

Organization and configuration of a raster database for operational integrated environmental monitoring.

**MSc Thesis
EURAC**

In the light of an ever-rising amount of data from an increasing number of earth observation satellites, we are in need of an efficient data organization for our research and operational products at EURAC. We are producing different products and maps for the alpine area like biophysical parameters or snow maps. Those have to be stored in an easily accessible way for further analysis and creation of mapping services. Currently we have setup a new database called RASDAMAN, which is a middleware on top of postgresql & postgis for efficient querying of raster data. We are looking for a master student with good knowledge in databases and database querying who feels comfortable working in a Linux environment (knowing the basic tools, using shell scripts etc.). The main questions to solve here are then:

- how to store our raster data using rasdaman most efficiently,
- how to structure and configure the database, and
- how to most efficiently query this data for retrieval and further processing.

If you are further interested in programming and are familiar with any of the languages such as Java, C++ or Python that is definitely a plus. Basic knowledge about geospatial data is most welcome as well.