



ThreatPredict

Objective

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In a nutshell, the project aims at characterizing the relationships between security events and social and geographical related data and, using this knowledge, to finally predict future cybersecurity threats and attacks that will occur. We especially aim to improve the research community's understanding of cyber security as a socio-technical problem by analysing and describing large datasets from multiple sources.

This project proposes a disruptive methodology for cyber-threat intelligence by improving our understanding of the effect of global societal events on cyber security. Currently, we know of many geo-political, sport, entertainment events that had a direct effect on cyber security. That knowledge is, however, mostly anecdotal.

News

Start of the Project is here!

We are happy to announce that project **ThreatPredict** finally started in December 2018! This project is financed by Science for Peace and Security programme of **NATO** for a purpose to deliver high-quality research in cyber attack prediction among three countries.

ThreatPredict @NetSoft18

ThreatPredict was represented at IEEE Netsoft 2018, in the ETSN workshop: <https://project.inria.fr/etsn/>. **Jérôme François** was presenting results about methods to mine known relations between attack and vulnerability descriptions to enhance their classification and predict unknown relations

ThreatPredict @RESSI 2018

The ThreatPredict project was presented by **Jérôme François** at **RESSI 2018**. RESSI is a major French event in network and system security bringing together more than 60 researchers and practitioners this year with a lot of live interaction. The presentation introduced the main challenges the project targets to tackle as well as first results obtained in first months.

Publications

Q. Dang, J. François. **Utilizing attack enumerations to study SDN/NFV vulnerabilities**. IEEE ETSN - Emerging Trends in Softwarized Networks, June 2018, Montreal, Canada

T. Tang, S.A.R. Zaidi, D. McLernon, L. Mhamdi, M. Ghogho, **Deep Recurrent Neural Network for Intrusion Detection in SDN-based Networks**, IEEE International Conference on Network Softwarization (NetSoft 2018), Montreal, Canada, 2018.

K. M. Carley, G. Cervone, Nitin Agarwal, H. Liu, **Social Cyber-Security**, In Proceedings of the International Conference SBP-BRiMS 2018, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson July, 2018 Washington DC, Springer.

G. Mezzour, K. M. Carley, L. R. Carley. **Remote Assessment of Countries' Cyber Weapon Capabilities**. Social Network Analysis and Mining (R&R)

G. Dobson and K. M. Carley, **A Computational Model of Cyber Situational Awareness**, International Conference SBP-BRiMS 2018, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson July, 2018 Washington DC, Springer.