

Seminar

on Thursday, March 16, 2017, 16:00 (ISPM seminar room 606, 1st floor)

Digital Epidemiology

Marcel Salathé, Associate Professor and head of the Digital Epidemiology Lab at the EPFL

Online, mobile, global – the ongoing digital revolution affects all aspects of life. Massive amounts of data are now shared by billions of people around the globe through mobile phones, social media services, and other outlets, on any issue imaginable, including issues of health. These data sources can be mined for epidemiological purposes, giving rise to digital epidemiology. Of equal importance, but less discussed, is the fact that these large data sets (big data) provide the raw material for new machine learning algorithms to train on (e.g., "deep learning"), resulting in software that in various domains is close to achieving, or already has achieved, human performance. As human expertise, specifically also white collar expertise, can increasingly be replaced by artificial intelligence, a huge disruptive potential will be unleashed. The health domain in particular will be deeply affected. In this seminar, I will discuss opportunities and challenges in these turbulent times.



Marcel Salathé is a digital epidemiologist working at the interface of population biology, computational sciences, and the social sciences. He obtained his PhD at the ETH Zürich and spent two years as a postdoc at Stanford University in California before joining the faculty at Penn State in 2010 in the Center for Infectious Disease Dynamics. In 2014, he spent half a year at Stanford as a visiting assistant professor. In the summer of 2015, Salathé became an Associate Professor at the Ecole Polytechnique Fédérale Lausanne (EPFL), where he heads the Digital Epidemiology Lab at the new Campus Biotech. In 2016, he was also appointed Academic Director of the

EPFL Extension School, whose mission is to provide high-quality online education in digital technology.

Salathé has published numerous papers in the biological, medical, and computational fields, and has written a book called "Nature, in Code". He led the development of "Epidemics – the Dynamics of Infectious Disease", a popular MOOC (Massive Open Online Course), and has just recently launched a new EPFL MOOC "Nature, in Code: Biology in JavaScript". He's the co-founder of PlantVillage, a knowledge exchange platform on crop diseases, and the founder of OpenFood.ch, an open food data API (Application Programming Interface) designed to foster an ecosystem of applications around food and nutrition data. He also founded CrowdAPI, an open data challenge platform whose goal is to accelerate research on big data across multiple scientific domains.

Salathé is Deputy Editor of PLOS Computational Biology, and Editor at EPJ Data Science.

Organization:

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