

COINS Ph.D. Student Seminar 2018 Report

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On the day of 17th of Sep., me and my colleagues at University of Stavanger, Cristina, Aida, Nikita and Dhanya converged together at 04:30 and started our journey to COINS seminar and Norwegian Information Security Conference (NISK) excitedly. We knew that it is the 30th anniversary of Norwegian Informatics Conference (NIK), and it should be a huge celebration of Norwegian informatics research community. However, we were still shocked by the scale and the impact of this conference.

When we transferred flight through Oslo towards Longyearbyen, at the boarding gate, we felt that almost all passages waiting there were from Norwegian informatic community. One can easily find his/her academia friends around there. For us, we firstly met our COINS friends from Bergen and Oslo, as well as two speakers of COINS seminar, Bikash and Bo. We hadn't met for a long while, so we were pretty glad to have this reunion, thanks COINS gave us this opportunity, and couldn't wait to update our recent developments and exchange our new research experience. At the same time, we got to know the newcomers at Bergen and Oslo team. New COINS members in our team also began to build their connections with other COINS members.

Even though Longyearbyen is not a tiny town as I imagined, the entire town is still filled up by the participants of the conferences. Rooms in Radisson Blu Polar Hotel were totally sold out. My colleagues and I with many other participants had to choose other hotels to stay, which gave us more opportunities to walk through this largest northernmost settlement to experience the confrontation between nature and human civilisation.

COINS Seminar was held on the afternoon of 18th. It began with an opening talk given by Hanno, who mentioned that this year we have the highest number of participants for COINS seminar and we got some experience, for the first time ever, reject persons to give their presentation. The reasons of overcrowding presentations this time could be the graceful place, the time of the seminar, holding together with NISK this year, etc. However, there is an indubitable factor we cannot dodge is that COINS research school is growing larger and larger along with these years. Hence the experience of this seminar I believe is also a trace to let us think about the expansion of COINS and our events.

Back to the seminar, the topics of this time corresponded with my worries or questions that I had for quite a while. Since I am at my third year of Ph.D., and I plan to graduate within 6 months. I have two common worries as a student at his/her a final year. One is "Does my ways of handling my Ph.D. correct or not?" and the other worry is "What will be going on after my graduation". From the speakers of the seminar, I got some input that makes me think clearer on my worries.

The seminar began with three speeches given by graduated COINS Ph.Ds. talked about their experience on what and how we should treat our Ph.D. lives. In the middle, several current Ph.D. candidates talk about their research topics and what they have researched recently. At last, two COINS Ph.D. graduates shared their experience on their lives after Ph.D. The seminar links with the entire process of a Ph.D., from the beginning till the end and also the next step. All current candidates are able to get information and experience fitting their current stage.

Firstly, Dr. Chris Carr shared his idea about what should do and what should not do as a Ph.D. candidate. Based on personal experience, I totally agree his idea on do not always be a "nice man" (I forget his original word which begins with 'm'). Our time is limited. Three/four year is not as ample as it seems. We should mainly focus on our research topic. If we have time, we can provide our experience and time to help each other. But we should always remember that the journey of Ph.D. is basically on our

own. Supervisors and friends are on our side. They are our solid backing. Guide us the direction of shore and give us encourage and help. But it is ourselves boating the canoe. Others cannot do it for us.

Also, Chris talked about the workload a Ph.D. should achieve. Similar content was also mentioned by the following speakers Dr. Andrii Shalaginov and Dr. Bo Sun. Besides, they all provided their attitudes about using extra time on Ph.D. work. The interesting thing was that their opinions on how to handle the extra time are significantly different. All speakers above accept that Ph.D. workload is more than its statutory working hours. However, Chris and Andrii both focused on the point of keeping the balance of life is more important. However, Bo paid more attention on how she went through the tough period.

Moreover, Dr. Bikash Smaradottir as the last speaker of the seminar, who shared his opinion on how to work as a co-founder of a start-up, also gave his thinking about how to handling when expected workload is much higher than work time, that is to put all of your energy into it, do as much as you can. It is not the same as the opinion given by Chris in his speech that one should keep balance between life and Ph.D.

I concur with the idea that we should keep our lives in balance. However, it should not be a balance between Ph.D. (work) and life. In my point of view, self-realization is an essential portion of the construction of happiness. We can hardly separate the influence of “work” from one’s self-realization of his/her “live”. In fact, work is an indispensable portion of one’s live. What we should keep balance is the proportion of work within our lives. The proportion of work is also depending on the stage of one’s life as well. Someone like Bikash at his stage of life can sustain almost hundred percent of work to realize his self-worth. Someone else with family and children could be more difficult to put even ninety percent of energy into his/her work. *There is light at the end of tunnel* (from Bo’s speech), and there are also *lights outside the tunnel* (of Ph.D., from Andrii’s speech). How to decide which light(s) to follow and how to follow, is an obligatory assignment for each Ph.D. candidate. There is no uniform answer. Just be sure do not lose in the dark.

In the following days, we joined NISK conference together with other interesting presentations given in other conferences. I would like to note some interesting presentations I participated here to share with others who may be interested in as well.

Prof. Barbara Wasson introduced their research centre for the science of learning & technology (SLATE) and several projects the centre works on. (e.g. Aktivitetsdata fo Vurdering og Tilpassning project). It is impressive that Norway is such advance in education digitalization in order that we already have huge amount of data can be used on education big data analysis.

Martha Norberg Hovd shared her research on utilizing subfield lattice attack on a fully homomorphic encryption scheme based on NTRU. She based on the existing lower bound derives another lower bound for the attack. The derived lower bound makes the scheme vulnerable to the subfield lattice attack.

Anusha Hossain illustrated their investigation on the utilization of HTTPS certificates by countries. They went through 500 most visited websites of 9 countries and check if their algorithm is secure. Generally, US, Norway and Canada have the best security situation on HTTPS certificates. China and Iran have the worst.

Roman Vitenberg gave his presentation on debunking blockchain myths, which is good for beginners to distinguish and clarify the concept and idea between blockchain, bitcoins, distributed database and other inner technologies.

The CTO of Qt, Lars Knoll led us go through their 20 years of history and shared their experience and lessons on making product, building development community, their expectation on good coding and their attitude on their programmers.

Tommy Thorsen demonstrated their work of introducing Long short-term Memory (LSTM) structure into their neural network, the model achieves better performance on assessing face image quality than pure CNN architecture.