Postdoctoral Researcher in Optics and Photonics
Aalto University

Job Title	Postdoctoral Researcher in Optics and Photonics
Department	T304 Dept. Applied Physics
Institution	Aalto University , , Finland
Date Posted	Sep. 16, 2024
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Post-Doc
Academic Field(s)	Physics - General
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher-in-Optics-and-Photonics_R40852
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 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

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development professionals, data specialists, technology experts, inventors, and scientists for industry and society.

The Department of Applied Physics is now looking for a

Postdoctoral Researcher in Optics and Photonics

We are looking for an outstanding postdoc to join the Optics and Photonics group for theoretical and experimental research on nanophotonics. The research will be focused on the development of novel approaches to design, create, and investigate photonic metasurfaces that efficiently trap light and enhance nonlinear optical phenomena. The position is fully funded by the Research Council of Finland and involves collaboration with researchers from the Department of Electronics and Nanoengineering at Aalto University, as well as international collaboration with a research team from the Netherlands.

This is an anonymous recruitment. We want to increase our diversity at Aalto University, learn to understand unconscious biases, and make objective hiring decisions. Please read more about the recruitment process in the end of this ad.

Your role and goals

In this position, you will act as a researcher working on design and characterization of nonlinear metasurfaces supporting resonant optical modes known as photonic bound states in the continuum. The design will be based on numerical modelling methods. The samples will be fabricated using the cleanroom facilities of Aalto University and investigated by nonlinear optical methods using the equipment of the Optics and Photonics group.

As a member of the group, you will: * use your knowledge and experience to achieve scientific breakthroughs in research on nonlinear metasurfaces and bound states in the continuum, * advance the field by overcoming existing challenges and developing new scientific ideas, * support research activities of other group members, * write and publish high-impact articles, * collaborate with other research groups, including participation in international research visits.
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Your experience and ambitions

Minimal requirements for the candidate are: * doctoral degree in physics, photonics, materials science, or another relevant field, * excellent scientific writing skills evidenced by publications in peer-reviewed journals, * high level of understanding of principles of optics and photonics, especially related to nonlinear optics at the nanoscale and optical properties of periodic structures, * familiarity with the

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relevant theoretical and experimental methods, such as numerical simulations and optical microscopy.
* excellent command of English; Finnish language is not required.
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Preference will be given to candidates with hands-on experience in conducting nonlinear optical experiments using ultrashort laser pulses and previous contributions to research on nonlinear metasurfaces and photonic bound states in the continuum.

What we offer

Aalto University follows the salary system of Finnish universities. The salary of a postdoc is in the range 4020 € - 4420 €/month (gross), depending on experience. The contract will be made initially for one year, with a possibility of extension. We expect the selected candidate to start the work in January 2025 or soon after. The annual workload of research and teaching staff at Aalto University is currently 1612 hours. The contract includes Aalto University occupational healthcare.

Our vast array of professional development opportunities means you will grow and learn, having the chance to participate actively in staff trainings and development projects based on your interests and needs. There is great freedom in your role, and we have a flexible modern working culture. We value work-life balance and well-being in all aspects of life.

We work in a hybrid way, and the primary workplace is Otaniemi, Espoo. The Otaniemi campus is a thriving and connected community of 100 nationalities, 13,000 students and 4,500 employees. Life at the campus is vibrant and filled with amazing architecture, calming nature, and a variety of cafes, restaurants, services, and good connections.

Join us!

To apply for the position, please submit your application through our online recruitment system by using the link on Aalto University’s web page ("Apply Now”). The deadline for applications is October 30, 2024. Please submit your application including the attachments mentioned below as a single PDF document in English: * CV, * PhD diploma, * list of publications, * contact details of at least three referees.
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In this anonymous recruitment, we make the first evaluation of the candidates anonymously; we are only interested to know your merits that make you a great fit for this role. This means, we will not see your personal details (such as name, gender, nationality, and age in the attachments) and we invite candidates for the interviews only based on their background, competences, and motivation seen in the answers to the online questionnaire.

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Please fill out the application form with your full work experience and education background. In the open questions, focus on your skills, competences, and motivation towards the position at Aalto. In the application form, we ask personal details, such as name, age, nationality and gender and we also ask you to upload the following documents as a single PDF file: CV, PhD diploma, list of publications, and contact details of at least three referees. This personal information and documents are not visible for the recruiters in the first screening and will not be used for evaluation. The identity will be revealed when we invite the candidates to the interviews. When the identity is revealed, the attachments become visible for the recruiters.

If you are already an Aalto employee, please apply via internal Workday system (Internal Jobs) by using your existing Workday user account. Please make sure you include your work history and education, since internal candidates are also under anonymous screening to ensure equal treatment. Aalto University's students and visitors should apply as external candidates with personal (not Aalto) email.

For additional information, kindly contact the HR Advisor Hanna Multisilta (hanna.multisilta@aalto.fi), who will forward your questions to the Principal Investigator. 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.

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 University

Check out our new virtual campus experience: [url=https://virtualtour.aalto.fi/]Aalto University - virtual campus tour

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: [url=https://worldhappiness.report/news/its-a-three-peat-finland-keeps-top-spot-as-happiest-country-in-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:

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[url=https://www.aalto.fi/en/careers-at-aalto/living-in-finland]Living in Finland | Aalto University and [url=https://www.aalto.fi/en/careers-at-aalto/for-international-staff]For international staff | Aalto University

Contact Information

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

Contact

Finland