SSPH+ INTER-UNIVERSITY GRADUATE CAMPUS SWISS SCHOOL OF PUBLIC HEALTH

in collaboration with Swiss TPH

Observational epidemiology workshop: advanced methods for data and exposure-response analyses

Facilitator

Prof. Joel Schwartz, Harvard T. H. Chan School of Public Health
Martin Röösli, Swiss TPH, University of Basel
Dr. Marloes Eeftens, Swiss TPH, University of Basel

Description

This workshop will introduce innovative methods for exposure-response analyses in observational epidemiological research. The following topics will be covered:

- regression analyses with generalized linear models (glm)
- use of smoothing and splines in generalized additive models (gam)
- Poisson time series analysis
- quantile regression

During the workshop we will discuss research questions and analytical problems of the students' datasets. In that way we will deal with common issues in epidemiological data analysis and provide analytic solutions for dealing with complex issues like selection bias, control for confounding, clustering of data, complex data distributions etc.

Objectives

By the end of this course, participants will be able to perform quantitative analyses of epidemiological data from observational studies dealing with a broad spectrum of research questions. In particular, students will learn how to analyze complex exposure-response patterns

Dates

20 – 24 July 2020

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

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Eligibility

We will work with the software R. Participants should be familiar with the statistical software R. This is an advanced statistical course. The course is aimed at researchers with an in-depth interest in applied data analysis. Participants should know the principals of linear and logistic regression modelling and have practical experience with regression modelling.

Course Structure

In this workshop we will follow a practical and applied approach. Students will receive datasets to explore different analytic strategies. The group work will be complemented with lectures by Prof. Joel Schwartz and individual computer exercises.

Students will present an analytic problem from their own research to the lecturer, tutors and fellow students. Possible solutions to this problem will be developed in an interactive way.

Students should bring their own laptop for the practical work.

Assessment

Active participation in the workshop and short presentation of an analytic problem from the own work

Credits

2 ECTS

Preliminary Work 7 h; Contact time 40 h Homework/ Wrap-Up Work: 3 h

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

Location

Swiss Tropical and Public Health Institute, University of Basel, Room will be announced

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)

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Registration	Please register online on our website
Registration date	**20 June 2020**

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