



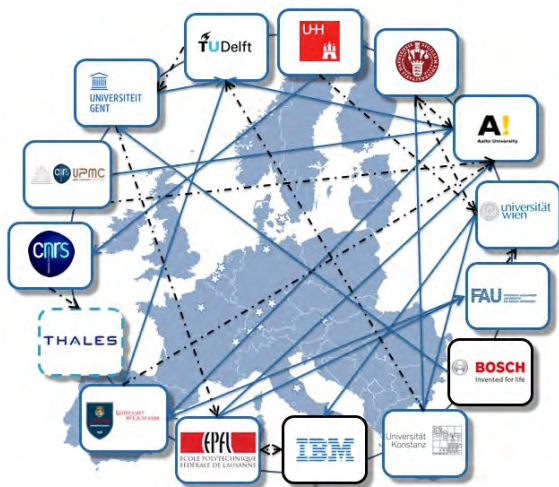
# Optomechanical technologies newsletter

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## Highlights

Our incredible OMT journey is finally nearing the end. A few of the fellows are already close to completing their PhDs, while the rest still have quite a bit of time left. We believe that the end of the ETN will impact each of us regardless of what is the situation in our home institution. In this last newsletter we will describe the last 'official' meetings of the OMT project, which is the annual Conference in Saanen and the career coaching organized by the OMT partners UKON and UCPH. We will also describe how the COVID pandemic and the subsequent confinement period affected our daily lives as scientists, and how our PhD projects have been affected by this. We will conclude with a general overview of what OMT meant for us as fellows, and with a photo gallery of some moments that have marked these 3 three years together!

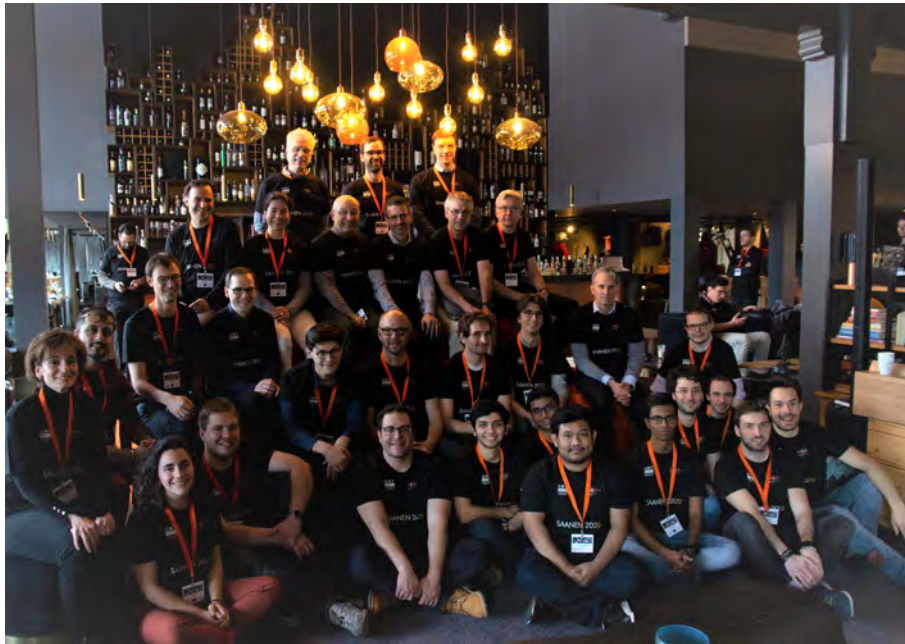
*(Image representing all partners involved in OMT)*

## Saanen meeting 2020

Back in January, when the coronavirus was merely a blip on the radar, the OMT fellows and PIs along with HOT partners (and naturally a plethora of other PhD students and postdocs associated with the labs) once more travelled to Saanen for the annual OMT-HOT conference.

The arrangements this year were hardly a surprise at this point with mornings and evenings filled with exciting presentations and the afternoon free for winter sports or perhaps spirited scientific debate. Thankfully, the evening after the final conference dinner was devoid of talks - A very very welcome change for both the attendees and the speakers.

However, this was also the final year of the OMT and HOT programs, and hence also the final year of the conference. Even if three years is in many respects a short period of time, the regular OMT conferences have taken their place along other milestones of the year. The final conference also marks the start of the final stretch of my - and quite a few other OMT fellows' - PhD. The year following the conference will undoubtedly be filled with near desperate experiments scrambling towards worthy results, but it also means that the time to take the next steps after OMT are near. And I'm more excited than sad to discover what is ahead of me and all of the other wonderful people I have come to know. Perhaps some OMT PIs should expect mail soon!



