

## Open PhD position (f/m)

University of Duisburg-Essen (Germany)  
Faculty of Physics

In the framework of DFG-funded project “**Spin dynamics in laterally patterned magnetic landscapes**” we are looking for PhD candidate for investigation of magnetization dynamics in nanostructures with ferromagnetic/paramagnetic (FM/PM) interfaces.

The tasks of PhD student will include:

- Thin film fabrication using magnetron sputtering, nanostructuring with electron beam lithography and ion irradiation;
- Magnetic characterization using magnetometry, magnetic microscopy imaging, micromagnetic simulations;
- Ferromagnetic resonance study of thin film bilayers and laterally patterned magnetic landscapes.

The three-year research program is to be realized in collaboration with the Helmholtz-Zentrum Dresden-Rossendorf, Institute of Ion Beam Physics and Materials Research (Germany), University of Augsburg (Germany) and the Technical Federal University Santa Maria (Chile). We aim to understand the complex effect of structural disorder-induced magnetization patterns on the dynamic magnetic properties of embedded nanostructures with periodical FM/PM interfaces, addressing multi-magnon scattering, spin pumping at magnetic interfaces as well as various magnonic effects.

### Your profile:

Master or equivalent degree in Physics with magnetism background is required. Experience in thin film deposition, fabrication of nanostructures as well as knowledge about ferromagnetic resonance technique and magnetization dynamics in nanostructures are advantageous (but not obligatory).

Duration of contract: 3 years

Salary: equivalent to TVöD E13

Start of position: as soon as candidate is found

Applications and questions should be sent to:

Dr. Anna Semisalova (project leader) [anna.semisalova@uni-due.de](mailto:anna.semisalova@uni-due.de)  
or Prof. Michael Farle (group leader) [michael.farle@uni-due.de](mailto:michael.farle@uni-due.de)

University of Duisburg-Essen, Faculty of Physics,  
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Further information about the group

- <https://www.uni-due.de/>
- <https://www.uni-due.de/agfarle/>