



RESPONSE – Open PhD Position

Open PhD Position in

RESPONSE (GA No. 847585)

«RESPONSE - to society and policy needs through plant, food and energy sciences»

H2020-MSCA-COFUND-2018

ESR 17

Sustainable storage hydropower for a resilient future energy system

Within the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 847585, ETH Zurich is offering a 42-month PhD position for an early-stage researcher (ESR) in the area of sustainable energy systems.

Job Description

We are looking for a talented doctoral candidate working on the topic of reservoir sedimentation and its future implications for a sustainable hydropower use. In addition to numerical modelling, this project also involves field measurements at selected reservoir sites in Switzerland. The anticipated outcome of this project is a better understanding of the efficiency and sustainability of different sediment management strategies, which may stimulate the development of improved guidelines on sediment evacuation from reservoirs.

A planned secondment of 3 months at the Swiss Federal Office of Energy (SFOE) in Bern/Ittigen (CH) is part of this project. During this secondment, the candidate will develop a holistic overview of the current and future state of reservoir sedimentation in Switzerland. Long-term scenarios with a time horizon up to the year 2100 for different reservoir characteristics will be scaled up to the Swiss fleet of storage reservoirs. This will allow the SFOE to assess the future reduction of the seasonal storage capacity of reservoirs with less uncertainty. To achieve this, the candidate will be working closely with the technical experts at SFOE.

The results will be communicated in scientific journals as well as at international conferences and will be shared with relevant stakeholders. The recommendations and scenarios developed within this project will have a direct impact on the successful implementation of the Swiss Energy Strategy 2050 for which hydropower is key for electricity storage and flexibility.

Interested / Your profile

Potential candidates should have an environmental or civil engineering background and experience in numerical modelling of hydro- and morphodynamic processes with a special focus on reservoir environments. A demonstrable knowledge and experience in programming



is a major prerequisite for the successful completion of the project. Good writing and communication skills are also essential.

Eligibility: Early stage researcher in the first 4 years (full-time equivalent) of their research careers, including the period of research training, starting at the date of obtaining the degree which would formally entitle them to embark on a doctorate either in the country in which the degree was obtained or in the country in which the initial training activities are provided.

At the time of recruitment (for call 3 = December 1, 2020) by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc.) in Switzerland for more than 12 months in the 3 years immediately before the reference date. Compulsory national service and/or short stays such as holidays are not taken into account.

Language requirement: English / Proficient oral and written English skills are expected. German and/or French is desirable.

Main Research Field: Hydraulic Engineering

Sub Research Field: Sediment Management

RESPONSE is open to applicants of any nationality.

For submitting your online application: <https://join.lszgs.uzh.ch/> (select PhD Program Science and Policy). The online application should contain all information as indicated by the application portal. Moreover, the following documents have to be uploaded under “further documents”: 1) a letter of motivation to join a) the RESPONSE doctoral programme and b) to apply for this specific position (ESR 17), 2) a comprehensive tabular CV, and 3) transcripts of records. If you apply for more than one RESPONSE position, please refer to them in your letter of motivation. Please note that we exclusively accept applications submitted through our online application portal. Applications via email or postal services will not be considered. The deadline is December 1, 2020.

Benefit

We are offering an interesting position at the interface of science, engineering and policy. While working in an international, interdisciplinary and innovative research environment at ETH Zurich, the ESR will be jointly co-supervised by the Laboratory of Hydraulics, Hydrology and Glaciology (VAW) at ETH Zurich and the Swiss Federal Office of Energy.

The complete 42 months will be under 100% working contracts.

The PhD salary follows the regulations of ETH Zurich and will be according to EU regulations for Marie Skłodowska-Curie Early Stage Researchers. The monthly gross salary will not be lower than CHF 3920.

The successful candidate will be matriculated and will have a working contract at ETH Zurich. He/she will work in Switzerland. The secondment will also take place in Switzerland.



Expected starting date of the working contract: **01.04.2021**

For questions and further information on the position, please contact Dr. Frederic Evers (evers@vaw.baug.ethz.ch), no applications.

Further information

RESPONSE Doctoral Programme (DP): «RESPONSE - to society and policy needs through plant, food and energy sciences» is funded by the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie Grant Agreement No 847585. RESPONSE DP builds on the academic expertise of three world-leading institutions - ETH Zurich, University of Zurich and University of Basel. The successful candidate will be integrated in the research network and infrastructure of the internationally renowned competence center [Energy Science Center](#) at ETH Zurich.

All RESPONSE ESRs will follow the [PSC PhD Program Science and Policy](#) that is unique in its kind. Through the curriculum of this program, ESR will be trained in the communication of scientific evidence to policy-makers and the public; the involvement of different stakeholder groups as well as in policy development and endorsement in Europe and at global scale.

For project, programme and application details:

<https://www.plantsciences.uzh.ch/en/research/fellowships/response.html>

Working location: ETH Zurich, Hönggerberg Campus, HIA Building, 8093 Zürich, Switzerland



Marie Skłodowska-Curie Actions (MSCA)

Co-funding of regional, national and international programmes (COFUND)

H2020-MSCA-COFUND-2018



“This program receives funding from the European Union’s Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement No 847585”.