

Postdoctoral researcher

Magnetic metamaterials

Postdoctoral positions available

The Faculty of Physical Sciences seeks applicants for two postdoctoral research positions within the field of magnetic metamaterials. The positions are funded for up to two years by the Icelandic Research Fund. Magnetic metamaterials feature in various emerging technologies including artificial spin ice and brain-inspired computing, where coupled magnetic nano-oscillators are used to mimic the neurons in our brains. Such neural networks are highly efficient at recognition, classification and prediction tasks and could consume less energy in performing these tasks than current computing schemes. Within this project the postdoctoral researchers will work on the development of an experimental framework for the control of magnetic ordering and dynamics in magnetic metamaterials. The researchers will explore ways to utilize collective phenomena in systems composed of magnetic islands arranged in specific patterns, which exhibit magnetic properties beyond those of their individual constituents. The work will involve thin film deposition and patterning, as well as structural and magnetic characterization of magnetic films and nanostructures at local and international facilities.

The research group

The supervisors will be Dr Unnar Arnalds and Dr Snorri Þorgeir Ingvarsson, Professors of Physics at the Faculty of Physical Sciences, and Dr Fridrik Magnus, Research Professor at the Science Institute. The PhD work is part of a larger grant of excellence project which employs 3-4 other PhD students and postdocs working on related subjects.

Qualification requirements

- PhD degree in physics, applied physics, materials science, or related fields.
- Experience of one or more of the following: thin film growth by PVD, patterning and/or magnetic characterization.
- The applicant must be able to participate in training PhD students.
- Proficiency in written and spoken English.

How to apply

Applications should be submitted through the University's online application system accessible via the link <https://euraxess.ec.europa.eu/jobs/210225>. Applications shall include:

- A cover letter describing the applicant's research interests and reasons for applying (1 page maximum).
- Curriculum vitae (3 page maximum).
- Copies of university diplomas and a link to the PhD thesis (in English).

Application deadline — April 22nd 2024

For more information contact Fridrik Magnus (fridrikm@hi.is), Unnar Arnalds (uarnalds@hi.is) or Snorri Ingvarsson (sthi@hi.is).