
ROB DEARDON, University of Guelph

Posterior Predictive Approach to Goodness-of-Fit for Infectious Disease Models

In complex non-linear models, such as spatio-temporal infectious disease models, it is often unclear how best to ascertain goodness-of-fit. Often such models are fitted within a Bayesian statistical framework, since such a framework is ideally placed to account for the many areas of data uncertainty. Within a Bayesian context, a major tool in assessing goodness-of-fit is the posterior predictive distribution. Here, we examine different test statistics and ascertain how well they can detect model misspecification via a simulation study.