Big Data in Public Health

Facilitators		
Oliver Gruebner **Sara Fabrikant** **Eva Furrer** **Leonard Held** **Torsten Hothorn** **Markus Wolf** **Milo Puhan** **Fabio Rinaldi** **Viktor von Wyl**	University Zurich
John Naslund	Harvard Medical School, USA
Ben Fabian	Hochschule für Technik, Leipzig, Germany
Suzanne Elayan **Martin Sykora**	Loughborough University, UK
Emiliano Albanese **Marta Fadda**	University of Lugano
Steve Mooney	University of Washington, USA
Ketan Shankardass	Wilfrid Laurier University, Canada
Tatiana Ermakova	Zentralinstitut für die kassenärztliche Versorgung in Deutschland

Description

Big data approaches raise high hopes, promising that this new form of data mining and analyses will significantly improve public health research and action. **The proposed course will give a broad overview of potentials and limitations of big data from multiple public health disciplines.** Definitions and concepts particularly from epidemiology, psychology, and health policy and law are introduced and discussed in key note lectures to evaluate the public health relevance of big data. We will also examine key legal and ethical challenges from a broader public health perspective. Subsequently, **we will explore emerging methods in big data analysis and their application for advancing public health research, with a particular focus on mental health** in mock sessions (i.e. case-based learning), practical exercises (i.e. working with social media data in the statistical software R), and in mini projects (i.e. group assignments extending on the lab sessions) during the course.

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Ann Walser
Graduate Campus Manager
awalser@ssphplus.ch
+41 31 631 58 94
https://ssphplus.ch/en/graduate-campus

| **Objectives** | By the end of the course, the participants are familiar with public health relevant definitions and challenges of big data approaches from major public health disciplines. They are able to address key issues in research and the broader public health discourse. **Specifically, participants will:** |

1. **Gain a broad understanding of the relevance and potential for big data to advance public health research**
2. **Apply novel methods in big data analysis towards addressing important public health challenges**
3. **Develop a project with potential for real-world public health impact using big data methods.**

| **Dates** | **17 – 21 August 2020** (postponed from 25 – 29 May 2020 because of corona crisis) |

| **Eligibility** | Priority is given to PhD students registered at Swiss School of Public Health + (SSPH+). Other students and external participants equipped with master degrees in the (various) fields of public health and related areas are welcome to apply for limited space. |

| **Course Structure** | The course consists of key note lectures that will introduce into the wider topic and that will provide ample room for questions and discussions. We will further use case-based learning methods and discuss specific questions such as ethical and legal aspects in big data for public health. In addition, participants will work in lab sessions on social media data in the statistical software R. Teamwork on mini projects will extend the lab sessions and generated results will be presented and discussed by the participants at the end of the course. |

| **Assessment** | Participants will be evaluated by their active participation during the course and by their presentation of group assignments at the end of the course. Furthermore, participants will write an abstract highlighting the approach and findings of their mini projects. |

| **Credits** | 2 ECTS: Preparation work: 30 h; Contact / Computer Lab: 30 h. |

(1 ECTS corresponds to appr. 25-30 hours workload)

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Location	University of Zürich
	KOL-E-13
	Rämistrasse 71
	8006 Zürich

Course Fees	SSPH+ PhD Students	30.- CHF (processing fee)
	PPHS PhD Students	30.- CHF (processing fee)
	External MD/PhD Students	600.- CHF
	External Academics	1700. - CHF
	Other Participants	2500. - CHF

(The cost scheme depends on the Number of ECTS. Per ECTS participants are asked to pay 300,- CHF, 850,- CHF or 1250,-CHF, respectively)

Registration	Please register online on our website

Registration date	**17 July 2020**

SSPH+ Inter-university Graduate Campus

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