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TNNNewsletter


Photo Credit: Leonie Richarz

this issue

PhD Council

We hope to involve Ph.D. candidates from all Norwegian universities in the running of TNNN - Research School for Training the Next Generation of Micro- and Nanotechnology Researchers in Norway. We, therefore, plan to establish a Ph.D. Council, that will include one member from each institution and will help with the organization of career development and social activities, advise on the scientific program for the TNNN conference, and more.

We are looking for candidates to join this Council. The workload will typically be 5 hours or less each month. Participation will give you an excellent opportunity to work with other Ph.D. candidates and contribute to the success of TNNN. If you are interested, please send your CV and a short email application that describes why you are a good candidate for this role to Dionna Ghalambor dionna.ghalambor@ntnu.no before the 8th of February.

The 1st TNNN Conference is in the books!

First of all, we would like to thank all participants who attended the TNNN conference – the kick off meeting of the Research School for Training the Next Generation of Micro- and Nanotechnology Researchers in Norway (TNNN). Thank you for excellent oral and poster presentations, intriguing questions and engaging discussions. Thank you for taking a very active part in the poster sessions. Your attendance and active participation helped to make this a great event. If each of us made one new scientific friend, learned one new thing or had one new idea, the conference was a success.

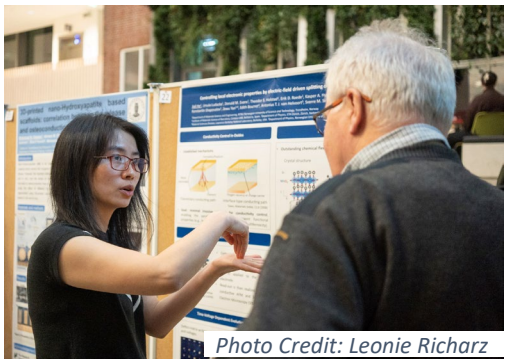


Photo Credit: Leonie Richarz

We would also like to thank **Kongsberg Defence & Aerospace AS** for participating in the conference, presenting a stand with some interesting equipment and organizing a very interesting workshop.

We are also grateful to **Magnus Nord** for running the data processing workshop and **Katharina Vestre** for running the science communication workshop.

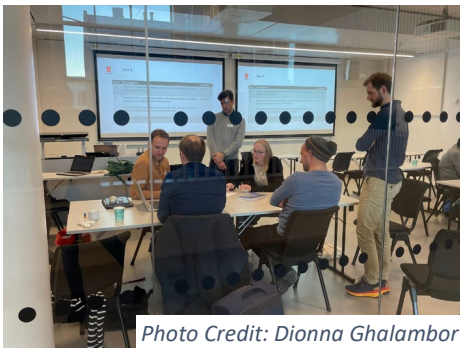


Photo Credit: Dionna Ghalambor

We hope that you found that the conference has contributed to the Ph.D. education within micro- and nanotechnology in Norway. We hope that you will continue to participate and engage in the TNNN network, irrespective of whether you are a Ph.D. candidate, postdoctoral researcher or a supervisor. We look forward to seeing you at our **next TNNN conference which will take place soon in June 2023**. The conference will start around lunchtime on 21.06 and will end in the afternoon on Friday 23.06.2023. More information is provided on the last page of this newsletter. The conference program, information about abstract submission, workshops, registration and travel support will be announced in future TNNN newsletters.

Meet the TNNN Logo Prize winner, Simon Cooil

Simon's design was chosen from 15 logo submissions.

How did you come up with the design?
I wanted something that was simple and memorable, whilst also being versatile enough to adapt to different situations. I included several variations on the design with the submission including black & white and line-art versions. I sought advice from my peers about how to project the logo and colour it, in the end we settled on gold as it was the most contrasting choice. I'd like to thank my officemates Erlend Lemva Ousdal and Ingvild Bergsbak for their input during the design phase.

What aspect of nanotechnology do you study and what does the future hold?
My work has spanned several aspects of nanotechnology over the years, however the one thing that remains constant throughout all my investigations, is the application of photoelectron spectroscopy and microscopy techniques. Using these techniques, I have investigated materials that could be useful for quantum computing, the growth and characterisation of two-dimensional materials like graphene and various dichalcogenides. I like to study how electrons behave in materials (quasiparticle interactions) including their interaction with phonons and other bosons. Most recently I have been awarded a FRIPRO project from the Norwegian research council for looking into the properties of ultra-wide bandgap semiconductor interfaces (diamond and gallium oxide) towards more sustainable energy distribution. I'm looking forward to starting my own research group in the semiconductor physics group (LENS) at UiO over the next few years.

The prize for winning the logo competition is 10000 NOK towards attending a cocnference of your choice. Which conference will you attend?
I plan to attend the 48th conference on the physics and chemistry of surfaces and interfaces (PCSI48) held in California USA in January 2023.

Photo Credit: Oliver Vanderpoorten

And the winners are…

Ambra Celotto and **Håkon Røst**

L-R: Pawel Sikorski, Ambra Celotto, Håkon Røst and Knut Aasmundtveit

This year's conference hosted 76 posters from researchers across Norway ranging in topics from nanomedicine to microscale aluminum welding techniques. Choosing just two poster prize winners was quite a daunting task for the judges. In the end, Ambra Celotto's and Håkon Røst's entries rose to the top. They will each receive 10000 NOK to attend an international conference of their choosing.

We asked them to tell us a little bit about themselves, how they came to work in their chosen field, what their plans are for the future and how they will use the award.

