



INFORMATICS COLLOQUIUM

Speaker:

Prof. Jérôme Waldispühl, McGill University, Montréal

Leveling Up Citizen Science

Abstract:

Over the past decade, citizen science computer games have become a popular practice for engaging the public in research activities. This methodology had a noticeable impact in molecular and cell biology, where millions of online volunteers contributed to the classification and annotation of scientific data, but also to solve advanced optimization problems requiring human supervision. Yet, despite promising results, the deployment of citizen science initiatives through academic/professional web pages faces serious limitations. Indeed, the volume of human attention needed to process massive data sets and make state-of-the-art scientific contributions rapidly outpaces the participation and availability of online volunteers. To overcome this challenge, citizen science must transcend its “natural habitat” and reach out to the entire gaming communities. Therefore, one solution is to build partnerships with commercial video game companies that already assembled large communities of gamers. In this talk, we describe how this approach can transform the impact of citizen science in genomics. We discuss our experience from Phylo, an online puzzle for gene alignment, to Borderlands Science, a massively multiplayer online game for microbiome data analysis. We show how to embeds citizen science tasks into a virtual universe to engage new user bases. These principles have profound implications for future citizen science initiatives seeking to meet the growing demands of biology.

Bio:

Jérôme Waldispühl is an associate professor of Computer Science at McGill University. He holds a PhD from École Polytechnique (France), and previously was an instructor in Applied Mathematics at MIT (2006-2009). Jérôme conducts research in RNA structural bioinformatics and cheminformatics. He also pioneered the use of video games to engage the public in genomic research with Phylo (2010), Colony B (2016), Borderlands Science (2020) and Project Discovery Phase 3 (2020), which he presented at the White House OSTP (2013), Québec Parliament (2016) and French Academy of Science (2018).

Date and time: Tuesday July 4th, 2023, 02:00 pm
Location: Pérolles 21, room C230, Bd de Pérolles 90, Fribourg
Contact person: Prof. Philippe Cudré-Mauroux

The colloquium is free and open to the public.