

Travel Report COINS seminar + NISK 2018

Manish Shrestha

COINS seminar at Svalbard was one of the shortest seminars from COINS that I ever attended. Being a PhD student, there is always a curiosity on how other people manage their time to be able to complete their degree. So, the most interesting session for me was “Lessons Learnt from doing PhD”. During this session, recent PhD graduates presented the journey of completing their PhD including their struggles and advices. There was also an election session for the two COINS student representatives where Sergii Banin was reappointed for the second time and Shukun Tokas was appointed as another student representative. Congratulations to both.

The conference started with the Keynote from Professor Barbara Wason on Learning Analytics and its role in education. She is the director of Center for the Science of Learning and Technology (SLATE). She provided an insight on what learning analytics is and what they were doing in this domain. It was interesting to know about the research they do on the data produced from learners. It was quite interesting to know that the data being collected were used to predict the successful and unsuccessful students which enable them to focus on valuable students and help the students that where predicted to be performing not according to expectations.

I attended the NIK session instead in NISK session before lunch, as the presentations in NIK looked more interesting to me. I then skipped the second key note, because it was in Norwegian and I do not have good background in Norwegian. I decided to use this time for my own research work. After that, I attended the session of Security Analysis. The first session was about web security. During the talk, the speaker talked about the security of the certificates and how they can be faked. He also mentioned that the duration of validity of certificates are decreasing. Before it was valid for several years. However, now we can find the certificates having lifespan of as short as six months. He also presented with the comparison of number of websites using vulnerable certificates in different countries.

The next session was about detecting fake profiles in social media. He gave several examples of pedophiles chatting with young people and later ending up with tragic incidents. If we were able to detect the fake profiles in the social media who participate in criminal activities, such incidents could be controlled. He proposed the idea of tracking the user activity and use such data and map it with the user details that is provided in the account information. Then user behavior data would be used to validate against the profile information provided against the user to identify whether the user is genuines or not. Currently, they have used the rhythm of typing in chat messages and identify whether the user is a male or female. However, in my opinion though it is necessary to stop such crimes, collecting many information about the person in the chat room may violate the privacy of the person and this is not ethical. So, more study should be conducted in order to reduce such crimes which may not violate privacy of people in the chat rooms.

Per Håkon Meland presented on "Combining threat models with security economics", where he presented about quantifying risk in terms of economy so that non-technical people in the management position could understand cyber risk and make decision on whether it is important to invest in reducing a given risk or not. It was quite interesting because, they collected the data from insurance companies as they were the major players in the risk business. They also found that, internal threats should also be the major concern during risk analysis that they found that there have been many incidents where the employees are involved in helping for cyberattacks and later claim their cut after the attacks. Since, these days, one can buy sophisticated tools and services to launch cyberattacks, they also keep updated with the latest attack tools that are active in the black market. They performed the assessment using bow-tie diagrams which are widely used to represent risk assessments.

The last session of the day was on myths of blockchains, where the speaker discussed about several myths of blockchains. His talks showed that, there is a wide variety of understanding about block chains and several misconceptions about it as well.

The next day, there was an interesting keynote presented by Lars Knoll, who was the CTO of The Qt Company. During his talk, he walked us through the history of Qt since its establishment of the company. He also talked about the development process in the company and how they keep up with new tools and technologies in the market. During malware session of NISK, the first talk was about ransoms. Majority of ransomware victims having critical data agrees to pay the ransom. However, there is no guarantee that their data will be decrypted after the ransom is being paid. Also, the ransom collected are typically invested in other cybercrimes. In this talk, the author encourage individuals to not to pay the ransom, and suggests to use best practices and how to recover from the systems infected with ransomware.

Another interesting talk was on secure coding entitled "Source Code Patterns of Cross Site Scripting in PHP Open Source Projects". They programmatically parsed php codes to detect XSS vulnerabilities in the code and correct them to make it safe from XSS attacks. Since all the developers may not have security backgrounds and they are humans which tend them to write insecure codes. Such code correction approaches can reduce vulnerabilities in the code level and broaden the knowledge of the software developers having less or no background on secure coding. The NISK conference ended with the talk derived from a work from a master's student who compared several open source search engine functionalities. Since the size of network data could be massive, efficiency and scalability of search mechanism play an important role on digital forensics and intrusion detection systems.

Finally, during COINS seminar and NISK conferences, I got to make new friends who are working in the security domain. There were several interesting and relevant talks which I could relate with my work. I appreciate COINS for supporting me and students like me through such funding programs which helps us building knowledge and connecting with other researchers and students and at the same time have a great time at Svalbard.