

Advanced Bayesian Disease Mapping

A Two-Day Course

April 15 - 16, 2010
Copenhagen, Denmark

COURSE CONTENT

This course is designed to provide advanced coverage of Bayesian disease mapping topics in applications to Public Health and Epidemiology: It is intended as an extension to the course: ‘An Introduction to Bayesian Disease Mapping’. Emphasis on the course is placed on spatial and spatio-temporal Bayesian modeling issues, and some knowledge of Bayesian computation and WinBUGS is assumed.

The two-day course consists of sessions dealing with:

DAY 1 Spatial topics

- Spatial models and simple variants: convolution, proper CAR, full MVN
- Special applications: sparse count data: zip and factorial regression
- Special applications: latent structure (L&C and mixtures)
- Spatial survival modelling
- Measurement error, SEMs and Joint modelling; quantile inference.
- WinBUGS, R2winBUGS and BRugs

DAY 2 Spatio-temporal modelling topics

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- Basic ST models: Bernardinelli, Knorr-Held, Waller; seasonal effects
- ST latent structure modeling
- Infectious disease models: FMD and influenza outbreaks

This is designed for those who want to cover advanced BDM methods, and includes advanced use of WinBUGS and related R functions: R2WinBUGS, BRugs. 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 spatial and spatio-temporal analyses will be considered. Examples will range over childhood asthma data from Georgia, influenza in South Carolina, foot-and-mouth disease in the UK and prostate cancer in Louisiana.

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 and spatio-temporal 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 and refreshments. The course is based on topics covered in *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.