

PhD and postdoctoral researchers for experiments on the
dynamics of living organisms
Aalto University

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Posted Oct. 3, 2022, set to expire Feb. 2, 2023

Job Title	PhD and postdoctoral researchers for experiments on the dynamics of living organisms
Department	T304 Dept. Applied Physics
Institution	Aalto University , , Finland
Date Posted	Oct. 3, 2022
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Graduate Student
Academic Field(s)	Physics - General Biology - General
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/PhD-and-postdoctoral-researchers-for-experiments-on-the-dynamics-of-living-organisms_R34605-2

Apply By Email

Job Description

Aalto University is a community of bold thinkers where science and art meet technology and business. We are committed to identifying and solving grand societal challenges and building an innovative future. Aalto University has six schools with nearly 11 000 students and 400 professors. Our campus is located in Espoo, Finland. Diversity and inclusiveness are part of who we are, and we warmly encourage qualified candidates from all backgrounds to join our community.

The Department of Applied Physics is now looking for

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Several PhD and/or postdoctoral researcher positions are available in the Living Matter group of Prof. Matilda Backholm at the Department of Applied Physics at Aalto University. Our research focuses on developing new cutting-edge techniques to probe the forces and flow in living systems, such as microscopic swimming organisms and actively growing plant roots. Our research is interdisciplinary and curiosity-driven, and we work in an inclusive and collaborative manner.

Your role and goals

You will perform curiosity-driven fundamental research in the overarching field of soft matter physics, with a focus on previously inaccessible living systems. You will perform technically challenging and intriguing experiments with tiny living organisms. A common experimental tool in the Living Matter team is the micropipette force sensor (Backholm et al., Nature Protocols (2019):

[url=http://www.backholm.files.wordpress.com/2021/03/bac19.pdf]www.backholm.files.wordpress.com/2021/03/bac19.pdf

In parallel with your experimental work, you might also develop your own theoretical models to describe your experimental findings. You will be expected to take charge of your own research project, conduct your work with high scientific quality, and actively communicate your problems, mistakes, and scientific findings to the rest of the team. We help each other to succeed in making exciting new scientific discoveries.

Your experience and ambitions

The ability to work independently as well as in a team is important. The working language of the group is English, and we expect all our team members to have strong written and oral English skills in order to ensure efficient communication and collaboration.

Requirements for postdoc applicants:

A doctoral degree in relevant fields, such as physics, biology, or materials science.

Experience of (or interest in) experimental work and using, e.g., MATLAB for image analysis.

These backgrounds are considered a plus:

Experience in fluid dynamics, biological physics, or soft matter physics research.

Experience in independently setting up and using fluorescence or confocal microscopy measurements.

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Experience in handling living organisms.

Experience in developing analytical/numerical models in swimming dynamics or biomechanics.

Requirements for PhD researcher applicants:

A MSc degree in physics, applied physics, or biology (with a strong interest in physics).

A keen interest to work in the laboratory, learn how to build your own instruments, perform your own experiments, and analyze your results.

Excellent student track records.

What we offer

We offer an interdisciplinary and dynamic working environment with a strong focus on curiosity-driven research. You will be trained in performing advanced experimental research and developing theoretical models to describe the core physics of the system. You will be encouraged to build your own scientific reputation by networking with our national and international collaborators, and participating in conferences to present your results. This position will also give you more general skill sets, such as critical thinking, problem solving, and communication of complicated topics in a clear and intriguing manner. The core values of the Living Matter group are inclusion, equality, and collaboration. We value work-life balance and the mental wellbeing of all team members. Please see [\[url=http://www.backholm.wordpress.com\]](http://www.backholm.wordpress.com)www.backholm.wordpress.com for more details about Prof. Backholm.

The fixed term contract is initially for 2 years. The PhD researcher will get a 2-year extension of the contract after passing their midterm review. For postdocs, there is a possibility for extending the contract after the first 2 years. All postdocs are also encouraged to apply for their own funding (e.g., Academy of Finland Research Fellowship or Marie Skłodowska-Curie postdoc grant). The annual workload of research and teaching staff at Aalto University is currently 1612 hours. Aalto University follows the salary system of Finnish universities. The salary ranges for a postdoc from 3700€ to 4100€ per month, depending on previous experience. The starting salary for PhD researchers is 2600€ per month. The contract includes Aalto University occupational healthcare. The primary workplace will be the Otaniemi Campus at Aalto University.

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Ready to apply?

To apply for the position, please submit your application including the attachments mentioned below as one single PDF document in English through our online recruitment system by using the link on Aalto University's web page ("Apply Now").

- (1) Letter of motivation (including information on the above listed requirements for the position)
- (2) CV including list of publications
- (3) Degree certificates and academic transcripts
- (4) Contact details of at least two referees (or letters of recommendation, if already available)

The deadline for applications is 31.10.2022. The positions will be filled as soon as suitable candidates are identified. For additional information, kindly contact Prof. Matilda Backholm (matilda.backholm (at) aalto.fi). Aalto University reserves the right for justified reasons to leave the position open, to extend the application period, reopen the application process, and to consider candidates who have not submitted applications during the application period.

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

About Finland

Finland is a great place for living with or without family - it is a safe, politically stable and well-organized Nordic society. Finland is consistently ranked high in quality of life and was just listed again as the happiest country in the world: <https://worldhappiness.report/news/its-a-three-peat-finland-keeps-top-spot-as-happiest-country-in-world/>. For more information about living in Finland: <https://www.aalto.fi/services/about-finland>

More about Aalto University:

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Contact Information

Please reference Academickeys in your cover letter when
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Contact

Finland