

$$\begin{array}{l} \backslash \\ \backslash \\ \backslash \\ \backslash \\ \backslash \\ \backslash \\ 1 \\ \backslash \\ \$ \\ K(x,y):=\exp\left(-\beta\|x-y\|_2^2\right),\forall x,y\in^d, \end{array}$$

$$\begin{array}{l} (1) \quad \sum_{j=1}^N \alpha_j K(x_j,x) + \\ \sum_{m=1}^Q b_m p_m(x), x \in^d \\ \sum_{j=1}^N \alpha_j K(x_j,x) + \\ \sum_{m=1}^Q b_m p_m(x) + \\ \sum_{j=1}^Q \alpha_j K(x_j,x) + \\ \sum_{m=1}^Q b_m p_m(x) \\ + \\ \sum_{j=1}^N \alpha_j K(x_j,x) + \\ \sum_{m=1}^Q b_m p_m(x) + \\ \sum_{j=1}^Q \alpha_j K(x_j,x) + \\ \sum_{m=1}^Q b_m p_m(x) \\ \begin{bmatrix} M & P \\ P^T & 0 \end{bmatrix} \begin{bmatrix} \mathbf{e} \\ \mathbf{f} \end{bmatrix} = \begin{bmatrix} \mathbf{f} \\ \mathbf{0} \end{bmatrix}. \end{array}$$

$$\begin{array}{l} (2) \quad \Gamma(z+1)=\\ z\Gamma(z),z\notin\\ \overline{\Gamma(k+1)}=\\ k!,k\in\\ \dot{\Gamma}(1/2)=\\ \sqrt{\pi},\\ \int_0^1u^{x-1}(1-u)^{y-1}du=\\ \frac{\Gamma(x)\Gamma(y)}{\Gamma(x+y)}.\\ \Omega_d=\begin{cases}cos(r), & d=1\\ \Gamma\left(\frac{d}{2}\right)\left(\frac{2}{r}\right)^{(d-2)/2}J_{(d-2)/2}(r), & d\geq 2\end{cases} \end{array}$$

$$\begin{array}{l} (3) \quad \backslash \\ \Omega \\ \Omega \times \\ \Omega \hookrightarrow \\ \vdots \\ \Omega \\ \overline{K} \\ K(y,x), \forall x,y \in \\ \Omega, \\ K(x,y):=\exp\left(-\beta\|x-y\|_2^2\right),\forall x,y\in^d, \end{array}$$

$$\begin{array}{l} (4) \quad r=\\ \|x-y\|_2\\ \phi(r)=\\ K(\|x-y\|_2),\phi:\\ [0,\infty)\rightarrow\\ \{L_0,L_1,\ldots,L_m\}\\ m+\\ \frac{1}{2}\\ X=\\ \{x_1,\ldots,x_Q\}\\ Q=\\ (m+1)(m+2)/2\\ L_0\\ L_1\\ m+\\ \frac{1}{2}\\ L^m\\ X\\ m \end{array}$$