


University for Continuing Education Krems

The University for Continuing Education Krems specializes in part-time academic continuing education. As a public university for continuing education, it works with its expertise in teaching and research to overcome societal challenges and tailors its study programs to address them. With 8,000 students coming from 85 countries, the University for Continuing Education Krems combines its many years of experience in university-based continuing education with innovation to provide outstanding quality in research and teaching at an international level. Situated 60 km from Vienna in the alluring world heritage region Wachau, Campus Krems is a highly attractive location.

The advertised position (MSCA Doctoral Candidate) is part of the 4-years EU-Horizon Europe Marie Skłodowska-Curie Doctoral Network project "HEAT4ENERGY". The main goal of HEAT4ENERGY is to train a new generation of enablers for the European Energy Transition with the skills needed to assess the potential of new energy technologies. They will acquire these in practice by addressing the challenge of making the first realistic and energy efficient thermomagnetic energy converters for low grade waste heat (<100°C) to electricity and they will learn how to upscale these and bring them to a viable market level. The project offers training in science and technology for energy transition and climate action, as well as transferable and complementary skills and Open Science related training. Through secondments the HEAT4ENERGY PhD students will engage in all fields of materials development for energy, ranging from physics to industrial practice.

This position is excellently appropriate for candidates who possess a detailed knowledge of magnetic materials and micromagnetic simulations. You will have ample space to develop your skills and conduct ground-breaking research.

Early Stage Researcher – PhD Student (m/f/d)

40 hrs./week Advertisement No. SB23-0283

Your tasks

- Collaboration on the development of high energy efficiency thermomagnetic (TM) devices
- Simulation of novel TM materials
- Data analysis using machine learning
- Optimization of novel TM materials
- Development of a mesoscopic model for thermal hysteresis
- Working on guidelines for TM materials development and fabrication
- Attending three secondments to acquire additional skills and experiences in materials simulation and optimization in a commercial setting
- Pursue a PhD at the Technical University of Vienna
- Publish research results in scientific journals

Your profile

We require evidence of the following qualifications for the application:

- Master's degree in physics, materials science, or a related field
- Fundamental knowledge in the field of solid-state physics and magnetism
- Excellent skills in computer simulations and/or machine learning
- A research-oriented attitude and the ability to transfer knowledge

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- Good communication skills and the ability to write reports/articles
- Good knowledge of English (min. B2)
- Willingness to work in a team

In addition, the following criteria are desirable:

- Previous work experience in academic research
- Experience with coding (python) for data analysis

Your perspective

- Full-time (40 hours/week), in a project funded by third parties, initially limited until 31 December 2027, with a minimum salary of EUR 3,277.30 gross per month on a full-time basis (classification as scientific project staff according to collective agreement of universities §49 VwGr. B1), willingness to overpay with corresponding qualifications and professional experience
- Innovative and modern working environment at the TFZ in Wiener Neustadt
- Possibility of homeoffice and mobile working (max. 42% of working hours)

Additional information

- MSCA requires candidates have not spent more than 12 months working or studying in Austria within the last 36 months prior to the job appointment
- Candidates must not have a doctoral degree at the date of their recruitment
- **Three secondments are an integral part of the project:**
  1) Radboud University Nijmegen, Netherlands, 2 months (Physics of thermomagnetic materials)
  2) Institut NEEL, Grenoble, France, 2 months (Analyzing high-throughput experiments)
  3) Magneto BV, Delft, The Netherlands, 2 months (Materials design)
- **Start Date:** June 1st, 2024

Your application should include:

- Curriculum Vitae
- Motivation letter
- Degrees and transcripts
- Two writing samples, ideally showing evidence of the required qualifications (e.g., scientific articles, seminar papers, Master thesis, etc.)

Persons with disabilities who meet the required profile criteria are expressly invited to apply for this position.
The University of Continuing Education Krems sees high innovation potential in the diversity of its employees and is committed to diversity as a guiding principle.
At the same time, it aims to increase the proportion of women and expressly invites certified women to apply. Women are given priority in the case of equal qualifications.

We look forward to receiving your online application by **18 February 2024 via our online tool:** https://www.donau-uni.ac.at/vacancies

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