ECE SEMINAR

ENRICO MARICONTI

PhD student
University College London
Department of Security and Crime Science

Friday, October 12, 2018 at 3:00 pm
8 Saint Mary's Street, Room 339
Faculty Host: Gianluca Stringhini

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ONE DOES NOT SIMPLY WALK INTO MORDOR: A PhD Journey in Malicious Behavior Detection

Abstract:

Researchers have been fighting malicious behavior on the Internet since before I was born. The arms race is far from being close to an end, but I decided to join in and contribute to this fellowship. My PhD journey has focused on measuring, predicting, and detecting malicious behaviour on the Internet. My work tried to understand the causes of such behavior, by applying framework and statistical tests to determine what triggers malware. We also used deep learning to predict what actions an attacker would have done, anticipating and countering them. Moreover, we worked on malware detection for Android, by modeling sequences of API with Markov Chains and applying machine learning algorithms to classify the different apps. The methodology, design and results of my research are relevant state of the art in the field; I will go through the different papers I worked on during my PhD to explain the design choices, the statistical methods and the takeaways characterising them.

Biography:

Enrico Mariconti is a PhD student of the University College London Department of Security and Crime Science. He is part of the SECReT DTC and during his PhD he focused mainly on Malware detection. Part of his research is also studying social network related issues and the use of machine learning techniques and statistical tests to measure and evaluate these issues. His studies at UCL started in 2014 under the supervision of Dr Gianluca Stringhini and Dr Gordon Ross. He has a background in Telecommunication Engineering (BSc and MSc at Università degli Studi di Genova) and, as part of the DTC, an MRes in Security Science.

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