



**H.F.R.I.**  
Hellenic Foundation for  
Research & Innovation

**GSRT**  
GENERAL SECRETARIAT FOR  
RESEARCH AND TECHNOLOGY



## POST-DOC POSITION

### Modeling magnetic skyrmion dynamics in ferromagnets and antiferromagnets

**Host:** Foundation of Research and Technology-Hellas (FORTH), Heraklion, Crete, Greece

**Start date:** January-March 2020

**Duration of the contract:** 18 Months

**Gross salary:** approximately 24 k€/year

**Supervisors:** Riccardo Tomasello and Stavros Komineas

**Contacts:** [rtomasello@iacm.forth.gr](mailto:rtomasello@iacm.forth.gr), [komineas@uoc.gr](mailto:komineas@uoc.gr) by November 30<sup>th</sup>, 2019.

The post-doc will take part to the activities of the project “ThunderSKY” (*Theoretical Understanding of static and dynamic properties of Skyrmions: towards a skyrmion based technology*). ThunderSKY's goal is the establishment of a theoretical framework for the description of the statics and dynamics of skyrmions and, in general, of magnetic solitons, and it aims to understand the open questions which arise from the recent experimental measurements.

The research team of ThunderSKY is composed of the Scientific Coordinator Riccardo Tomasello, and the members Stavros Komineas, Giovanni Finocchio and Pedram Khalili- Amiri.

ThunderSKY has received funding from the Hellenic Foundation for Research and Innovation (HFRI) and the General Secretariat for Research and Technology (GSRT), under the HFRI's 1st Call in order to support the Postdoctoral Researchers with grant agreement No 871.

#### Requirements:

- PhD's degree in Physics, Mathematics, Engineering, or Computer Science.
- Experience in numerical methods, preferably in micromagnetic simulations.
- Good experience in programming (e.g. Fortran, CUDA, Python, creating Graphical User Interfaces, etc.).
- Experience in theoretical methods (PDEs, non-linear dynamics, mathematical models, etc.).
- Degrees obtained abroad need to be recognized by the Greek Authority (DOATAP).

The Post-doctoral researcher will have the chance to take part in all the activities of the group. He/she will perform micromagnetic simulations, develop post-processing tools (Python) for the static and dynamical micromagnetic properties, take part in the development of the theoretical framework for skyrmion statics and dynamics (develop theoretical tools and methods), develop an open-access software that will implement the analytical theory, participate in national and international conferences, visit the other members of the team abroad.

For more information on the project, please visit <http://thundersky.iacm.forth.gr/>