

**TWO FULLY FUNDED PH.D. POSITIONS ARE AVAILABLE**

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**TOPIC 1: ENVIRONMENTAL AND HYDRAULIC ENGINEERING AND GEOMATICS**  
**call id: 3781-2848**

The focus of the research will be on the investigation of the impact of climate change on subsurface ecosystems.

**Keywords:** sustainable water, resources management, nature base solutions, climate change, water security

**Required:** M.Sc in Civil or Environmental Engineering, Applied Mathematics, Physics, Numerical Methods or related field

The ideal candidate should have:

Strong background in environmental/physical-based studies and mathematics.

Familiarity with programming languages (such as MATLAB, R, C++, Fortran, Python).

Fluency in English, both written and spoken.

**Reference ERCs:**

PE1\_19 Control theory and optimisation

PE8\_3 Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste treatment

PE6\_11 Machine learning, statistical data processing and applications

PE10\_17 Hydrology, hydrogeology, engineering and environmental geology, water and soil pollution

SH7\_6 Environmental and climate change, societal impact and policy

**Reference SDGs:**

GOAL 6: Clean Water and Sanitation

GOAL 11: Sustainable Cities and Communities,

GOAL 13: Climate Action

**Start Day:** 01/11/2023

**Place to work:** Milano

**Call:** open at July 26, 2023

**Deadline:** September 5, 2023 (2 pm Italian Time)

**PhD programme in Environmental and Infrastructure engineering**

**Where to apply:** <https://www.dottorato.polimi.it/en/prospective-phd-candidates/calls-and-regulations/39-cycle/2nd-additional-call-2023-24>

**Call:**

[https://www.dottorato.polimi.it/fileadmin/user\\_upload/bandi/ciclo39/bandi\\_aggiuntivi/2\\_Iug23/3781\\_2848\\_APPLICATION\\_IAI\\_ENVIRONMENTAL\\_AND\\_HYDRAULIC\\_ENGINEERING\\_AND\\_GEOMATICS.pdf](https://www.dottorato.polimi.it/fileadmin/user_upload/bandi/ciclo39/bandi_aggiuntivi/2_Iug23/3781_2848_APPLICATION_IAI_ENVIRONMENTAL_AND_HYDRAULIC_ENGINEERING_AND_GEOMATICS.pdf)

**Topic:**

[https://www.dottorato.polimi.it/fileadmin/user\\_upload/bandi/ciclo39/bandi\\_aggiuntivi/2\\_Iug23/SCHEDA\\_3781\\_IAI\\_\\_ENVIRONMENTAL\\_AND\\_HYDRAULIC.PDF](https://www.dottorato.polimi.it/fileadmin/user_upload/bandi/ciclo39/bandi_aggiuntivi/2_Iug23/SCHEDA_3781_IAI__ENVIRONMENTAL_AND_HYDRAULIC.PDF)

## **Topic 2: Multiscale characterization of heterogeneous porous systems**

The focus of the research will be on the investigation of the evolution of porous systems due to bio-geochemical processes.

**Keywords:** reactive transport, carbon sequestration, mineral dissolution/precipitation, carbon storage, atomic force microscopy, microfluidics

**Required:** M.Sc in Civil or Environmental Engineering, Physics, Chemistry, Geological Sciences or related field

The ideal candidate should have:

Strong background in fluid mechanics and/or physics and/or physical chemistry.

Familiarity with experimental and imaging techniques are a plus

Fluency in English, both written and spoken.

### **Reference ERCs:**

PE4\_18 Environment chemistry

PE8\_3 Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste treatment

PE10\_9 Biogeochemistry, biogeochemical cycles, environmental chemistry

PE10\_17 Hydrology, hydrogeology, engineering and environmental geology, water and soil pollution

### **Reference SDGs:**

GOAL 6: Clean Water and Sanitation

GOAL 11: Sustainable Cities and Communities,

GOAL 13: Climate Action

**Call:** open at September 14, 2023

**Deadline:** September 29, 2023.

**Where to apply:**

<https://www.dottorato.polimi.it/en/prospective-phd-candidates/calls-and-regulations>

For additional information, please contact [monica.riva@polimi.it](mailto:monica.riva@polimi.it)