

Launching the QuSpin Mobility Grant

Encouraging our PhD students to seek international research experience, broaden their cultural outlook and extend their network.

This article is based on interviews with PhD students Lina Johnsen Kamra and Bjørnulf Brekke, facilitated by Karen-Elisabeth Sødahl.

The QuSpin Mobility Grant

In 2022 we established the QuSpin Mobility Grant which our PhD students can apply for in connection with research stays abroad if their application provides a clear explanation on how the research stay will benefit their current project and QuSpin.

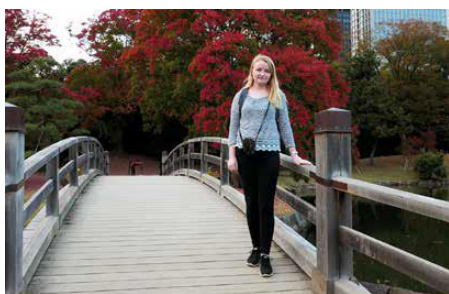
The purpose of this grant is to learn and transfer research methods or techniques relevant to the project and QuSpin as a whole. We emphasize that these research stays should create stronger professional relationships between the host, the PhD student and QuSpin, and that it should result in a joint publication.

The grant will typically cover travel and accommodation costs. Candidates can apply for financial support for up to three months for a research stay. After the completion of the research term the applicant is required to present findings and experiences during the annual research conference. In addition, a presentation will be required at the Center and on our webpage.

Our first two PhD students to receive this grant

The first two students to receive this grant were Lina Johnsen Kamra, who spent four months at RIKEN research institute in Tokyo, Japan during the autumn of 2022, and Bjørnulf Brekke, who is having a six month stay 2022-2023 at UCLA in Los Angeles, USA. They told Karen-Elisabeth about their experiences.

Lina's Journey to RIKEN, Tokyo



My motivation

The possibility for a research stay abroad was an important factor in my decision to do a PhD at QuSpin. It is a unique possibility to join a research group that would have been “out of my league” if I had been applying for PhD positions directly after my Master’s.

The process from idea to action

I started planning to go for exchange already in my first PhD year and had valuable help from my supervisor at QuSpin, Professor Jacob Linder, in finding a host. But because of the pandemic I had to

wait until my last year since Japan and RIKEN did not open up for foreigners until the summer of 2022. Getting a visa and a place to stay went very smoothly because of the very helpful and competent secretary Tokuyoshi-san who took care of everything for me. I was staying with Prof. Naoto Nagaosa at RIKEN in Saitama, close to Tokyo. I also got close supervision by our collaborator Prof. Yukio Tanaka at Nagoya University. I was working on local and optical responses of the Majorana edge mode in a ferromagnetic insulator/unconventional superconductor hybrid on top of a topological insulator.

Experiencing a new research culture, collaboration, and supervision

The professors I was working with were amazing for their passion for physics. We often had discussions late in the evening, even lasting until after midnight. I enjoyed escaping the culture of going home at four that is so common in Norway, and really being able to focus on my research without people reminding me to take breaks. I shared an office with colleagues from the Nagaosa and Arita groups and enjoyed having lunch and coffee breaks with my office mates. Although I also got to know some of the experimentalists in the Tokura group, meeting new people and staying connected with the different groups at campus was a bit tough due to the Covid restrictions and many meetings still being online.

Experiences from a different country, society and social life

My friends in the office originated from China, Taiwan, South Korea, and a few from Japan, and some of the people had lived in the US before coming to RIKEN. It was therefore a quite multicultural environment, and everyone was fluent in English. I was surprised how similar the Japanese culture and way of behaving is to Norwegian culture, and I felt quite at home in Tokyo. The language was however a challenge outside Campus, so I had to learn how to read some Japanese to manage to read train stops, and shop in grocery stores.

Challenges and joys

The biggest challenge was the eight-hour time difference compared to Europe. This was a lot more challenging than I expected, because I would often go to bed before my husband living in Europe came home from work, so at times we would miss out on our daily chat. However, I really enjoyed working at RIKEN around so many motivated and excellent people, and to explore the city with its shrines and temples, towers, parks, interesting food, and hiking opportunities.

My advice to other PhD students

If you want to pursue a career in academia, a research stay abroad helps you develop in a way you can only do if you visit new places and talk to different people. You build a network that can help you get interesting opportunities in the future.

I would highly recommend taking the initiative early in your PhD. You will make up for the work it takes to plan and prepare by the opportunities that open up by going abroad!



My motivation

Towards the end of my Master's degree, I had to decide if I wanted to pursue a PhD abroad or stay at QuSpin in Trondheim. The possibility for a research stay abroad was an important factor in making my decision. For me, international experience is important from a scientific point of view as well as for maturity and life experience in general.

The process from idea to action

The pandemic prevented travelling during the first two years of my PhD. When society opened up, I discussed my wishes with my supervisor Professor Arne Brataas. His large international network provided several opportunities. After conferring with two of his former students, Sverre Gulbrandsen and Erlend Grytli Tveten, I decided to visit Professor Yaroslav Tserkovnyak at UCLA to study the topological properties of supercurrents. The visa application process was cumbersome, but good help from our center coordinator Karen-Elisabeth Sødahl just across the hallway and the opportunity to ventilate any frustrations in the lunchroom to other voluntary or involuntary QuSpinners eased the process.

Experiencing a new research culture, collaboration, and supervision

The UCLA campus has a very active feel to it. There are great facilities for sports and an evident pride of being a part of UCLA or being a so-called «bruin» flows through campus. Yaroslav's research group provides a different collaboration dynamic from QuSpin. There are two main reasons for that. Firstly, Yaroslav is very hands-on on each of his students' research projects. Also, sharing an office with graduate students within the group facilitated a lot of discussions both related and unrelated to our research. However, although the research group feels very close, the condensed matter section as a whole does not feel as connected as QuSpin.

Experiences from a different country, society and social life

Los Angeles feels very different from Trondheim. It is extremely diverse in terms of culture, background and wealth. The diversity gives LA a unique character yet serves as a peeking hole to cultures all over the world.

Challenges and joys

I would argue that a stay abroad at the PhD level is more challenging than an Erasmus exchange year. However, being more personally and academically mature has helped a lot towards making the stay enjoyable and successful. Doing a research project abroad has required academic independence beyond my experience at QuSpin so far.

Advice to other PhD students

If you are going for a research stay abroad, be proactive! Nothing will come for free, but there will be plenty of help and opportunities for anyone who reaches out. I have been lucky to be part of a great beach volleyball community in Santa Monica. And I look forward to seeing them again the next time I am in Los Angeles.

Finally, where does your journey take you next?

“Thanks to the great support and encouragement from Prof. Nagaosa, this stay at RIKEN has opened new doors for pursuing an academic career,” says Lina. “My plan is to apply for a grant that can finance a Postdoc position from 2024. Maybe a university on the East Coast of the United States will be my next address?”

“The vibrant physics community and the extraordinary people at UCLA have opened my eyes to the many career opportunities both within and outside of academia,” says Bjørnulf. And he continues: “I have yet to decide for myself which direction to pursue. The many discussions with my friends and co-workers at UCLA and QuSpin will surely help me make the right choice.”