

Title of the thesis	The Societal Impact of Omnipresent Invasive Tracking on the Web: A rigorous study of the technologies, challenges, risks, defences and user perception of Web tracking.
Acronym	SOCIETAL_WEB_TRACKING
Reference number	026

Hosting institution	Employer
Université de Lille Website: https://www.univ-lille.fr/home/	Université de Lille Website: https://www.univ-lille.fr/home/
Hosting research unit 1	Hosting research unit 2
Name: Centre de Recherche en Informatique, Signal et Automatique de Lille Acronym: CRISAL Identification number: UMR 9189 Address: Université de Lille – Cité scientifique Bâtiment ESPRIT Avenue Henri Poincaré 59655 Villeneuve d'Ascq Website: http://cristal.univ-lille.fr	Name: Centre Lillois d'Études et de Recherches Sociologiques et Économiques Acronym: CLERSE Identification number: UMR 8019 Address: Bâtiment SH2 Cité Scientifique - Université de Lille - 59655 Villeneuve d'Ascq Cedex Website: https://clerse.univ-lille.fr/
Principal supervisor	Co-supervisor
Name: Walter Surname: RUDAMETKIN Email: walter.rudametkin@univ-lille.fr Phone: +33 6.98.22.38.32	Name: Fabien Surname: ELOIRE Email: Fabien.eloire@univ-lille.fr Phone: +33 6.34.76.23.46

Thesis information	
Keywords	Web tracking; privacy; societal impact of tracking; user behavior
Abstract	<p>The Web is built to track us extensively. Advertising is the main source of revenue for most of the services we use today. Facebook, Google, Twitter, LinkedIn, and many more technological companies are, surprisingly, advertising companies. The ad ecosystem is built of thousands of companies that share, sell, and trade data that originates from the services and websites we use daily. The fact that the economic model of the Web is advertising has led to advancements to improve the effectiveness of ads. We are shown tailored ads from extensive profiles that have been built for us. However, the underlying techniques to build profiles are invasive and ubiquitous—almost all sites track their users—and the profiles are sensitive, personal, and can be used to manipulate us, as seen through the Cambridge Analytica scandal. Furthermore, these profiles are moving into the physical world through location tracking, WiFi tracking, Bluetooth tracking, loyalty cards, and other techniques specific to personal handheld devices like mobile phones. GDPR, ePrivacy and the California privacy act all attempt to influence how data is collected, shared and sold. The main idea is for companies to get the user's consent first. However, it is arguable whether people fully understand the scope of tracking and the implications of their browsing activities on the web. Furthermore, as users become more aware of the uses of their data, they behave differently. This is known as <i>Social Cooling</i> and can be summarized as "If you feel you are being watched, you change your behaviour".</p> <p>This PhD will study the users' behavior and their understanding of tracking. We will perform large-scale automated studies of the web to identify and understand the</p>

	<p>tracking ecosystem and use this information to provide user-friendly, real-time feedback to users through novel tools that accurately present privacy-risks. Using our tools, we will perform controlled experiments to study changes in user behavior, in particular, informed v. uninformed users, as well as their behavior with and without the assistance of our privacy-risk tools. Through rigorous controlled studies, surveys, interviews, questionnaires and large-scale crawls, we will understand user behavior in regards to privacy and hopefully find usable tools and methods to influence users towards safe, more privacy friendly actions. This work should also shed light on the <i>Privacy Paradox</i>, which states that users that although users are concerned about privacy, their actions and behaviors do not mirror those concerns.</p>
<p>Expected profile of the candidate</p>	<p>This PhD between the CRISAL and CLERSE laboratories, brings together computer science and sociology to methodically analyse the tracking and the social behaviors of users. The candidate is expected to have a strong background in computer science. Knowledge in statistics, Web development or Machine Learning is desirable. She/he is also expected to have got knowledge, experience or, minimally, interest in social science and online surveys. The candidate will work closely with Mozilla, the makers of Firefox and will contribute to the AmlUnique platform, a world-class platform for the study of tracking and the vulgarization of risks to privacy. He or she will develop tools, as well as societal studies, that will be deployed to https://AmlUnique.org. All code will be open-sourced, datasets will be anonymized and published when possible, and research will be published in top-level conferences.</p>
<p>Application procedure & Eligibility criteria</p>	<p>The application procedure and eligibility criteria are detailed on the European doctoral programme PEARL website www.pearl-phd-lille.eu. The funding is managed by the I-SITE ULNE foundation which is a partnership foundation between the University of Lille, Engineering schools, research organisms, the Institut Pasteur de Lille and the University hospital.</p> <p>The application file will have to be submitted before March 31, 2021 (10:00 AM - Paris Time) and emailed to the following address : international@isite-ulne.fr.</p>
<p>Net salary and Lump Sum</p>	<p>A net salary of about €1,600 + €530 per month to cover mobility, travel and family costs.</p>