

## Postdoctoral Researcher, Hydrological Modelling Aalto University

Direct Link: <https://www.AcademicKeys.com/r?job=234552>

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Posted Apr. 12, 2024, set to expire Dec. 30, 2024

**Job Title** Postdoctoral Researcher, Hydrological Modelling  
**Department** T213 Built Environment  
**Institution** Aalto University  
, , Finland

**Date Posted** Apr. 12, 2024

**Application Deadline** Open until filled  
**Position Start Date** Available immediately

**Job Categories** Post-Doc

**Academic Field(s)** Ecological and Environmental

**Job Website** [https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher--Hydrological-Modelling\\_R39371](https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher--Hydrological-Modelling_R39371)

**Apply By Email**

### Job Description

Aalto University is where science and art meet technology and business. We shape a sustainable future by making research breakthroughs in and across our disciplines, sparking the game changers of tomorrow and creating novel solutions to major global challenges. Our community is made up of 13 000 students, 400 professors and close to 4 500 other faculty and staff working on our dynamic campus in Espoo, Greater Helsinki, Finland. Diversity is part of who we are, and we actively work to ensure our community's diversity and inclusiveness. This is why we warmly encourage qualified candidates from all backgrounds to join our community.

### POSTDOCTORAL RESEARCHER IN HYDROLOGICAL MODELLING

The Water and Environmental Engineering research group (WAT:

[url=<https://www.aalto.fi/en/departement-of-built-environment/water-and-environmental->

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engineering]<https://www.aalto.fi/en/departement-of-built-environment/water-and-environmental-engineering>), offers position for a talented and motivated postdoctoral researcher, who is specialized in computational hydrology, hydrological modelling and/or water quality and solute transport modelling. The postdoctoral researcher candidate will study catchment hydrological processes and environmental loads as well as stream flow processes under changing land uses and climate forcing in areas of diverse land use from agricultural and forested areas to urban and constructed areas. The positions links to the Digital Waters (DIWA) Flagship (<http://www.digitalwaters.fi>).

The postdoctoral researcher will work in the research themes of the Digital Waters (DIWA) Flagship (<http://www.digitalwaters.fi>) funded by the Research Council of Finland. The researcher works with the DIWA theme leader, prof. Harri Koivusalo and his team. DIWA Flagship aims to form, facilitate and foster a new generation of the water sector. DIWA enables a transition towards the digital representation of real-world water systems (Digital Twin) to reproduce hydrological storages, their states, fluxes and processes, as well as ecosystem responses with novel options for improved scenario analysis, planning and governance. The candidate would become a part of a multidisciplinary team of experts. In addition to Aalto University, DIWA Flagship includes experts from several Finnish universities and institutes, e.g. University of Oulu, University of Turku, Finnish Environment Institute (Syke), Finnish Geospatial Research Institute, and Finnish Meteorological Institute. The work within DIWA will aim for enhancing water security through digital models, and Digital Twins created from the supersites of the consortium.

The post-doctoral researcher would overall concentrate on Research Theme 3 “Integrated analysis and modelling” of DIWA Flagship, more precisely related to “Dynamic simulation models”. Methodologically the work can include: (1) harmonizing and preparation of meteorological, climate scenario, and catchment datasets in different northern European river basins, (2) development and application of hydrological and water quality / nutrient load models to simulation of spatially varied hydrological and load generation processes, and (3) preparation of models and their input and output to interlink with digital twins of land use domains within river basins.

### Requirements

The position requires a strong theoretical background in computational hydrology, including for example hydrological modelling, land-surface processes, water resources management, nutrient and pollutant loads in river basins, and hydraulic modelling. Thus, applicants should have a doctoral degree in water and environmental engineering, hydrological sciences, environmental sciences, physical geography or other relevant fields of science. The doctoral degree should be awarded within past 5 years. We accept applications from persons at the final stage of their doctoral studies, but we expect you to have your doctoral degree completed before starting in the position.

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For this position, the candidate should have skills in water resources research and development and application of simulation models. Skills in programming (Python or similar), geoinformatics, and quantitative analysis will be an asset.

The candidate must have high motivation and aptitude for research and must enjoy working as part of a team. Fluent written and verbal communication skills in English are essential. The candidate must be able to generate bright scientific ideas and propose new methodological solutions. We also expect the candidate to work independently, and write research funding proposals and scientific articles, and participate in teaching.

### Salary, terms, and conditions

Funding for the postdoc is available until the end of 2027 (i.e. for ~3.5 years period). The expected starting date is as soon as possible (negotiable with the candidate).

The salary range, terms and conditions are based on a collective bargaining agreement among Finnish universities. The starting salary for postdoctoral researchers at Aalto University is currently around 3960€ per month (gross) which may be gradually increased over time according to performance. The annual total workload of research and teaching staff at Aalto University is 1612 hours. The contract includes Aalto University occupational health care.

### How to apply

All applications must include the following materials. \* Letter of Motivation (1-2 pages), where you introduce yourself and describe your motivation for the position. Also clearly indicate your competence in the key themes of the position. \* Curriculum Vitae (2-3 pages), including details of all academic merits, your language competence as well as contact details of two relevant referees. You are also encouraged to include links to your possible LinkedIn page or other similar website. \* Important: include in the CV an outline of the potential experience in field work and/or laboratory experiments, methods (incl. modelling, programming/coding) and research related to the relevant scientific fields (e.g. fluvial processes / water engineering). \* List of Publications, including a link to your Doctoral Thesis (if available)

All materials should be submitted in English in a single pdf-file (compiled in the order specified above, name it as "firstname\_lastname\_application.pdf"). The application should be submitted through our online eRecruitment system (press 'Apply' button at the end of the page) latest on Sunday 26th of May 2024. Please note Aalto University's employees and visitors should apply for the position via our internal system Workday -> find jobs (not external aalto.fi webpage on open positions) by using their existing Workday user account.

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Kindly note that we will start to go through the applications and may also invite suitable candidates for interview during the application period. The position will be filled as soon as suitable candidate is identified: this can happen already before the application period closes. You are thus encouraged to submit your application as soon as possible.

Applications submitted by email will not be accepted. Aalto University reserves the right to leave the position open, extend the application period and consider candidates who have not applied during the application period.

### Further information

Further information about working at Aalto University can be found at [url=<https://www.aalto.fi/aalto-university/international-staff-information-package>]https://www.aalto.fi/aalto-university/international-staff-information-package. Content-related questions about the vacancy may be directed via email to Harri Koivusalo (Professor, Water Resources Engineering, harri.koivusalo [at] aalto.fi) while recruitment-related questions may be directed to Kirsi Kärkkäinen (HR Coordinator, using the email format firstname.lastname&#64;aalto.fi).

### Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

### Contact

Finland