

Research Assistant (Master's Thesis Position) in
Triboelectric Charging of Water Drops
Aalto University

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Posted Nov. 7, 2025, set to expire Mar. 9, 2026

Job Title Research Assistant (Master's Thesis Position) in
Triboelectric Charging of Water Drops
Department T304 Dept. Applied Physics
Institution Aalto University
, , Finland

Date Posted Nov. 7, 2025

Application Deadline Open until filled
Position Start Date Available immediately

Job Categories Research Scientist/Associate

Academic Field(s) Physics - General

Job Website https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Research-Assistant--Master-s-Thesis-Position--in-Triboelectric-Charging-of-Water-Drops_R44701-2

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.

At the Department of Applied Physics, our pioneering research in physical sciences creates important

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industrial applications that hold great technological potential. Our research focuses on Materials physics, Quantum technology, Soft & living matter, and Advanced energy solutions. Topics extend from fundamental research to important applications. We educate future generations of research and development professionals, data specialists, technology experts, inventors, and scientists for industry and society.

A Research Assistant (Master's thesis position) in triboelectric charging of water drops through sliding on dielectric surfaces is available at the Soft Matter and Wetting (SMW) group, Department of Applied Physics (School of Science) at Aalto University. This position requires a suitable studies background in physics, electrical engineering, materials science, or a related field, with interest in interfacial and electrostatic phenomena.

Triboelectric charging first observed in ancient Greece more than 2000 years ago, where rubbing materials such as amber was found to attract light objects. However, the mechanisms of tribocharging, especially for water drops sliding on dielectric surfaces, are still far from complete. This project offers a unique opportunity for a talented and dedicated master's student, who is interested in this topic, to study triboelectric charging of water drops on various surfaces, gaining hands-on experience in development of experimental setup, charge measurements, and data analysis under expert guidance. The thesis work will contribute to a better understanding of water-surfaces interactions and its tribocharging.

Your role and goals

The student will develop the experimental setup and the measurement automation program, perform measurements, and analyze the data.

Your network and team

The Research Assistant will be based in Department of Applied Physics, Aalto University at the SMW group. SMW is a multidisciplinary team studying functional soft materials and surface wettability and developing wetting characterization instruments. More information about our group can be found in: (<http://physics.aalto.fi/smw>).

Your experience and ambitions

We offer a hands-on, multidisciplinary research environment, combining experimental work on surface wettability and triboelectric phenomena with data analysis and setup automation programming. In return, we are looking for a master's student who has: * A suitable academic background in physics, electrical engineering, materials science, or a related field * Strong interest and background studies in electrostatics, electric potential, and basic electric circuit principles. * Good programming (MATLAB) and data analysis skills * Excellent study record, motivation, and ability to work both independently and in a team * Proficiency in English (Finnish is not required).

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What we offer

The employment contract will be fixed term and made for 6 months. Aalto University follows the salary system of Finnish universities. The salary for a master's thesis worker is approximately 2460 € per month (gross). The contract includes Aalto University occupational healthcare.

Join us!

If you would like to be considered for the position, please submit your application in English through our recruitment system by clicking the link "Apply now!" on our webpage.

To apply, please share the following application materials with us: * CV * Motivation letter * Study transcripts * Other supporting material * Contact details of referees (up to 3)

Kindly apply before the deadline - 30.11.2025. We encourage you to apply as soon as possible since we aim to fill this position as soon as a suitable candidate is found. Aalto University reserves the right for justified reasons to leave the position open, extend the application period, reopen the application process, and consider candidates who have not submitted applications during the application period.

Please note: Aalto University's employees should apply for the position via our internal HR system Workday (Internal Jobs) by using their existing Workday user account (not via the external webpage for open positions). Aalto University's students and visitors should apply as external candidates with personal (not Aalto) email.

More information

If you wish to hear more about the position, you can reach out to Dr. Ali Afzalifar (ali.afzalifar@aalto.fi) or Prof. Robin Ras (robin.ras@aalto.fi).

Want to know more about us and your future colleagues? You can watch these videos:

[url=https://www.youtube.com/watch?v=5k_og_6zUJQ]Aalto University - Towards a better world,
[url=https://www.youtube.com/watch?v=dUfEGVM-ZP8&feature=youtu.be]Aalto People , and
[url=https://www.youtube.com/watch?v=ZK6pDWm1_CE]Shaping a Sustainable Future. Read
more about working at Aalto: [url=https://www.aalto.fi/en/careers-at-aalto]Careers at Aalto | Aalto
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Contact Information

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Contact

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