The OMT participants in Saanen.



The weather cooperated to really make the last OMT-HOT conference a memorable one.



This year, the conference photo featured matching t-shirts. And Pertti Hakonen knows what's going on.



The atmosphere of the poster session was dense from all the brilliance forced into such a small space.



One of the HOT partners is presenting to a keen audience.

–Sampo Saarinen

## Career coaching

The final workshop on careers and entrepreneurship was planned to take place in Munich in March, but was cancelled due to COVID-19. However, to salvage what was salvageable, the career coaches gave a presentation online and the individual coaching sessions via Skype.

It was helpful to hear a more industry oriented perspective on how to think about writing job applications. Besides more technical advice - especially during the one-on-one coachings - on structuring CV or writing a cover letter, I also appreciated the more general advice on the approach to take of communicating with prospective employers.

One final topic, that is especially relevant for many of the fellows, was how academic experience is viewed in the industry. I believe many of us are thinking about whether to pursue a postdoc or not. The discussion clarified the issue and put the potential costs and benefits of the options in more concrete terms. Overall, the career coaching was definitely useful and gave me more tools to plan my next steps.

–Sampo Saarinen



## #stayathomeOMT

The COVID-19 crisis has changed our daily life. The OMT fellows are not an exception, and, as all scientists and researchers, have become accustomed to online meetings and presentations, ensuring social distancing, and to the proliferation of tools for hosting online conferences. Teaching has also been revolutionized almost everywhere, with in-person classes being suppressed in favour of streaming from the classroom, and campuses emptying suddenly of students.

As the first wave slowed down in Europe, restrictions were eased and companies and universities started to allow more of their personnel on the premises, with new rules and regulations. Many OMT fellows could then avidly resume their experimental work, being close to the end of the project and starving for good results!

As an OMT fellow at TU Delft, our experience began with the lockdown on March 13th. TU Delft also decided to close the buildings for students and only allow employees. They encouraged researchers to work from home with decreased presence in the lab. Approximately 30% of researchers in our department (Quantum-Nanoscience) showed up in the office and lab, suggesting many of them were also concerned about the virus.

One of the most important laboratories for researchers working in optomechanics is the cleanroom, where we fabricate our devices. The Kavli Nanolab facility at TU Delft decided to limit the number of the people working in the cleanroom through social distancing. They also implemented several new restrictions, such as the temporary barriers depicted in the picture below.



Example of cleanroom security during the COVID-19 outbreak at TU Delft.

Education is also one of the main duties of a PhD student. Most of the fellows are involved in some form of teaching activity. Even under COVID-19, our university kept the didactic activities running, with a shift to online courses. I was a teaching assistant when the lockdown started. Fortunately, tutorial sessions were almost done at the time but arranging the final exam and grading still remained challenging under the confinement. Luckily, in our department, a grading system called 'Zesje' allowed remote grading and correcting student reports and exams.

–Byoung-Moo Ann, Alberto Beccari

## Overall impressions of OMT program

The OMT program was a great journey. Bringing together people from across the world for a unique, huge European project with science as its core is not an easy task to organize. When we were accepted to be part of the program, none of us were actually aware how different being part of the ETN would be compared to a standard PhD.

For us, the OMT fellows, the network was a way to drastically improve our skills. Scientific skills, of course, but not only. The wide range of workshops offered by the program provided much variety. Optomechanics was certainly the main course, provided in several different ways, from theory to experiments. But what made the OMT 'menu' excellent was the quality of amazingly different side features. Writing a patent for a paper clip at IBM's headquarters in Zurich while it was snowing outside or pretending to be a real actor to improve our oral skills during a week in unusually sunny Delft are just a couple of examples of how the success of the OMT program was in the attention to details, covering all the aspects to shape modern scientists. I believe that this was a crucial point in our European Training experience and the success of OMT.



Workshop participants on the IBM campus.



Brainstorming session in Delft.

Furthermore, training and research secondments are evidence of how networking and collaborations can be essential in science nowadays. The various partners involved in the consortium and their expertise played also a big role in this context, allowing the fellows to pursue secondments matching the actual scientific needs of their related PhD topics. Last but not least, I strongly think that the positive atmosphere brought by each individual fellow was the real reason why we enjoyed this program very much, allowing to build in the end a small OMT family.

–Giuseppe Modica

# OMT Jump Collection



Figure 1: Jumps collection

# OMT Photo Gallery



Figure 2: OMT moments 1

# OMT Photo Gallery



Figure 3: OMT moments 2

# OMT Photo Gallery



Figure 4: OMT moments 3