

$[G1 ; G2]$

*G*

$[G2; G1]$

*B*

$[B1\ G1;\ B2\ G2;\ G3]$

$U$

$$Gi_g + H\{\# : \#\}$$

$i_g$



$$H\{\# : \#\}$$

#





$B i_D$

$i_D$

$C\,i_D$

*A*



$$[B1\ G1;\ B2\ G2]$$



$$= \chi =>$$



$P$

*C*



$N$



$X$









$\{0, 0\}$



$\{+, 0\}$



$\{0, +\}$

$X_{ij}$



$$\hat{x}_i + \epsilon \Delta x \Gamma_x(x_i, y_j)$$

$Y_{ij}$

$$\hat{y}_j + \epsilon \Delta y \Gamma_y(x_i, y_j)$$

$X_{ij}$

$Y_{ij}$





$\hat{y}_j$

$$0 < \epsilon < 1$$

$$\Delta x$$

$$\Delta y$$

$\Gamma$

$$\Gamma(x_i, y_j)$$

$$\Gamma_x(x_i, y_j) = -(x_i/L_x)(1 - x_i/L_x)(0.5 - x_i/L_x)(y_j/L_y)(1 - y_j/L_y)$$



$$\Gamma_y(x_i, y_j) = -(y_j/L_y)(1 - y_j/L_y)(0.5 - y_j/L_y)(x_i/L_x)(1 - x_i/L_x)$$

$$\Gamma_x(x_i, y_j) = +(x_i/L_x)(1 - x_i/L_x)(0.5 - x_i/L_x)(y_j/L_y)(1 - y_j/L_y)$$

$$\Gamma_y(x_i, y_j) = +(y_j/L_y)(1 - y_j/L_y)(0.5 - y_j/L_y)(x_i/L_x)(1 - x_i/L_x)$$

$$\Gamma_x(x_i, y_j) = \sin(4\pi x_i/L_x) \cos(6\pi y_j)/L_y)$$

$$\Gamma_y(x_i, y_j) = \sin(4\pi x_i/L_x) \cos(6\pi y_j)/L_y)$$

$$\Gamma_y(x_i, y_j) = \sin(4\pi y_j/L_y) \cos(6\pi x_i/L_x)$$











&





$$|a + b| + a * \cos(2\pi * k_x * x / L_x) + b * \sin(2\pi * l_y * x / L_y)$$

$$2 \times 3$$

$$(1, 2) - - > (2, 1)$$



$$1 \times 2$$

$$2 \times 1$$

$$D1 == 1$$

$$D2 = 2$$

$$D2 = *1$$

$$1 \times NPETS$$

$$NPETS \times 1$$

$D1$





*NPETS*

$$N \times N \leq NPETS$$

$$NPETS = 4$$

$$N = 2$$

$$NPETS = 6$$



$$2N \times 1/2N$$



$$D1 = *2$$

$$1/2N \times 2N$$

$$D2 = +1$$

$2N$

$$1/2N$$

$$D2 = *0.5$$

$$(1/2)(N) + 1$$

$$2N \times (1/2)(N) + 1$$



$$(1/2)(N + 1)$$

$+P$

$$80 \times 20$$

$G1\{80\}$

$$G2\{20\}$$

$$npets \times 1$$

$B1\{npets\}$

$$B2\{1\}$$



$$/ = 1$$

$$/ = 2$$

$10^{19}$

$$\langle n \rangle$$





$\langle esmfKind \rangle$

$$[42 * (2 * 4)] = 672$$



