**Spatial and Temporal Statistical Modelling for Population Health Sciences**

(5 days) – 24-28/11/2014, Leahurst House, Leahurst Campus, University of Liverpool.

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| Date | Time | Location? | Topic | Format | Led by  **Room Key**  JSJ = John Share Jones  JGW= JG Wright  OW=Owen Williams |
| Monday 24th | 09:30-10:00 | Break-out area | Registration & coffee | | |
| 10:00-10:30 | JSJ | Welcome and introductions | Round table | MB |
| 10:30-11:00 | JSJ | Overview of geospatial methods | Lecture | PJD |
| 11:00-12:00 | JGW/JSJ | Introduction to R | Lecture/demo | GH |
| 12:00-13:00 | Break-out area | Lunch | | |
| 13:00-14:00 | JSJ | Geostatistics: exploratory | Lecture | PJD |
| 14:00-15:00 | JSJ | Geostatistics: linear models 1 | Lecture | PJD |
| 15:00-15:30 | Break-out area | Coffee | |  |
| 15:30-17:00 | JGW/ OW | Data-plotting, variogram | Practical | PJD+EG+JR |
| 17:00- 20:00 | BoatHouse, Parkgate | Course Dinner | | |
| Tuesday 25th | 09:00-10:00 | JSJ | Geostatistics: linear models 2, design | Lecture | PJD |
| 10:00-10:30 | Break-out area | Coffee | | |
| 10:30-12:30 | JGW/EGW | Linear model, link to QGIS | Practical | PJD+EG+JR |
| 12:30-13:30 | Break-out area | Lunch | | |
| 13:30-14:30 | JSJ | Geostatistics: prevalence mapping, extensions | Lecture | PJD+(EG+JR) |
| 14:30-15:00 | Break-out area | Coffee | | |
| 15:00-17:00 | JGW/EGW | Prevalence mapping | Practical | PJD+EG+JR |
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| Wednesday 26th | 09:00-10:00 | JSJ | Time series: exploratory analysis | Lecture | EW+(GH+JR) |
| 10:00-10:30 | Break-out area | Coffee | | |
| 10:30-12:30 | JGW/EGW | Linear and harmonic regression, residual correlogram | Practical | EW+GH+JR |
| 12:30-13:30 | Break-out area | Lunch | | |
| 13:30-14:30 | JSJ | Time series: modelling autocorrelation structure | Lecture | EW |
| 14:30-15:00 | Break-out area | Coffee | | |
| 15:00-17:00 | JGW/EGW | Model-fitting | Practical | EW+GH+JR |
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| Thursday 27th | 09:00-10:00 | JSJ | Censoring, Kaplan-Meir, log-rank test; simple parametric models (exponential, Weibull). | Lecture | GH  **Room Key**  JSJ = John Share Jones  JGW= JG Wright  OW=Owen Williams |
| 10:00-10:30 | Break-out area | Coffee | | |
| 10:30-12:30 | JGW/EGW | Survival data, Kaplan-Meier, log-rank. Advanced topics: hazard estimation [R package survival] | Practical | GH+EW+JR |
| 12:30-13:30 | Break-out area | Lunch | | |
| 13:30-14:30 | JSJ | Regression models: proportional hazards, accelerated failure life, Cox PH model, Suggestions for further reading. | Lecture | GH |
| 14:30-15:00 | Break-out area | Coffee | | |
| 15:00-17:00 | JGW/EGW | Parametric and semi-parametric model fitting and inference [R package survival] | Practical | GH+EW+JR |
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| Friday 28th | 09:00-10:00 | JSJ | Infectious disease transmission modelling: deterministic models | Lecture | JR |
| 10:00-10:30 | Break-out area | Coffee | | |
| 10:30-12:30 | JGW/EG | Infectious disease transmission modelling: deterministic models | Practical | JR+EW+AM |
| 12:30-13:30 | Break-out area | Lunch | | |
| 13.30-14.30 | JSJ | Infectious disease transmission modelling: stochastic models | Lecture | JR |
| 14.30-15.00 | Break-out area | Coffee | | |
| 15.30-17.30 | EGW | Infectious disease transmission modelling: stochastic models | Practical | JR+EW+AM |