

There is the possibility to open full-time postdoc positions and PhD student positions at the **International Centre for Interfacing Magnetism and Superconductivity with Topological Matter – MagTop**. The research activity of MagTop is described in its agenda: <http://www.magtop.ifpan.edu.pl/>.

The place of work will be Warsaw (Poland).

The PhD students should start in October 2024, the postdoc can start anytime in the second part of 2024.

To manifest your interest in one of these two positions, please send a mail to magtopparticipants@gmail.com

Candidate selected for next stages will be contacted in the first 2 weeks of April.

Please mention in your email or in your first page of the CV:

- 1) Position in which you are interested
- 2) Year of birth
- 3) The date of the Master degree and eventually the date of the Ph.D. degree
- 4) Possible starting date of the new position
- 5) Research Topic in which you are interested

Job Description: The postdoc and/or the PhD student will work under the supervision of Prof. (Associate) Carmine Autieri

The selected candidate will perform relativistic ab-initio calculations. Possible Research Topics within the density functional theory field could be:

- 1) **k**-space topology
- 2) topology in 2D materials
- 3) Anomalous Hall Effect and spin-Hall effect in thin films.
- 4) Interplay between **k**-space topology and magnetism.
- 5) Altermagnetism

Furthermore, there will be a strong connection with experimental teams and other theory groups.

Key responsibilities:

- 1) Performing research on topological and 2D systems using high-performance computing.
- 2) Disseminate results to the scientific community and to the public.
- 3) Teaching is optional but not required.

Career Stage for the Postdoc: We require a Ph.D. in condensed matter physics or close discipline completed less than 5 years ago. We require a strong record of publications compared with the age of the candidate. Candidates with experience in the usage of plane-wave DFT codes are highly preferred. Knowledge of wannier90

and wanniertools is highly appreciated. Very good knowledge of written and spoken English is required.

Salary of the postdoc: 12 000 PLN per month gross salary (2 600 € per month), health insurance covered; less than 24% in employee taxes and social security contributions. The postdoc will receive additional bonuses based on the number of medium-high rank publications.

Salary of the PhD student: 5 000 PLN per month gross salary, health insurance covered and social security contributions.

Type of Contract for the postdoc: The first contract will be 2 years with possibility of prolongation until December 31st 2028.

Type of Contract for the PhD student: The contract will be for 4 years before which the student is supposed to defend the Ph.D. thesis. In extraordinary cases, it will be possible to extend the contract beyond the fourth year to allow the student to defend the thesis.

Other info: Postdoc applications from people with Russia or Belarus affiliation in 2023 and 2024 will not be considered. Phd applications may be considered.

Info on group research activity:

<https://www.magtop.ifpan.edu.pl/accomplishments/publications-2-2-2-2/>

<https://scholar.google.it/citations?user=83pF0ywAAAAJ&hl=it>