

An Introduction to Bayesian Disease Mapping

A Two-Day Course

April 12 - 13, 2010
Copenhagen, Denmark

COURSE CONTENT

This course is designed to provide an introduction to the area of Bayesian disease mapping in applications to Public Health and Epidemiology.

The two-day course consists of sessions dealing with:

DAY 1 Spatial topics

- Basic concepts of Bayesian methods and disease mapping
- Bayesian computation and MCMC
- Basic R and WinBUGS use
- Demonstration of risk estimation and cluster detection using WinBUGS

DAY 2 Spatio-temporal modelling topics

- Hands-on with simple WinBUGS models: Poisson-gamma; convolution models for risk estimation
- Ecological analysis, cluster models and space-time analysis
- Infectious disease models and veterinary data

This is designed for those who want to cover more advanced mapping methods, and includes ecological analysis and the use of WinBUGS software.

The course will include theoretical input, but also practical elements and participants will be involved hands-on in the use of R and WinBUGS in disease mapping applications. Both human and veterinary examples will be covered in the course as well as simple infectious disease space-time modelling. Examples will range over congenital anomaly birth data, influenza in South Carolina, foot-and-mouth disease in the UK and oral cancer in Georgia.

THE SPEAKER

Professor Andrew B. Lawson (Division of Biostatistics & Epidemiology, College of Medicine, Medical University of South Carolina) is a World Health Organization (WHO) advisor on Disease Mapping and organized with the WHO an International workshop on this topic which has led to an edited volume “Disease Mapping and Risk Assessment for Public Health”. He has published a number of books focused on disease mapping and spatial epidemiology. In particular, a new volume entitled **Bayesian Disease Mapping: hierarchical modeling in spatial epidemiology** will be a course text for this course.

WHO SHOULD ATTEND

The course is intended for epidemiologists and public health workers who need to analyse geographical disease incidence. In addition, the course may be of interest to statisticians or geographers and planners who deal with spatial disease data. Some statistical/epidemiological background would be beneficial but is not essential.

WHY ATTEND

Participants will gain an in-depth understanding of the basic issues, methods and techniques used in the analysis of spatial health data using a Bayesian approach. They will gain insight into the detailed analysis of practical problems in risk estimation and cluster detection. The course is presented by a leading researcher in the field of disease mapping and spatial epidemiology.

COURSE FEES

Two-day Course – Dkr.2600

Two-day course fee includes comprehensive course notes, lunch, refreshments and a copy of *Bayesian Disease Mapping: Hierarchical Modeling in Spatial Epidemiology*, Lawson, A. B., (2009), CRC press, New York.

A discounted fee of 4300 DKK will be available for those booking both the introductory and advanced level courses: Introduction to Bayesian Disease Mapping and Advanced Bayesian Disease Mapping.

Attendees must bring a laptop with R and WinBUGS 1.4 software preloaded. Datasets will be provided. R and WinBUGS software can be downloaded from the following websites:

<http://cran.wustl.edu> and/or www.mrc-bsu.cam.ac.uk/bugs

VENUE

The course will take place at the National Institute of Public Health, University of Southern Denmark, Østre Farimagsgade 5A, DK-1353 København K, Denmark.

REGISTRATION INFORMATION
Bayesian Disease Mapping

Registration is limited to 20 participants per course

Deadline for Registration is March 1, 2010 to Kirsten Zachariassen, kiz@niph.dk

Course Registration (indicate below which course/courses you register for):

- An Introduction to Bayesian Disease Mapping. Course fee is Dkr. 2600** *or*
 Advanced Bayesian Disease Mapping. Course fee is Dkr. 2600 *or*
 Both the introductory and advanced level courses. Discounted Course fee is Dkr 4300

Name _____

Title _____

Company/Organization _____

Address _____

City State Zip _____

Phone (+) _____ Fax (+) _____

E-mail _____

METHOD OF PAYMENT

Advance payment to:

Danske Bank, Odense Afdeling, Flakhaven 1, Postbox 1314, 5100 Odense, Denmark

Account no. 3001-7616090

IBAN: DK08 3000 0007 6160 90

SWIFT/BIC: DABADKKK

Account owner:

National Institute of Public Health, University of Southern Denmark

Øster Farimagsgade 5 A, 2. sal

DK-1353 Copenhagen

Please state your name(s) and "Project 1966, Registration Bayesian Disease Mapping".

Please note that the participants must pay all bank fees.

Payment should be made no later than March 1, 2010.

Refund Policy: Requests for refunds must be made in writing. There will be a Dkr 400 processing fee for cancellations before March 1, 2010. After March 1, 2010, no refunds can be given.