The Nanomagnetism and Spintronics (NanoSpin) group at the Department of Applied Physics is looking for a highly motivated PhD student to work on **active control of spin waves in YIG-based magnonic nanostructures**. The project aims at the realization of reprogrammable spin-wave band structures in magnetic metamaterials by means of external magnetic fields, thermo-plasmonic heating and voltage-driven magneto-ionicics, which is relevant for the development of energy-efficient analog computing devices. The project offers an interesting combination of experiments (high-quality thin-film growth, lithography, high-frequency electronic and magneto-optical characterization) and modeling (micromagnetic simulations, plane-wave method calculations, electromagnetic simulations of high-frequency electronic components). Any previous background and experience in some of these topics is considered as an advantage, but strong candidates from other fields of physics are encouraged to apply as well.

**REQUIREMENTS**
We are looking for a bright and motivated PhD student with an excellent study record in physics or a related discipline up to the level of MSc (awarded or expected soon). Good command of English (both verbal and written) and demonstrated ability to disseminate scientific results are mandatory requirements for the position. Applicants must be motivated to conduct research at the highest international level with the aim at completing the PhD degree within 4 years.

**SALARY AND WORKING TIME**
The salary is based on the salary system of Finnish universities. The starting salary is around 2500 €/month and it increases as you progress in your research and studies. Following the standard practice in the Department of Applied Physics, the contract will initially be made for 2 years and it will be extended by another two years after an approved mid-term review. The total duration of PhD studies is 4 years.

**PLACE AND INFRASTRUCTURE**
As a PhD student, you will join the NanoSpin research group at Aalto University (http://physics.aalto.fi/en/groups/nanospin/). The group focuses on cutting-edge research on electric-field controlled magnetism, magnonics and magneto-plasmonics in hybrid nanoscale structures. The NanoSpin laboratory is equipped with instrumentation for nanomaterial fabrication and advanced electronic, magnetic and magneto-optical characterization. Besides, you will have full access to the OtaNano research infrastructure for nano- and microtechnologies, comprising state-of-the-art equipment for nanofabrication and microscopy (http://otanano.aalto.fi/en/). As a PhD student in the NanoSpin group, you will be part of a vibrant and multidisciplinary
research community. The project is funded by the Academy of Finland and involves national and international collaborations.

Aalto University has six schools with nearly 11 000 students and 400 professors. It is the largest university in Finland focusing on education and research and technology, science, business, and arts. The NanoSpin group is located on the Otaniemi campus in Espoo (10 km from the city center of Helsinki), which is one of the largest hubs of high-tech in Northern Europe.

**HOW TO APPLY**

To apply, please send the following documents as a single PDF file to Prof. Sebastiaan van Dijken (sebastiaan.van.dijken@aalto.fi) or Academy Research Fellow Dr. Huajun Qin (huajun.qin@aalto.fi):

1. Letter of motivation (1-2 pages)
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)

Applications are invited immediately and the position will be filled as soon as a suitable candidate is identified.