UNISA university of south africa

INLA Workshop

23-27 June 2019, UNISA Science campus, Florida

Integrated Nested Laplace Approximations (INLA) and stochastic partial differential equations for spatial modelling

Presenters: Prof H Rue, Dr HC Bakka, Dr J van Niekerk, Prof LK Debusho

Time	Monday 24th June	Tuesday 25th June	Wednesday 26th June	Thursday 27th June
8:30 - 10:30	• Opening / welcome. • Introduction to Bayesian thinking and Integrated Nested Laplace Approximations (INLA) • R-INLA methodology	• Time series models like AR(1) • Survival and joint models for biomedical applications	• Spatial Bayesian Models	• Introduction to Stochastic partial differential equations (SPDE) for spatial modelling
10:30 – 11:00	Tea break	Tea break	Tea break	Tea break
11:00 – 13:00	• Zero inflated generalized linear models • Generalized linear mixed model (GLMM)	• Survival and joint models for biomedical applications (continued)	• Spatial Bayesian Models (Cont.)	• Introduction to Stochastic partial differential equations (SPDE) for spatial modelling (Continued) • Summary
13:00 – 14:00	Lunch	Lunch	Lunch	Lunch
14:00 – 16:00	• Data handling in R (including loading data, basic data descriptive Statistics, running scripts • R-INLA application: Using R-INLA to model continuous data	• R-INLA application: Using R-INLA to model discrete data (point-process model) • Survival and joint models for biomedical applications	• R-INLA application: Spatial Bayesian Models	• R-INLA application: Introduction to Stochastic partial differential equations (SPDE) for spatial modelling • Summary