

## Thesis Template

**Title:** Mapping and quantifying diffuse CO<sub>2</sub> and CH<sub>4</sub> soil degassing at Palidoro gas emission site.

Name of the **supervisor**, Carlo Cardellini

Name(s) of a **potential co-supervisor(s)**

Prospective **assistance** in the supervision: Lab activity, data analysis

**Prerequisites** based on specialization or specific compulsory courses or (if any),

Brief **description** of the planned research : 1) **objectives**, 2) the **study area** and 3) the **research methods** foreseen.

1) **objectives:** Measuring CO<sub>2</sub> and CH<sub>4</sub> fluxes from soil diffuse degassing to map the eventual tectonic structures controlling the gas flux at the Palidoro gas emission site (northern Latium) and estimate the gas release.

2) the **study area:** Solforata di Palidoro is a gas emission in northern Latium and a part from the main gas vent there are not studies of eventual diffuse release of gas in the nearby areas.

2) **research methods:** measurements will be done by accumulation chamber method, and possibly also gas samples from vent emission will be sampled and analyses. Data will be used to estimate the amount of released gas by a probable deep, geothermal, reservoir using statistical and geostatistical methods. Mapped flux will be compared with bibliographic knowledge about geology/geophysics of the area.

