

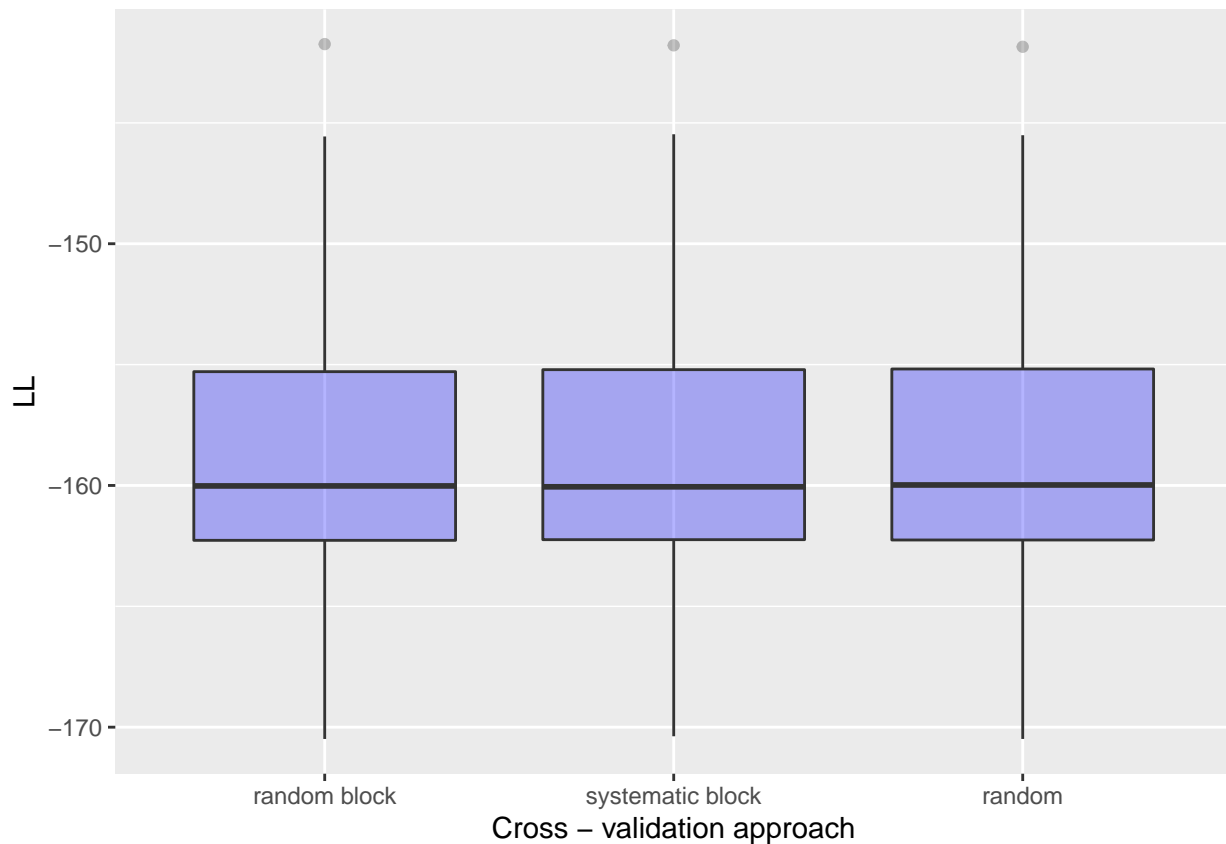
Summarize results of spatial blocking

Eric Ward

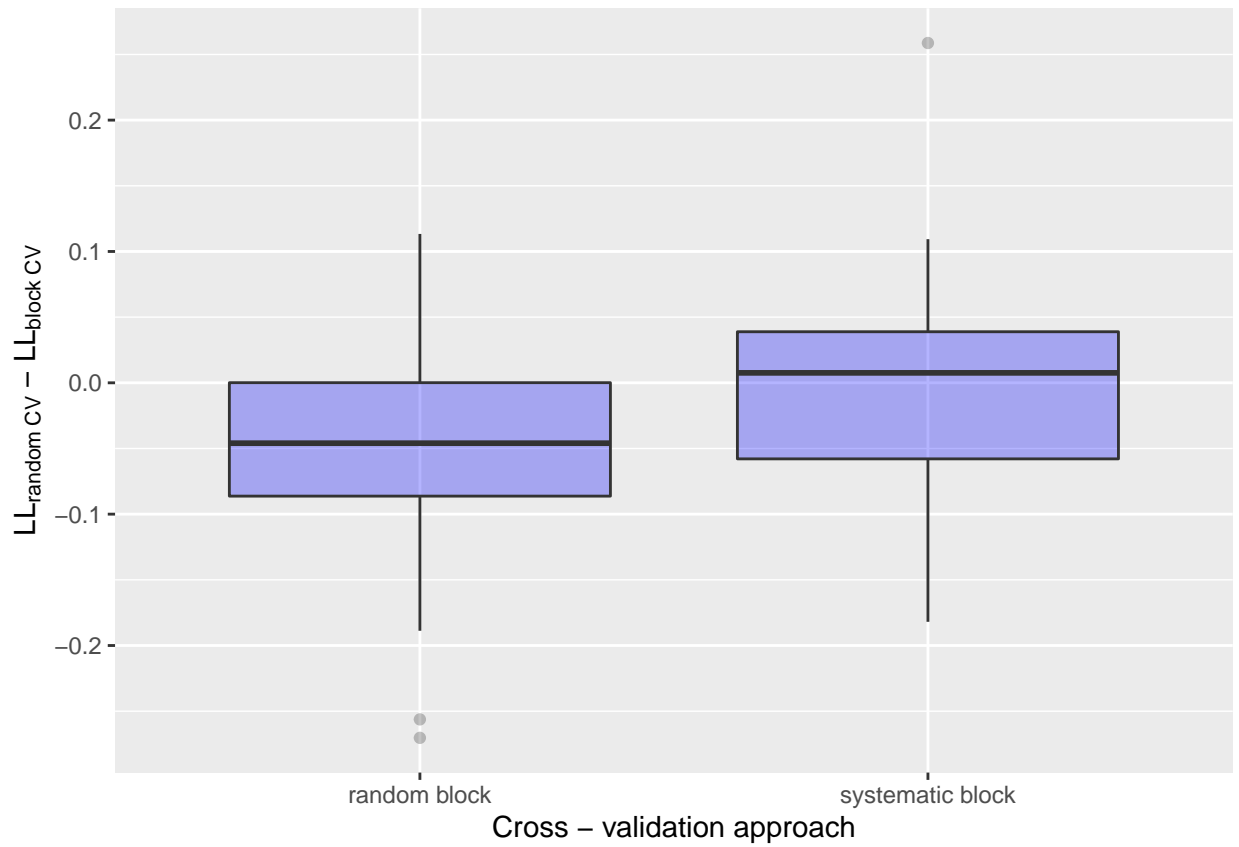
5/30/2020

Note: sdmTMB reports the objective function as the NLL – but it's flipped here to just be the log-likelihood

First we'll look at holding the range (for spatial resampling) and kappa (defining spatial autocorrelation in the data) and look at how the choice of spatial sampling affects the likelihood. The operating model and estimation model both include covariate effects. This shows little difference between the models, and a lot of variation.



But that approach doesn't take the variability among datasets into account. Because we've resampled the same datasets, we can focus on a single dataset and look at how each of the block sampling approaches affects the log-likelihood relative to the model that uses random cross-validation (not taking spatial autocorrelation into account). This shows that the LL is largely unaffected with the systematic approach – but the LL using 'random block' sampling in blockCV results in higher likelihoods relative to the random approach (difference is negative).



But because the NLL is on a relative scale, what also matters though is how the difference in likelihoods between this model compares to a simpler model (say a null model fit to the same data, but not including an estimated covariate effect).

