Day 1 – Spatial & Spatio-temporal Modelling

Welcome to Day 1

- Spatial geostatistical modelling
- Spatio-temporal extensions
- Malaria data simulated for Nigeria
- All modelling uses **UTM coordinates**

Load the Data

```
library(readr)
spatial_binom <- read_csv("../data/spatial_binomial_data.csv")
head(spatial_binom)
```

```
# A tibble: 6 x 10
     id   utm_x    utm_y n_tested n_pos prevalence_true       S elevation
  <dbl>   <dbl>    <dbl>    <dbl> <dbl>           <dbl>   <dbl>     <dbl> <
1     1 385648. 1454675.      182    72           0.351  0.0139     363.   0
2     2  58859. 1077815.       64    30           0.632  0.680      165.   0
3     3 437997.  476112.       67    17           0.287  0.489      359.   0
4     4 380293. 1341662.      188    77           0.419 -0.101        8.90 0
5     5 319034.  570466.       97    22           0.272 -0.244      484.   0
6     6 980518.  974256.       88    48           0.427  0.809      474.   0
# i 1 more variable: urban <dbl>
```