

ST733 – Assignment 4 – Prediction

1. Using your final model for GenX data in Assignment 2, make a prediction map with uncertainty quantification for California (with depth fixed at the average depth).
2. Select a few prediction locations, \mathbf{s}^* , and plot the Kriging weights at the training locations. That is, the Kriging prediction is

$$\hat{Y}(\mathbf{s}^*) = X(\mathbf{s}^*)\hat{\boldsymbol{\beta}} + \sum_{i=1}^n w_i[Y(\mathbf{s}_i) - X(\mathbf{s}_i)\hat{\boldsymbol{\beta}}],$$

make a map of the weights w_i .

3. For one \mathbf{s}^* , plot the weights for a few different values of the covariance parameters and comment on the changes you observe.