



Seminar/Talk

The Utility Cost of Privacy

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Host: Krzysztof Pietrzak

Privacy-enhancing systems have to strike a careful balance between a system's utility (i.e., its specified goal) and its degree of privacy protection. To achieve this utility-privacy balance, a rich body of work aims at tightly quantifying the degree of privacy protection, in particular under a continual usage of the system, which in many cases leads to a steady decline of the degree of privacy. Precisely quantifying this decline in privacy has proven to be a hard problem but is vital for a practical privacy assessment and thus for finding a system's utility-privacy balance. My research tackles both sides of the utility-privacy balance. First, I will talk about our recent method for quantifying the decline in privacy: we provably compute upper and lower bounds for the decline in privacy over a growing exposure for a large class of privacy-enhancing systems. Second, using this method, I will show how to tightly quantify the privacy decline caused by timing delays of a browser extension for deniable uploads and downloads, a system that we recently designed, implemented, and proved secure.

Wednesday, January 23, 2019 10:00am - 11:00am

Mondi Seminar Room 2, Central Building



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