The “Superconductivity and Spintronics Laboratory” led by Priv.-Doz. Dr. Oleksandr Dobrovolskiy, which is part of the “Nanomagnetism and Magnonics” Research Group under the direction of Prof. Dr. Andrii Chumak at the Faculty of Physics, University of Vienna, is a young research team that conducts internationally leading research in the fields of superconductivity, spintronics and magnonics. The research scope of the group encompasses magnonics, magnon spintronics, quantum magnonics at low temperatures, superconducting spintronics, and nonlinear spin-wave phenomena in nanoscale hybrid systems. We are looking for a motivated prae-doc assistant (PhD student) to extend our team. The overall aim of the position is to perform cut-edge experimental studies of complex magnetic states and their dynamics in curvilinear magnetic micro- and nanoarchitectures by magnetometry, magneto-transport measurements as well as advanced microwave and optical spectroscopy methods. The 3D nano-architectures will be fabricated by strain-engineering-based self-assembly as well as direct-write techniques of focused electron and ion beam induced deposition [Microelectron. Engin. 185-186, 9 (2018), ACS Appl. Mater. Interf. 11, 17654 (2019)]. The position is funded by the FWF via the German-Austrian project “Curvature-Induced Effects in Magnetic Nanostructures”.

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**Job Description:**
- Characterization of static magnetic properties of curved and complex-shaped 3D nanostructures by state-of-the art methods of micro-Hall, vibrating sample and SQUID magnetometry
- Investigations of dynamic magnetic properties of curved and complex-shaped 3D nanostructures by custom-designed microresonator-based and broadband FMR, and propagating spin-wave spectroscopy
- Investigations of linear and nonlinear spin-wave physics in curved magnetic microstructures by magneto-optical Kerr effect and Brillouin light spectroscopy
- Optional participation in experiments on the visualization of static and dynamic magnetization patterns in 3D curved nano-architectures by advanced synchrotron methods
- Close collaboration with the partner institutions – Goethe University Frankfurt am Main and Helmholtz-Zentrum Dresden-Rossendorf
- Acquisition, processing and analysis of new data
- Publication and presentation of scientific results in peer-reviewed journals and at international conferences and workshops

**Profile:**
- Master or Diploma in Physics. Listened lecture courses on solid-state physics and magnetism, spintronics is desirable.
- Experience in nanofabrication, microwave and magneto-optical methods is desired
- Experience in micromagnetic simulations of static and dynamic magnetic properties of nanostructures is of advantage
- Affinity for practical work and cooperation in a multidisciplinary team.
- Experience and strong interest in programming and automating data acquisition/analysis of results is of advantage (e.g. C++, Python, LabView, MatLab, Mathematica)
- Initiative in finding solutions to scientific problems
- Knowledge of principles of teaching
- Excellent command of written and spoken English.

Applications including a letter of motivation, academic curriculum vitae, list of publications, evidence of teaching experience (if available), short doctoral project proposal, degree certificates (German or English) should be submitted via the Job Center to the University of Vienna (http://jobcenter.univie.ac.at) mentioning the reference number 11233.