

## Postdoctoral Researcher, Fluvial Research Aalto University

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Posted Apr. 4, 2024, set to expire Dec. 30, 2024

**Job Title** Postdoctoral Researcher, Fluvial Research  
**Department** T213 Built Environment  
**Institution** Aalto University  
, , Finland

**Date Posted** Apr. 4, 2024

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

**Job Categories** Post-Doc

**Academic Field(s)** Water Resources Engineering  
Ecological and Environmental

**Job Website** [https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher--Fluvial-Research\\_R39298](https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher--Fluvial-Research_R39298)

**Apply By Email**

### Job Description

Aalto University in Espoo, Finland is a community of bold thinkers where science and art meet technology and business. We are committed to identifying and solving grand societal challenges, promoting sustainability, and building an innovative future. Aalto has six schools with over 13000 students and a staff of more than 4500, of which 400 are professors.

Aalto University School of Engineering, Department of Built Environment invites applications for

POSTDOCTORAL RESEARCHER IN FLUVIAL RESEARCH (“Modelling of bank erosion processes”)

The Water and Environmental Engineering research group of Aalto University (WAT:  
[url=https://www.aalto.fi/en/department-of-built-environment/water-and-environmental-

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engineering] <https://www.aalto.fi/en/department-of-built-environment/water-and-environmental-engineering>), more precisely its fluvial dynamics research team (lead by Research Fellow and Assistant Professor Eliisa Lotsari), has a vacancy for a highly talented and motivated postdoctoral researcher, who is a specialist in coding, hydro-morphodynamic modelling and fluvial research. More specifically, the topic of the research would relate to bank erosion modelling and its development. The postdoc will work in close collaboration with two projects lead by Prof. Lotsari (Funded by MVTT and the Research Council of Finland). The research aims to determine the effects of changing bank erosion on Northern River systems based on new measurement and modelling approaches.

The postdoctoral researcher would overall concentrate on analyzing the hydro-morphodynamic changes in seasonally ice-covered river channels and participate in field measurements. In particular, the postdoctoral researcher would concentrate on parameterizing and developing the riverbank erosion modelling and its applications in seasonally frozen conditions (incl. hydraulics and sediment transport). The field data gathered from ice-covered and open-channel flow seasons in Finnish rivers would be applied for the refinement of the model parameterization, code and application approaches. The required equations and workflow for model development have been already planned within the projects, and therefore the person to be hired would be in particular working on developing, coding and building the model and simulating the seasonal changes of erosion processes in Northern River systems.

### Requirements

The position requires a strong theoretical background in fluvial research, and computational methods. Thus, applicants should have a doctoral degree in water and environmental engineering, hydrological sciences, environmental sciences, physical geography, or other relevant fields of science regarding fluvial research or computational methods. The successful candidate will have skills and experience in programming and development of models (using Python or other programming languages). Skills and experience in geoinformatics, quantitative analysis and computational fluid dynamics and their codes are considered assets.

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. A driver's license (valid in Finland) is needed during the possible additional field campaigns if more verification data for the models would be needed to gather with the research team. Thus, the candidate will have a chance in participating field work with a research team in (remote) river locations in Finland, and will need to analyze the gathered spatial data, and apply the data in model experiments. 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 activities (max 5% of working hours). The candidate is also expected to present

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at high-level scientific conferences, to publish in leading academic journals, and to participate in the activities of Water and Environmental Engineering team.

### Research Environment

The successful applicant will join a young and dynamic team of world-class researchers at Aalto University's School of Engineering. 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. More information about living and working in Finland can be found at <https://www.aalto.fi/aalto-university/international-staff-information-package>.

### Salary, terms, and conditions

Funding for the postdoc is available until the end of 2026 (i.e. for 2.5 years period). The expected starting date is earliest on 1st June 2024, and after that as soon as possible.

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 3900€ 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. \* Motivation letter with the applicant's contact information and an indication of the preferred starting date (max 1 page) \* CV including details of all academic merits, and contact information for 2 persons who may be contacted to provide a character reference (max 3 pages) \* Important: include in the CV an outline of the experience in programming/coding and, hydro-morphodynamic modelling. State also if you have and what kind of field work experience. \* Complete list of publications

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) the latest on Thursday 25 April 2024. Please note Aalto University's employees and visitors should apply for the position via our internal system Workday -&gt; find jobs (not external aalto.fi webpage on open positions) by using their existing Workday user account.

Applications submitted by email will not be accepted. Kindly note that we will start to go through the applications and may also invite suitable candidates to interview already during the application period.

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The position will be filled as soon as a 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.

Aalto University reserves the right to leave the position open, extend the application period, reopen the application process, and to consider candidates who have not submitted applications 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)]<https://www.aalto.fi/aalto-university/international-staff-information-package>. Content-related questions about the vacancy may be directed via email to Eliisa Lotsari (Research Fellow and Assistant Professor, in Water Engineering, [[url=mailto:eliisa.s.lotsari@aalto.fi](mailto:eliisa.s.lotsari@aalto.fi)][eliisa.s.lotsari](mailto:eliisa.s.lotsari@aalto.fi) [[at](mailto:eliisa.s.lotsari@aalto.fi)] [aalto.fi](mailto:eliisa.s.lotsari@aalto.fi)) while recruitment-related questions may be directed to Kirsi Kärkkäinen (HR Coordinator, using the email format [firstname.lastname@aalto.fi](mailto:firstname.lastname@aalto.fi)). Please send your possible inquiries latest on 22 April 2024.

### Contact Information

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

### Contact

Finland