Ambra Celotto:
My background is in mechanical engineering where people do not commonly deal with such small scales. I graduated from the University of Padova, Italy, in Product Innovation Engineering and I decided to apply for a PhD at the Department of Mechanical and Industrial Engineering at NTNU after my exchange here in 2019. The way I ended up being a "microscale" person is still quite unclear to me, but for sure I've always been passionate about innovation of both product and process which is maybe what brought me to start a PhD on novel welding techniques performed inside a FIB microscope. However, what I prefer to science is well-presented science. Indeed, I strongly believe that clear and effective communication is the key feature that distinguishes a well-made work from a popular, well-made work, and I'm extremely fascinated by people succeeding in this. That's also the reason why I spent a lot of time in the preparation of my poster: my intention was to make the most out of the poster session, which in my opinion is the best opportunity to deeply discuss my research in public, by getting people engaged in my topic and building constructive discussions out of mine and their field of expertise.

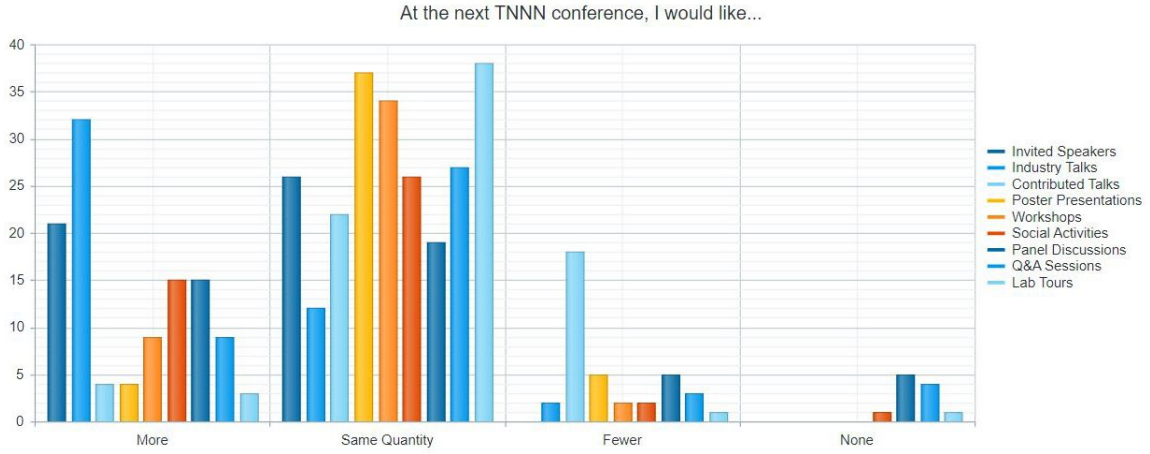
I plan to use the award to attend a conference that hosts an international summer school, which I have found to be the best experience you can have during your PhD, both for the networking and the exciting scientific opportunities that follow. Next year I see myself still in the research field, but I'm unsure whether this will be in academia or industry. My dream job is to run my own lab and let people have fun (scientifically speaking) inside it!

Håkon Røst:
I am a recent PhD graduate from QuSpin, Dept. of Physics at NTNU (defended in late September). I did my MSc in Nanotechnology at the same university and spent a year abroad at UC Berkeley studying Solid state physics and electronics. I am born and raised Norwegian from Oslo but have lived in Trondheim for about 8-9 years. I am currently in a shared postdoc position between the University of Oslo and the University of Bergen, supervised by Professors Justin Wells and Bodil Holst.

I started studying Nanotechnology because I was fascinated by the concept of manipulating materials on the atomic scale to alter their existing properties or induce completely new ones. This is also exactly what we did in the work that I presented a poster on during TNNN, so I guess my aspirations and achievements have been somewhat in line at least!

Currently I am focusing mostly on the study of electron-phonon interactions in 2D materials using photoemission and incident atom scattering techniques.

I plan to use the travel grant to attend the 35th European Conference on Surface Science in Lodz, Poland, potentially presenting an extension of the delta layer work I showed at TNNN.



Survey results are in

Thank you to those who participated in our survey. Your feedback will be used to make our future conferences better.

Forty-nine people responded. Overall, the feedback was quite positive. You can view the results at https://www.ntnu.no/machform/report.php?key=1300505xe2350e6675

Contributions Welcome

Do you have something you'd like to share with the TNNN community? We accept job announcements, publication announcements, grant/funding calls or kudos, as well as assorted good news of interest to the micro- and nanotechnology community. Send contributions to dionna.ghalambor@ntnu.no.

Q: Why should I become a member of TNNN?

A: By becoming a member of TNNN, you gain access to a growing network of researchers in micro- and nanotechnology across Norway. You are invited to the annual conference, workshops and courses developed to help you connect with others and grow your career. Cross-listed courses between the five partner Universities, coupled with travel grants to attend, will greatly expand your educational options.

If you have not done so already, please sign up for TNNN Research School. This allows us to stay in touch with you and inform you of upcoming events and offerings.

Use the QR code to access the registration form

TNNN Steering Committee

The TNNN Steering Committee members represent the different university partners and are involved in the planning and implementation of Research School activities.

TNNN Leader:
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Stay for the Celebration !

Midsummer's Eve is Friday, June 23rd. Add an extra night to your stay and celebrate with fireworks and a concert.

Save the date!

TNNN Conference 2023
June 21-23rd, 2023 (beginning around lunchtime and ending early-mid afternoon)
Hosted by University of Southeastern Norway
Main conference organizer: Prof. Knut Aasmundtveit
Horten, Norway
More information to come!

Photo Credit: Nils Kalve

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RESEARCH SCHOOL FOR TRAINING THE NEXT GENERATION OF MICRO- AND NANO-TECHNOLOGY RESEARCHERS IN NORWAY

UNIVERSITETET I BERGEN

NTNU
Kunnskap for en bedre verden

UNIVERSITETET I OSLO

Universitetet i Sørøst-Norge

NORGES ARKTISKE UNIVERSITET
UIT

KONGSBERG

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