

Doctoral Researcher in Remote Sensing Aalto University

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Posted Sep. 25, 2024, set to expire Jan. 25, 2025

Job Title Doctoral Researcher in Remote Sensing
Department T213 Built Environment
Institution Aalto University
, , Finland

Date Posted Sep. 25, 2024

Application Deadline Open until filled
Position Start Date Available immediately

Job Categories Graduate Student

Academic Field(s) Physics - General
Geography

Job Website https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Doctoral-Researcher-in-Remote-Sensing_R40945

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.

Doctoral Researcher in Remote Sensing

The Remote Sensing Research Team

(<https://www.aalto.fi/en/remotesensing>) is seeking a highly motivated doctoral researcher to work in a project "Transferable models for remote sensing of forest

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biomass with spaceborne lidar” funded by the Research Council of Finland.

Our project develops new methods for remote sensing of forest above-ground biomass. We will use satellite laser sensors to provide regional estimates of biomass and its change 2003-2027 for the entire European boreal forest zone. Satellite lasers can directly measure tree heights and forest canopy densities. Statistical and physically-based models are used to convert these measurements into accurate estimates of biomass. Special attention is paid to model transferability, which guarantees that the predictions are reliable for different types of forests. Regional estimates of biomass change and its components are calculated for the Nordic and Baltic countries, as well as European Russia. Our project will help to improve and harmonize the quality of European forest resource information.

The main tasks of the doctoral researcher will be to conduct scientific research on the project’s theme, and to undertake doctoral studies at Aalto University. The topic of the doctoral thesis must be linked to the use of physically-based forest reflectance models in interpretation of spaceborne lidar data, but the exact content of the thesis can be tailored based on the candidate’s interests and skills. The doctoral researcher will work in the Remote Sensing Research Team. The work will also entail close collaboration with the consortium partner at University of Eastern Finland School of Forest Sciences, as well as opportunity to collaborate with the international partners.

Requirements and expectations

The applicant is expected to fulfil the following requirements: * Master’s degree in a field relevant to the project’s topic, for example (but not limited to), remote sensing, geoinformatics, physics, geography, or forestry. Candidates who are close to completion of their master’s degree (with clear proof of progress and plan to complete the thesis within the first half of 2025) may also be considered. * Good oral and written English and communication skills * Experience in working with optical remote sensing data * Experience in programming (e.g., Python, R, c++) * Willingness and ability to participate in field campaigns in forests in Finland during summer 2025 * A driver’s licence that is valid in Finland Note that the applicant must fulfil the admission criteria of the Aalto Doctoral Programme in Engineering. If selected for the position, the applicant must apply for, obtain, and accept the right to pursue doctoral studies at Aalto University. For more information on the admission criteria, see description here: [[url=https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-engineering](https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-engineering)]<https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-engineering>

The following are considered as an advantage: * Strong mathematical skills and interest in solving mathematical and physical problems * Experience in applying physically-based and/or statistical models in interpretation of remote sensing data * Prior experience in air- or spaceborne lidar remote sensing of forests

We offer * The candidate will have an opportunity to work in an inspiring environment in an international team of world-leading researchers in optical remote sensing. The colleagues are supportive and represent all stages of academic career. * The contract will be full-time and should start

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between 15th November 2024 and 1st January 2025. Later starting date may be considered for justifiable reasons if the applicant has otherwise excellent skills for the position. * The recommended maximum duration of doctoral studies at Aalto University is four years. The contract will be first made until mid-term and will be renewed if the research and studies have progressed according to the plan. Note also that the applicant selected to the position must apply for, obtain, and accept the right to pursue doctoral studies at Aalto University within the probation period of 6 months. * Currently, the starting gross salary for a doctoral researcher is around 2700€ per month, and it increases as the doctoral researcher progresses in the research and studies. * Working hours are flexible. On-site work at the Aalto University campus as part of the Remote Sensing Research Team is highly encouraged, but occasional remote work is allowed. Presence in Finland for the duration of the contract is compulsory. * The contract includes Aalto University occupational healthcare. * Helsinki is safe, clean, and close to nature, with a high quality of life. English is spoken everywhere. For more information about living in Finland: [[url=https://www.aalto.fi/en/careers-at-aalto/for-international-staff](https://www.aalto.fi/en/careers-at-aalto/for-international-staff)]<https://www.aalto.fi/en/careers-at-aalto/for-international-staff>.

How to apply?

Please submit your application no later than 30th October 2024 by 23:59 (midnight) EET (UTC+2). The application should be sent through our online recruitment system (link "Apply Now!" below). If you are already working at Aalto University, please apply for this job by using your existing Workday user account (Workday -> Find Jobs). Email applications will not be considered.

Please include the following appendices: * A motivation letter (max. 1 page), in which you describe your motivation and suitability for the position. Please also include your contact information and state your preferred starting date in the motivation letter. * A Curriculum Vitae, including contact details of two referees. * List of publications, including B.Sc. and M.Sc. theses as well as scientific publications if applicable. If the latest thesis has been written in other language than English, please include an English translation of the title and the abstract. The applicants are also encouraged to include links to their M.Sc. and B.Sc. theses if available. * A copy of the M.Sc. degree certificate or equivalent. If the degree is still pending, then a plan for its completion must be provided. * An official study transcript of your Master's degree, listing all courses and grades. * Other documents you wish to include to demonstrate your merits for the position (max. 3 pages).

All material should be in English, preferably submitted as a single pdf file compiled in the order specified above.

The decision will be made after the deadline of the call. We may invite the best applicants to an interview before making the decision. 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.

For more information

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General information about doctoral studies at Aalto University can be found on this webpage: [\[url=https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-engineering\]https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-engineering](https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-engineering). For additional information, please contact staff scientist Arne Hovi (arne.hovi@aalto.fi). For recruitment process-related questions please contact HR Advisor Kirsi Kärkkäinen (kirsi.karkkainen@aalto.fi).

Contact Information

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

Contact

Finland