

Simulation Results: Scenario 0

We consider two covariates: elevation (z_1) and gradient of elevation (z_2) contained in the **bei** datasets. We fix the coefficients of z_1 and z_2 to be respectively $\beta_1 = 2$ and $\beta_2 = .75$. The intercept is fixed so that we have in average 500 points in W_1 , 2000 points in W_2 and 4000 points in W_3 where

$$W_1 = [0, 250] \times [0, 125], \quad W_2 = [0, 500] \times [0, 250] \quad \text{and} \quad W_3 = [0, 1000] \times [0, 500].$$

Table 1: Empirical prediction properties based on 2000 replications of inhomogeneous Strauss model with gamma=.2,5 and inhomogeneous Geyer model with gamma=1.5. No penalization and estimations are based on the pseudolikelihood function.

W	Model	Bias	SD	RMSE	nbre.pts
W1	Strauss	0.09	0.49	0.5	101
W1	Strauss	0.1	0.4	0.41	138
W2	Strauss	0.01	0.23	0.23	396
W2	Strauss	0.01	0.18	0.18	540
W3	Strauss	0.02	0.13	0.13	1137
W3	Strauss	0.01	0.1	0.1	1486
W1	Geyer	0.07	0.42	0.43	752
W2	Geyer	0.01	0.19	0.19	2965
W3	Geyer	0.03	0.08	0.09	5620