NISK 2018 and COINS Ph.D. Seminar

Ramtin Aryan

September 18-20, 2018
Logyearbyen, Svalbard, Norway

In September, COINS supported me to attend the Norwegian Information Security conference (NISK). The Conference was held in Longyearbyen in Svalbard from the 18th to the 20th of September. Meanwhile, there was the annual COINS Ph.D. student seminar in the 18th of September.

September 17th, I arrived in Longyearbyen. It is located at latitude 78° North, just 1,316 km from the North Pole. It was interesting for me to spend a few days in the arctic latitude and close to around 4000 polar bears and arctic coal mines.

On Tuesday, September 18th, the Ph.D. seminar started. It was a good chance to meet several Ph.D. students that are working on cybersecurity. The other interesting aspect in the Ph.D. seminar was the presentation of former students that defended the thesis and shared their experiences with the other students. Moreover, six Ph.D. students had a presentation about their projects.

In the second day, there were two presentations about cryptography in the morning. First presentation title was "*A Successful Subfield Lattice Attack on a Fully Homomorphic Encryption Scheme*" and the second one was "*Improving the generalized correlation attack against stream ciphers by using bit*".

In the evening session, there were two presentations about cryptography and four presentations about the security analysis that were very interesting and I want to give a brief report about them.

First interesting topic was "*Where is the web still insecure? Regional scans for HTTPS certificates*". This research tries to have a study on the HTTPS usage that includes encryption algorithms and certification properties. In this paper, some data from a scan on the top 500 most visited websites from nine countries of interest are collected and analyzed and an interesting conclusion presented.

Next presentation was about "*Fake Chatroom Profile Detection*". The authors try to use keystroke dynamics as a biometric feature and combine it with textual features to determine not only the validity of user's profile but also harassment activities, pedophile specifically, in the internet chatrooms.
As the last presentation on the second day, Roman Vitenberg presented an interesting topic, "*Debunking blockchain myths*". He tried to describe seven common myth about blockchain that I highly recommend the students who are interested in blockchain to read this short paper.

The third and the last day of the conference was begun with a keynote about "*Developing for the long term - Lessons learned through 20 years of Qt* " that presented via Lars Knoll, CTO of The Qt Company.
After the keynote, the Biometrics session started. Two papers were very interesting. The first paper was "*Baseline Evaluation of Smartphone based Finger-photo Verification System: A Preliminary Study of Technology Readiness*". The authors try to propose an effective and reliable fingerphoto verification system instead of embedded sensors.
As a next presentation, Marta Gomez-Barrero presented her paper, "*Towards Fingerprint Presentation Attack Detection Based on Short Wave Infrared Imaging and Spectral Signatures*". The paper proposes a detection method against the presentation attacks that is one of the big challenges for the biometric verification systems. The authors' main focus was on fingerprint recognition systems. They propose an algorithm that uses Short Wave InfraRed (SWIR) images at different wavelengths to detect discriminate skin from the other materials. They tried to improve the speed of the method via using Support Vector Machine (SVM).
The last session of the conference was about malware. One of the interesting paper was "*Fighting Ransomware with Guided Undo*" that presents a ransomware detection method and its evaluation results.

Unluckily, that it is impossible to describe all presentations in this short report. However, the full Program [1] and proceeding [2] of the conference are available for more detail.

There is no doubt that the highest motivation for attending events like this, is the opportunity to be in touch with other Ph.D. students who work in the security field in Norway. I am grateful to COINS for having allowed my presence there through financial support.

[1] http://nikt2018.ifi.uio.no/program_nisk_no.html
[2] http://nikt2018.ifi.uio.no/images/NISK2018_preproceedings.pdf