



UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI
SCIENZE DELLA TERRA “ARDITO DESIO”



The Department of Earth Sciences “A. Desio” of the University of Milan announces the availability of 6 additional PhD studentships on ‘Green’ research topics (D.M. n. 1061, 10th August 2021 – a.y. 2021/2022, XXXVII Doctoral Cycle).

The available PhD studentships are bound to specific topics. Each awardee will be bound to develop the assigned research topic in collaboration with a company, where the student will have to spend a period of 6 to 12 months.

The PhD activities are expected to start on 1st January 2022.

The list of the available research topics (all co-funded by the industry) is reported below.

- Soil improvement treatments by resin injection: physical experimentation and numerical modelling, aimed at exploring the possibility of using resin injection treatments for the containment and/or stabilization of groundwater pollutants – (company *Geosec srl*) – under the supervision of Prof. Tiziana Apuani (tiziana.apuani@unimi.it);

- Study of groundwater resources in Bergamo pre-Alps, karstified rocks, with respect to water availability, possible climate change effects which may modify the spring discharge, and the possible resumption of metal mining activities (especially Lead and Zinc) - (company *Uniacque spa*) – under the supervision of Prof. Giovanni Beretta (giovanni.beretta@unimi.it);

- Experimental and numerical analysis of the thermal and thermo-mechanical behaviour of thermo-active sheet pile walls, exerting the dual function of geotechnical/structural support and low-enthalpy geothermal energy exploitation - (company *CRUX Engineering B.V.*) – under the supervision of Prof. Francesco Cecinato (francesco.cecinato@unimi.it);

- HydroGeosITe: the Italian hydro-geological-geophysical calibration site, for hydrogeological applications of geophysical methods (electric, electromagnetic and seismic) - (company *A2A Ciclo Idrico spa*) - under the supervision of Prof. Gianluca Fiandaca (gianluca.fiandaca@unimi.it);

- MountainHydro: hydrogeological, geochemical and geophysical characterization, and numerical modelling of a group of springs located in Valle Sabbia (Province of Brescia) - (company *A2A Ciclo Idrico spa*) - under the supervision of Dr. Daniele Pedretti (daniele.pedretti@unimi.it);

-IPRaMa, Induced Polarization for Raw Materials: innovate mineral exploration of disseminated raw materials that are of (critical) interest for the green economy transition, through the induced polarization geophysical method - (company *Aarhus Geofisica srl*) - under the supervision of Prof. Gianluca Fiandaca (gianluca.fiandaca@unimi.it);

The deadline for applications is 8 November 2021 at 2pm Italian time. The call, including instructions for applicants, is available at the following URL:

<https://www.unimi.it/en/education/postgraduate-programmes/doctoral-programmes-phd/ay-2021/2022-earth-sciences>

Prospective applicants may directly contact the supervisors for further information about the relevant research topics.

The Doctoral School Coordinator

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