

Research Assistant / Master's thesis worker on compound
semiconductor device design & fabrication within a
research project targeting cryogenic optoelectronics for
quantum data-links
Aalto University

Direct Link: <https://www.AcademicKeys.com/r?job=244156>

Job Title Research Assistant / Master's thesis worker on
compound semiconductor device design & fabrication
within a research project targeting cryogenic
optoelectronics for quantum data-links

Department T314 Dept. Neuroscience and Biomedical Engineering

Institution Aalto University
, , Finland

Date Posted Sep. 3, 2024

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Professional Staff

Academic Field(s) Bioengineering (all Bio-related fields)

Job Website https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Research-Assistant--Master-s-thesis-worker-on-compound-semiconductor-device-design---fabrication-within-a-research-project-targeting-cryogenic-optoelectronics-for-quantum-data-links_R40

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.

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Engineered Nanosystems group at <https://www.aalto.fi/en/node/5311> Department of Neuroscience and Biomedical Engineering at <https://www.aalto.fi/en/node/5311> Aalto University School of Science is looking for

Master's Thesis worker / Research Assistant on compound semiconductor device design & fabrication within a research project targeting cryogenic optoelectronics for quantum data-links

We are looking for a highly motivated master student with an interest to continue with doctoral studies after graduation. Our research is focused on energy transfer in III-V compound semiconductors and is funded by the European commission within Horizon 2020 research and innovation programme and the Academy of Finland.

The master thesis project will be aimed at studying the properties of LED's components below room temperature and down to cryogenic temperatures. The work will be done in a close collaboration with a team of experimentalists and theoreticians from both Aalto University and VTT. A successful candidate will have an important role in co-designing the experimental work of our research team aiming to demonstrate the next break-throughs in energy conversion between light, heat and electricity.

Selected publications of our team related to the topic of master's thesis * Sadi, T., Radevici, I. & Oksanen, J. Thermophotonic cooling with light-emitting diodes. Nat. Photonics 14, 205-214 (2020). [[url=https://doi.org/10.1038/s41566-020-0600-6](https://doi.org/10.1038/s41566-020-0600-6)] <https://doi.org/10.1038/s41566-020-0600-6> * A. Casado, et al. On the temperature dependence of the efficiency of electroluminescence J. Appl. Phys. 126, 173102 (2019). [[url=https://doi.org/10.1063/1.5124566](https://doi.org/10.1063/1.5124566)] <https://doi.org/10.1063/1.5124566>

Our wish list for the selected candidate includes: * interest/experience on experimental data acquisition and manipulation; * knowledge of semiconductor physics and/or related materials; * team working skills and sociable character; * aptitude for creative, open minded and independent thinking.

We'll consider as a strong benefit: * experience on fabricating and processing compound semiconductor light emitting/solar cell devices (emphasis on GaAs); * previous experience in scripting (python, MATLAB, etc.) and electronics (Arduino, ESP32, etc.)

What we offer

The research takes place at [[url=http://www.aalto.fi/](http://www.aalto.fi/)]Aalto University, School of Science, and [[url=http://www.micronova.fi/](http://www.micronova.fi/)]Micronova, located at Otaniemi, Espoo, Finland, offering a great environment both for research and recreation. Micronova is the largest clean room facility in the Nordic countries and offers a state-of-the-art ecosystem for micro- and nanoelectronics research and small-scale manufacturing. We also have a vivid national and international collaboration with research

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groups from Finland and EU.

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Posted Sep. 3, 2024, set to expire Dec. 31, 2024

The salary is determined according to the salary system of Finnish universities. At the Department of Neuroscience and Biomedical Engineering, setting the salary of a master's thesis worker to 2378,62 €/month. The duration of master thesis worker contract is 6 months.

As an employer, Aalto University provides excellent learning and development opportunities as well as occupational health care services, commuter ticket benefit and sport activities offered by Unisport. The contract includes occupational health benefits and Finland has a comprehensive social security system.

Ready to apply?

The deadline for applications is September 22, 2024. Note, however, that the position may be filled as soon as a suitable candidate is identified. We will go through applications, and we may invite suitable candidates to interview already during the application period.

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.

To apply, please share the following application materials with us through our recruitment site ("Apply now!").

Please submit the following application material in pdf-form:

- CV
- Motivation letter (including names, position and contact information of possible referees)
- Resumé of your studies/experience

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.

If you want more information about the open position, please contact Ivan Radevici or Jani Oksanen (emails of the form firstname.surname(at)aalto.fi).

Questions related to the recruitment process can be sent to HR services at hr-nbe(at)aalto.fi.

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

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[url=https://www.youtube.com/watch?v=#61;dUfEGVM-ZP8&feature=#61;youtu.be]Aalto People , and
[url=https://www.youtube.com/watch?v=#61;ZK6pDWm1_CE]Shaping a Sustainable Future.

Read more about working at Aalto: [url=https://www.aalto.fi/en/careers-at-aalto]https://www.aalto.fi/en/careers-at-aalto

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Contact Information

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

Contact

Finland