MASTER'S STUDENT POSITION

Modeling magnetic skyrmion dynamics in ferromagnets and antiferromagents

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

Start date: January-September, 2020

Duration of the contract: 6 Months

Gross salary: approximately €500,00/month

Supervisors: Riccardo Tomasello and Stavros Komineas

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The student will take part in 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.

Requirement:

- Bachelor's degree in Physics, Mathematics, Engineering, or Computer Science.

Basic knowledge of programming (e.g. Python) and theoretical methods (PDEs, non-linear dynamics, etc.) is an advantage.

The master's student 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), participate in national conferences. The activities in this project can be part of a master's thesis.

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