 3 CFU activity proposal

**Professor:**

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**Place:**

Earth System Modelling laboratory

(Department of Earth and Environmental Sciences)

**Typology of activity:**

Data Quality

Data Cleaning

Data Exploration

**Activity title:**

Database of past climates data

**Activity description:**

The proposed activities constitute the preliminary steps towards the creation of a database of past climate data, relevant for climate sciences and benchmarking of numerical simulations with Earth System Models.

In particular, mineral (desert) dust dispersed by large scale winds is accumulated within natural archives (marine and terrestrial deposits, ice cores) that can be dated, effectively yielding the possibility of deriving time series of dust mass accumulation rates in the geological past. Abundant data relevant for the calculation of dust mass accumulation rates exist, scattered in different public repositories.

The proposed tasks involve searching and downloading relevant data from a list of public repositories, performing quality checks, harmonizing variables from different repositories, organizing them in a common data format and visualizing salient features. Because of the varied nature of natural archives, several opportunities for students are available, with focus on marine sediments, terrestrial sediments, ice cores.

**Number of students:**

3