

Doctoral Candidate in Laser Physics  
Aalto University School of Electrical Engineering

Direct Link: <https://www.AcademicKeys.com/r?job=124373>

Downloaded On: Oct. 21, 2019 8:30am

Posted Jun. 12, 2019, expired Oct. 12, 2019

<b>Job Title</b>	Doctoral Candidate in Laser Physics
<b>Department</b>	Department of Electronics and Nanoengineering <a href="http://ele.aalto.fi/en/">http://ele.aalto.fi/en/</a>
<b>Institution</b>	Aalto University School of Electrical Engineering Helsinki, , Finland
<b>Date Posted</b>	Jun. 12, 2019
<b>Application Deadline</b>	Open until filled
<b>Position Start Date</b>	Available immediately, preferred fall 2019 the latest
<b>Job Categories</b>	Graduate Student
<b>Academic Field(s)</b>	Physics - Elementary Particles/Nuclear Physics - Condensed Matter/Low Temperature Physics - Atomic/Molecular/Optical/Plasma Physics - General Nanotechnology
<b>Job Website</b>	<a href="https://www.aalto.fi/en/open-positions/doctoral-candidate-in-laser-physics">https://www.aalto.fi/en/open-positions/doctoral-candidate-in-laser-physics</a>
<b>Apply Online Here</b>	<a href="https://www.aalto.fi/en/open-positions/doctoral-candidate-in-laser-physics">https://www.aalto.fi/en/open-positions/doctoral-candidate-in-laser-physics</a>
<b>Apply By Email</b>	
<b>Job Description</b>	

We are now looking for a talented and highly motivated

DOCTORAL CANDIDATE IN LASER PHYSICS

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Your goal will be to carry out research in quantum optics. The aim is to experimentally realize a theoretically proposed quantum illumination experiment. This research would make up a new very interesting realizable application field in quantum communications. Knowhow in experimental work in optics is required but also a deep understanding of quantum optics theory is necessary. The chosen student can also participate in the research of optical properties of various nanomaterials, such as two-dimensional layered materials (e.g. transition metal dichalcogenides), and their heterostructures for various photonic and optoelectronic applications. You'll get to conduct high quality research independently, and to work as an active member of the Micro and Quantum Systems research group by taking part in guiding M.Sc. students. Our target is that you will acquire the doctoral degree in four years.

### Research group

This research position will be supported by the Micro and Quantum Systems group (<https://www.aalto.fi/en/department-of-electronics-and-nanoengineering/micro-and-quantum-systems>), which is led by Professor Ilkka Tittonen. The group focuses mainly on the study of various nanofabrication methods, energy harvesting, thermoelectrics, quantum optics theory and experiments. The group belongs to the Department of Electronics and Nanoengineering at the School of Electrical Engineering, and is located in the Micronova Nanofabrication Center, the largest academic clean room facility in the Northern Europe.

### Your experience and skills

- Master degree in physics, nanotechnology, or related topics is favorable for the position
- Good command of English
- In this position you will apply for the study right for doctoral studies at Aalto University, please check the student information and application criteria (<https://into.aalto.fi/display/endoctorelec/How+to+apply>).

### Salary and contract terms

The Doctoral Candidate position will be filled for 1-4 years. The expected starting salary is approximately 2500 €/month, and will increase according to performance over time. The contract includes occupational health benefits, holiday bonus, and Finland has a comprehensive social security system. Preferable starting time is before summer 2019, but can be also negotiable.

### More information

If you wish to hear more about the position, please contact Professor Ilkka Tittonen, [ilkka.tittonen@aalto.fi](mailto:ilkka.tittonen@aalto.fi).

Ready to apply?

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Please submit your application through our recruiting system and include the following documents in English 1) Application letter, 2) CV (with the list of publications if you have), 3) Course transcripts of Bachelor and Master degree with grades, 4) English language test (if you have), 5) References. Application period closes on July 31, 2019 but we will start reviewing candidates immediately. Applications will be considered until the position is filled.

### About Aalto University, Campus and Finland

The School of Electrical Engineering is located at the Aalto University Otaniemi campus in the Helsinki metropolitan area, Finland. As a living and work environment, Finland consistently ranks high in quality-of-life. For more information about living in Finland please visit our "International staff - Information package" pages (<https://www.aalto.fi/en/careers-at-aalto/for-international-staff>).

### Contact Information

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

**Contact** Professor Ilkka Tittonen  
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