

## Day 2 – Joint Modelling + Non-stationarity

# Today's Focus

- ▶ Joint models
- ▶ Shared vs group-specific fields
- ▶ Non-stationary spatial processes

## Load Datasets

```
library(readr)

joint_malaria <- read_csv("../data/joint_malaria_processes.csv")
nonstat_malaria <- read_csv("../data/nonstationary_malaria_data.csv")
head(joint_malaria)
```

# A tibble: 6 x 12

	id	group	utm_x	utm_y	n_tested	n_pos	prevalence_true	S_shared	S_sp
	<dbl>	<chr>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	
1	1	child~	249196.	7.37e5	148	48	0.281	0.297	-
2	2	child~	703934.	9.57e5	107	35	0.337	-0.0736	-
3	3	child~	-90558.	9.32e5	139	66	0.416	0.680	-
4	4	child~	252087.	1.11e6	138	55	0.369	-0.147	-
5	5	child~	685078.	1.34e6	183	47	0.219	-0.192	-