### THE CAMBRIDGE STATISTICS DISCUSSION GROUP

## Monday 21st January 2019 7:15 for 7:45

Large Lecture Theatre, MRC Cognition and Brain Sciences Unit, Chaucer Road, Cambridge, CB2 7EF

# Mapping Health: Why, How, Considering what...

## Sylvia Richardson

MRC Biostatistics Unit @ University of Cambridge

**Abstract:** In this non-technical talk, I will reconnect with a long standing interest of mine, that of studying the geographical variations of chronic diseases and of exploiting the natural geographical variation of many environmental exposures to gain insight into disease determinants. With the increasing availability of area level data at a small scale, there are a number of non-standard aspects to spatial analyses in health that I shall discuss, including the use of hierarchical models to stabilize small area estimates, spatial confounding and ecological bias. The talk will be illustrated by studies in environment and health.

**Speaker:** Sylvia Richardson is the Director of the MRC Biostatistics Unit and holds a Research Professorship in the University of Cambridge since 2012. Prior to this Sylvia held the Chair of Biostatistics in the Department of Epidemiology and Biostatistics at Imperial College London since 2000 and was formerly Directeur de Recherches at the French National Institute for Medical Research INSERM, where she held research positions for 20 years. In 2009, Sylvia was awarded the Guy Medal in Silver from the Royal Statistical Society and a Royal Society Wolfson Research Merit award. Sylvia has worked extensively in many areas of biostatistics research and made important contributions to the statistical modelling of complex biomedical data, in particular from a Bayesian perspective. Her work has covered spatial modelling and disease mapping, measurement error problems, mixture and clustering model. Her recent research has focussed on modelling and analysis of large data problems such as those arising in genomics.

**Directions** Chaucer Road is off Trumpington Road – if you are heading away from the city centre it is the first right after the junction with Brooklands Avenue. Number 15 is at the end on the left and is a large Victorian House with a more modern extension to its right. The entrance is in the porch located in the middle of the older section on the left as you come in and is accessed by ascending a few steps from the car park. Cars may be parked there. The outside door will be locked at 7:45.

Arrivals after 7:45pm can gain admittance by contacting the secretary on 07761769436. A map showing the location of the unit is at http://www.mrc-cbu.cam.ac.uk/contact-us.

#### **Provisional Next Meetings:**

4th February 2019 – Sian Evans and Stephen Yeung (Public Health England) on 'From Fingertips to RAP: getting statistics into public health policy and practice'.

25th February - Nicole Janz (University of Nottingham) on "Solving the Reproducibility Crisis".

19th March - Graham Wheeler (UCL Cancer Trials Centre).

30th April - Matthew Bland (Institute of Criminology).

9th October - Imre Leader (Department of Pure Mathematics) on 'Clueless Voting'.

26th November - Nick Goldman (European Bioinformatics Institute).

**Supper:** Some members eat before a talk at the University Centre meeting in the Granta Lounge at **5-45pm**. All welcome! **Secretary:** Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 7EF; telephone 01223 273712; E-mail <a href="mailto:peter.watson@mrc-cbu.cam.ac.uk">peter.watson@mrc-cbu.cam.ac.uk</a>