Invitation à la soutenance publique de thèse de
Luc ROCHER
Master en Sciences Humaines et Sociales, architecture de l'Information

Pour l'obtention du grade de Docteur en sciences de l'ingénieur et technologie

« Anonymization in the 21st century: a critical examination of de-identification for modern large-scale data »

qui se déroulera
le vendredi 20 décembre 2019 à 15h
Auditoire A03
Place des Sciences
1348 Louvain-la-Neuve

While rich medical, behavioral, and socio-demographic data are key to modern data-driven research, their collection and use raise legitimate privacy concerns. 91% of Americans and 80% of Europeans believe that they lost control over their data.

De-identification, the process of anonymizing datasets before sharing them, has been the main paradigm used in research and elsewhere to share data while preserving people’s privacy. Yet numerous supposedly anonymous datasets have recently been released and re-identified by researchers and journalists.

Are our data truly anonymous and our information safe? This thesis constitutes, firstly, a critical review of how data anonymization practices are currently evaluated, spanning from disclosed medical and demographics microdata to high-dimensional datasets, as well as methods to release aggregated statistics instead of raw data. This thesis builds, secondly, new models and frameworks to estimate the anonymity of data collections and suggest modern ways to release sensitive personal data while limiting privacy breaches.

Jury members:

Prof. Julien Hendrickx (UCLouvain), supervisor
Prof. Yves-Alexandre De Montjoye (Imperial College, UK), supervisor
Prof. Roland Keunings (UCLouvain), chairperson
Prof. François-Xavier Standaert (UCLouvain), secretary
Prof. Renaud Lambiotte (Oxford, UK)
Prof. Bart Preneel (KULeuven, Belgium)