

Bayesian Disease Mapping in Epidemiology and Public Health

Description

A course for researchers dealing with spatial data in epidemiology and public health.

Objectives

This 2-weeks course will provide a comprehensive introduction to Bayesian spatial modeling in public health and epidemiology. Participants will be introduced to the basics of Bayesian modeling and computation and they will learn how to model areal and geostatistical data for identifying significant covariates and for geographical prediction and mapping of a range of health-related outcomes.

Participants will be also introduced in Remote Sensing and Geographical Information Systems (GIS) in order to extract environmental predictors from satellite sources, process satellite data and map raw data as well as model-based predictions. The course will involve theory and computer practical exercises in R, Winbugs, IDRISI, and OpenGIS.

Dates

08 – 19 August, 2011

Eligibility

The course is intended for researchers working in the field of epidemiology and public health, statisticians, geographers and planners who deal with spatial data. Some statistical/epidemiological background would be beneficial but is not essential.

Course Structure

The course includes lectures in statistical modelling from the classical and Bayesian viewpoint, Bayesian spatial modelling, Bayesian computation and inferences including Markov chain Monte Carlo (MCMC) simulation methods, Lectures will be accompanied by practical exercises in Stata and Winbugs. In addition participants will get basic knowledge on GIS and Remote Sensing to allow them extract, process and display geo-reference information. Towards the end of the course the participants will be divided in small groups and work on data analysis projects that cover all topics included in the course.

PhD Program Management:

Academic lead Prof. Charlotte Braun-Fahrlander
Program coordination Dr. Sina Henrichs
Program management Dr. Sonja Merten

Contact:

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PhD Program Public Health



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| Assessment | A question test at the end will be used to assess the individual performance of the participants. Certificates confirming successful completion and/or attendance will be issued. |
| Credits | 3 ECTS |
| Facilitators | Penelope Vounatsou, PhD, SwissTPH |
| Location | SwissTPH, Socinstrasse 57, 4002, Basel |
| Course Fees | <p>For SSPH+ Students the course is for free.</p> <p>For students that are not enrolled with the SSPH+ PhD program in Public Health the total course fee is CHF 2'300.- and must be paid 4 weeks before the start. For students enrolled in the tropEd programme at any tropEd partner institution the course fee is CHF 2'000.-. A registration fee of CHF 100.- is due at the moment of acceptance. If cancellation of attendance is less than 4 weeks before beginning of the course a fee of CHF 500.- will be charged.</p> |
| Registration | Please register online: www.ispm-unibasel.ch/ssphplus |
| Deadline | 31. July 2011 |
| Max. Attendance | 30 |

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