



GEOMED 2022 short course:

Nimble for Bayesian Disease Mapping

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Abstract:

Bayesian Disease Mapping has matured with the extensive use of purpose built software such as CARBayes, INLA, and GeoBUGS. A recent development which provides a very fast platform for Bayesian modeling is the R package 'Nimble'. This package allows the user freedom to specify a wide range of data models and to fit these using sophisticated computational tools (e.g. MCMC, SeqMC).

This short introductory course is intended to demonstrate some basic uses of the package in the context of disease mapping applications. I will focus on basic relative risk models (such as log-linear risk) and develop from these to fit CAR models for spatial effects. We will examine applications in cancer studies and environmental risk assessment.

A quick intro guide can be found in:

Lawson, A.B. (2020) NIMBLE for Bayesian Disease Mapping *Spatial and Spatio-temporal Epidemiology*. <https://doi.org/10.116/j.sste.2020.100323>