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$$K(x,y) := \exp\left(-\beta\|x-y\|_2^2\right), \forall x,y \in^d, \quad (1)$$

$\sum_{j=1}^{N} \alpha_j K(x_j,x)+$
$\sum_{m=1}^{Q} b_m p_m(x), x \in^d$
$\sum_{j=1}^{N} \alpha_j K(x_j,x)+$
$\sum_{m=1}^{Q} b_m p_m(x)+$
$\sum_{j=1}^{N} \alpha_j K(x_j,x)+$
$\sum_{m=1}^{Q} b_m p_m(x)$
$+$
$\sum_{j=1}^{N} \alpha_j K(x_j,x)+$
$\sum_{m=1}^{Q} b_m p_m(x)+$
$\sum_{j=1}^{N} \alpha_j K(x_j,x)+$
$\sum_{m=1}^{Q} b_m p_m(x)$

$$\begin{bmatrix} M & P \\ P^T & 0 \end{bmatrix} \begin{bmatrix} \alpha \\ \mathbf{b} \end{bmatrix} = \begin{bmatrix} \mathbf{f} \\ 0 \end{bmatrix}. \quad (2)$$

$\Gamma(z+$
$1) =$
$z\Gamma(z), z \notin$
$-,$
$\Gamma(k+$
$1) =$
$k!, k \in$
$,$
$\Gamma(1/2) =$
$\sqrt{\pi},$
$\int_0^1 u^{x-1}(1-$
$u)^{y-1}du =$
$\frac{\Gamma(x)\Gamma(y)}{\Gamma(x+y)}.$

$$\Omega_d = \begin{cases} cos(r), & d=1 \\ \Gamma\left(\frac{d}{2}\right)\left(\frac{2}{r}\right)^{(d-2)/2} J_{(d-2)/2}(r), & d \geq 2 \end{cases} \quad (3)$$

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Ω
$\Omega \times$
$\Omega \to$
$; =$
Ω
$\underline{K}$
$K(y,x), \forall x,y \in$
$\Omega,$

$$K(x,y) := \exp\left(-\beta\|x-y\|_2^2\right), \forall x,y \in^d, \quad (4)$$

$r =$
$\|x-$
$y\|_2$
$\phi(r) =$
$K(\|x-$
$y\|_2), \phi :$
$[0,\infty) \to$
$\{L_0, L_1, \ldots, L_m\}$
$m+$
1
2
$X =$
$\{x_1, \ldots, x_Q\}$
$Q =$
$(m+$
$1)(m+$
$2)/2$
L_0
L_1
$m+$
1
L_m
X
2
m