

OBJECT:

2 + 1 year post-doc position at the University of Pavia on lake ecological and hydrodynamic modelling

DURATION:

The post-doc position has been established for the moment for a 2-year period. However, funding is and will be available to extend it for a further year after the first 2 years with mutual agreement between the advisors and the researcher.

DESCRIPTION:

A post-doc position at the University of Pavia (Italy) in the field of lake ecological and hydrodynamic modelling is available. Object of the work will be the 0D/1D modelling of lakes of different size and characteristics in the Lombardy region of Italy, with the aim of assessing the achievability of the water quality targets prescribed by law for each basin. The post-doc will work within the cooperation agreement among Regione Lombardia, CNR-IRSA (Water Research Institute of the Italian Research Council) and the University of Pavia "Hydrodynamic-ecological modelling activities of lakes in Lombardy to support the update of the regional Programme for the Protection of Water" ("Modellazione idrodinamico-ecologica dei laghi lombardi a supporto dell'aggiornamento del Piano di Tutela delle Acque"). The researcher will oversee and contribute to all the aspects of the work:

- 1) organisation of existing data needed by the models and identification of the missing data to be surveyed;
- 2) selection of the most proper methods and hypotheses for the modelling of various different lakes in Lombardy;
- 3) implementation of the numerical models of the lakes in Lombardy;
- 4) application of the models to the analyses required by the regional Programme for the Protection of Water and drafting of the related technical reports;
- 5) preparation of the scientific papers documenting the results of major scientific interest achieved in the activity.

The post-doc will collaborate with researchers at the University of Pavia and CNR-IRSA as well as with technical personnel of ARPA Lombardia (Regional Environmental Protection Agency of the Lombardy region) and of Regione Lombardia. Strict collaboration will also start in late 2022 with a Ph.D. student at the University of Pavia who will also work on the project.

POSITION:

The post-doc will be qualified as Research Assistant ("Assegnista di Ricerca") at the Department of Civil Engineering of the University of Pavia, but will also be given an equivalent associate position at CNR-IRSA, in Brugherio and/or Verbania, in order to perform the project activities. The main work location will be Pavia, where manifold residences for University staff are available. Work will start no later than July 2022.

REQUIREMENTS (MANDATORY AND SUGGESTED):

- 1) M.Sc. degree (mandatory) in a field relevant to the project: Environmental/Water Engineering, Natural Sciences, Biology, etc.;
- 2) Ph.D. degree (theoretically not mandatory due to legislation issues, yet highly suggested) in a field relevant to the project;
- 3) previous research experience in the ecological or hydrodynamic modelling of lakes (suggested);
- 4) coding using at least one language among MATLAB, R, Python (suggested);

- 5) a proper level of English to perform scientific research activities (mandatory, knowledge of Italian is also a plus, due to the applicative nature of the project, which will involve dealing with local authorities).

SELECTION PROCESS:

Selection of candidates is based on qualifications and on an interview with the candidates, which will be performed online.

APPLICATION:

Application should be submitted before May 11 2022, 12:00 CET. The announcement of the position is available here:

<http://www-assegni.unipv.it/bandi-dipartimenti-tipo-b/>

The notice (in Italian) is available here:

<http://www-assegni.unipv.it/wp-content/uploads/2022/04/Bando-assegno-FENOCCHI.pdf.pdf>

Application is to be submitted through the PICA portal:

<https://pica.cineca.it/unipv/tipologia/assegni>

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