

Report Following Visit of SICSA DVF Prof. Guevara Noubir (17-25 March 2017)

The research visit was an excellent opportunity to continue the research Prof. Noubir and Dr Patras started in July 2016 while Dr Patras visited Northeastern University with support of a SICSA PECE bursary. At the same time, the Scottish academic community could attend two guest lectures given by Prof. Noubir at U. Edinburgh and U. Stirling, and discuss pressing security and privacy challenges facing networked systems.

During his stay at Edinburgh, Prof. Noubir met with researchers working on wireless and mobile networking problems, usable security, privacy preserving analytics, and software security. This included one-to-one discussions with Vaniea, Aspinall, Sarkar, Bhatotia, and Marina. The guest spent half a day at U. Stirling where he was hosted by Dr Fayed, with whom he had technical discussions about rural broadband and media streaming problems.

Patras and one of the MInf student he is supervising met at length with Noubir, solved jointly technical problems related to the implementation of a prototype system to test the risks of surveillance through Bluetooth devices. This will employ software-defined radio based protocol snooping and GPU based post-processing. The team defined a clear plan to progress this joint research and a publication is expected to be submitted to ACM Privacy Enhancing Technologies or IEEE Symposium on Security and Privacy by November. Patras and Noubir have also discussed new potential research problems, most notably the risk of intrusion into the SS7 cellular system, with a view to user tracking.

In addition the Guevara and Patras have defined guidelines for assigning a reproducibility label to experimental research accepted for publication at ACM WiSec, which Noubir is chairing this year. This is a pioneering a process aiming to increase the impact of mobile and wireless research, and enable better dissemination of results by sharing code and experiments set-ups. The label will recognize papers whose results were reproduced by an independent group of researchers. Patras will be a member of this committee.

Finally, Prof. Noubir has agreed to support the submission of an EPSRC fellowship application with Patras as PI. Should the EPSRC funding be awarded, Guevara will host Patras at Northeastern University for up to 6-months and continue to collaborate on IoT security and privacy research.