



Skyrmionics - Low power neuromorphic computing & sensing (f/m/div)

“TOPOCOM” is hiring 11 Doctorate Candidates (DCs) to be funded by the Marie Skłodowska-Curie Actions (MSCA) Doctoral Networks-Industrial Doctorates (DN-ID), 2023, within the European Union's EU Framework Programme for Research and Innovation Europe Horizon. The TOPOCOM consortium contains six leading European Universities and two major Industrial Partners working in the field of topological spin structures for unconventional computing and sensing. In particular, we are studying the use of skyrmions, magnetic whirls with enhanced stability and dynamics for novel unconventional logic and computing and integrated sensor- logic applications.

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Location: Villach

Job ID: tbd

Start date: As soon as possible

Type of employment: Full time

Length of contract: Temporary

Workplace type: Hybrid

Job description

- **Research field:** Creation, manipulation and control of magnetic skyrmions in thin film multilayers
- **Research Objectives:** Perform experiments to understand the fundamental static and dynamic properties of magnetic spin structures with a particular topologies.
- **Research Activities:** Explore the magnetic device design to match industry requirements for the use case of a power free magnetic revolution counter. Verify different magnetic designs under real application conditions.
- **Employment and Secondment:** The selected DC will be enrolled as Ph.D. student at Physics Department of Johannes Gutenberg University Mainz and will be employed for 24 months by Infineon Technologies Austria AG (IFAT) within the project period. Furthermore, the TOPOCOM network offers ideal possibilities for scientific exchange with leading groups in the field and secondments are planned at selected partners.

Your profile

to be defined

For your application please consider the following:

Eligibility and mobility criteria (mandatory requirements EU rules)

- Supported researchers must be doctoral candidates, i.e. not already in possession of a doctoral degree at the date of the recruitment.
- Recruited researchers can be of any nationality and must comply with the following mobility rule: they must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 36 months immediately before their recruitment date. For 'International European Research Organisations' (IERO), 'international organisations', or entities created under Union law, the researchers must not have spent more than 12 months in the 36 months immediately before their recruitment in the same appointing organisation. Compulsory national service, short stays such as holidays and time spent by the researcher as part of a procedure for obtaining refugee status under the Geneva Convention (1) are not considered. (1) 1951 Refugee Convention and the 1967 Protocol.

Conditions of employment

- The successful candidates will receive from the respective employer an attractive salary in accordance with the MSCA regulations for Doctoral Candidate researchers and will include a mobility allowance.
- The guaranteed PhD funding is for 36 months. In addition to their individual scientific projects, all fellows will benefit from further continuing education, which includes internships and secondments, a variety of training modules as well as transferable skills courses and

attractive participation in conferences.

Application Procedure

- Applications must be submitted to both Infineon Technologies (AT) and Aalborg University (DK). The application for Aalborg University (DK) can be submitted at their website: <https://www.stilling.aau.dk/vis-stilling/?vacancy=1201327>

Documents requested:

- Eligibility Statement: for verifying MSCA requirements, the candidates clearly indicate exact dates of (1) degree entitling to pursue a PhD (typically a Master of Science degree or Engineering degree), (2) positions and country of residence in the last 5 years.
- Complete CV (Europass format obligatory): The candidates are allowed to pursue a maximum of three positions in the E2GO programme. If more than one position is pursued, please clearly indicate all the positions that applied with priorities on the first page of the CV.
- Motivation letter (maximum 1 page per position applied) should state why the applicant wishes to pursue the specific research and why she thinks s/he is an ideal candidate for the position.
- Scan of certificates showing BSc, MSc and other courses followed, with grades and if it is possible a ranking.
- Up to 3 recommendation letters and/or contact e-mail addresses with a brief professional description (title, position, relationship with applicant) of the referring person.
- If possible, up to two selected publications (e.g. MSc thesis, conference paper) in English.
- The applicant must provide and upload a proper project description, which describes the applicant's initial thoughts and ideas related to the specific project applied for. This includes a brief state-of-the-art (including short list of references), a time schedule and how the applicant intends to shed light on the project objectives. The project description should have a length of 4-5 pages.

Selection Process

The selection process contains two phases:

- In the first phase, a pre-selection of possible candidates will be performed by Recruitment Committee. Based on CV, experience, skills, and motivation letter and a few round interviews, the Recruitment Committee will reduce the candidate list to a max of three candidates for each position.
- In the second phase, the selected candidates will be invited to an official recruitment event in TU/e campus (NL) for the final interview. In the recruitment event all the selected candidates for the 9 positions will meet each other with the supervisors.

E2GO deals with a recruitment process based on the European principles of openness, fairness and transparency that guarantee a selection of candidates in respect of merit and gender balance.

Please, note that applications that do not follow the announcement's guidelines will not be considered.

- **Deadline for online application: 30 April 2023**
- **Targeted starting date: As soon as possible**
- **Full-time employment: 38.5 hrs/week**

This position is subject to the collective agreement for workers and employees in the electrical and electronics industry. The salary for this position is EUR 3.000,00 gross p.m. (full-time basis).

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Infineon is a world leader in semiconductor solutions that make life easier, safer, and greener. Our solutions for efficient energy management, smart mobility, and secure, seamless communications link the real and the digital world.

– **Automotive (ATV) shapes the future of mobility with micro-electronics enabling clean, safe and smart cars** –

Our semiconductors are essential for supporting the automotive megatrends: electromobility, automated driving, connectivity, and advanced security. They link the real and the digital world, driving the ever-advancing pace of automotive digitalization. **Infineon ATV** is the number one semiconductor partner in the fast-changing automotive world, based on our system knowledge and our passion for innovation and quality.

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At **Infineon in Villach** you shape the technologies of tomorrow and work in an international environment with more than 4700 colleagues from over 70 nations. Your personal contribution will be valued and appreciated as the cornerstones of our success. And all that in beautiful surroundings which guarantee a high quality of life.

The **City of Villach** is located in the center of Carinthia, Austria's southernmost province, in close proximity to the Italian and Slovenian border. Living in Austria has many social, health-care-related and economic perks. The country's social and health care system is among the best in the world and for decades numerous international surveys have singled out Austria as a particularly safe and wealthy country with a high quality of life. Villach itself benefits from its status as a "small town", offering everyday living at affordable prices in an outstanding setting.

Find out what you like most about Villach and join us:

<https://www.welcome2villach.at/>

* *The term gender in the sense of the General Equal Treatment Act (GETA) or other national legislation refers to the biological assignment to a gender group. At Infineon we are proud to embrace (gender) diversity, including female, male and diverse.*

Does this sound like just the right challenge for you? If so, we look forward to getting to know you!

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Contact

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[LinkedIn Recruiter Profile](#)