test_latex

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$$\kappa$$

$$\mu = [m(u_1), \cdots, m(u_M)]$$
$$\sum_{i,j} = \kappa \tag{1}$$

$$\mathbf{K}_{X,X} K$$

$$\kappa(u, u') = \sigma_f^2 (1 + \frac{\sqrt{5}|h|}{\ell} \frac{5h^2}{3\ell^2}) exp(-\frac{-\sqrt{5}|h|}{\ell}) \tag{2}$$

Suppose we observe a training set $\mathcal{D} = (u_n, J(u_n) : n = 1 : N)$ g, where $J(u_n)$ is the noise-free observation of the function evaluated at u_n. Now we consider the case of predicting the outputs for new inputs that may not be in $\mathcal{D}$. Specifically, given a test set (prediction set) set U^* of size $N_* \times D$, we want to predict the function outputs $J^* = [J(u_1), \cdots, J(x_{N_*})]$