

# PhD in Systemic multi-hazard risk assessment

## Project background

The PhD is embedded in a large European project called **PARATUS** “*Promoting disaster preparedness and resilience by co-developing stakeholder support tools for managing the systemic risk of compounding disasters*” that will develop an open-source platform for dynamic risk assessment that allows to analyse and evaluate multi-hazard impact chains, risk reduction measures, and disaster response scenarios in the light of systemic vulnerabilities and uncertainties.

## Main topic:

*Development and validation of an open-source GIS toolbox for systemic risk-assessment of compounding disasters. Application to different study areas and natural hazards.*

The final PhD project can be adapted by other optional topics like:

- *Impacts of past and future global changes including land-use and land cover and climate changes*
- *Uncertainty analysis of hydro-geomorphological cascading hazards*

## Skills needed:

- Excellent MSc degree with a background in civil or environmental engineering, earth sciences, or similar.
- Advanced experience with GIS (QGIS), databases (SQL queries and scripts) and scientific programming (including Python)
- Highly motivated for research work and quick to acquire new knowledge/methods
- Ability to work independently, but also in a multi-disciplinary team
- Very good English knowledge (written and spoken)
- You must fulfill the requirements for admission to the UPC's doctoral program (<https://doctorat.upc.edu/en/future-doctoral-candidates/access-and-admission/general-entrance-requirements> )

## We offer:

- Ideal and fruitful working environment in multidisciplinary research groups
- A PhD-student contract applying the UPC BarcelonaTECH remuneration standards (yearly renewable with a maximum of 4 years)

## PhD supervisors:

- Marcel Hürlimann (<https://deca.upc.edu/en/people/marcel.hurlimann>)
- Nieves Lantada (<https://futur.upc.edu/NievesLantadaZarzosa>)