

## 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>	<dbl>
1	1	childr~	2.71e5	6.47e5		156	68	0.470	0.680	-0.000
2	2	childr~	1.03e6	1.07e6		199	57	0.253	-0.0229	-0.000
3	3	childr~	1.03e6	1.23e6		83	18	0.216	-0.600	-0.000
4	4	childr~	8.62e5	1.11e6		193	137	0.712	0.976	-0.000
5	5	childr~	8.08e4	8.40e5		76	45	0.491	0.656	-0.000