

$$\begin{array}{l}??\\ \mathcal{A}\Phi\lambda_s\sigma\sigma S_iP\\ \mathbf{W}\\ U_jS_iS_iP\mathbf{W}\alpha\\ h\\ kn\mathbf{q}=\\ \{q_1,q_2,\ldots,q_j,\ldots,q_k\}\\ q_j\in\\ \{1,-1\}U_j\mathbf{x}=\\ \{x_1,x_2,\ldots,x_j,\ldots,x_k\}=\\ \{p_1q_1,p_2q_2,\ldots,p_jq_j,\ldots,p_kq_k\}\\ \mathbf{p}=\\ \{p_1,p_2,\ldots,p_j,\ldots,p_k\}jp_j^2\\ \mathbf{W}=\{w_{ij}\}_{n\times k}\\ w_{ij}jis\end{array}$$

$$\begin{array}{l}(1)\mathbf{s}=\mathbf{W}\mathbf{x}\\ \mathbf{x}\mathbf{W}\mathbf{W}n\times\\ 1\mathbf{W}=\\ \{\mathbf{w}_1,\mathbf{w}_2,\cdots,\mathbf{w}_k\}^T\\ \mathbf{G}=\\ \{g_{ij}\}_{k\times n}\\ g_{ij}\in\\ Rg_{ij}=\\ h_{ij}R_{ij}^{-\alpha}\\ h_{ij}R_{ij}S_iU_j\mathbf{y}\end{array}$$

$$\begin{array}{l}(2)\mathbf{y}=\mathbf{G}\mathbf{s}+\mathbf{z}\\ \mathbf{G}\tilde{z}\in\\ RN_0\\ \mathbf{W}\end{array}$$

$$\begin{array}{l}(3)\mathbf{W}=\mathbf{G}^T(\mathbf{G}\mathbf{G}^T)^{-1}\\ ^T\\ \mathbf{?????}\mathbf{xz}\end{array}$$

$$\begin{array}{l}(4)\mathbf{y}=\mathbf{x}+\mathbf{z}\\ j\gamma_j??\end{array}$$

$$\begin{array}{l}\gamma_j=\frac{x_j^2}{N_0}=\frac{p_j^2}{N_0}\\ (5)U_j\end{array}$$

$$\begin{array}{l}(6)R_j=\log_2(1+\gamma_j)\\ ??\\ _cluster.pdf\\ ??\\ \mathcal{DS}(x,y)=\\ \{S_1(x_1,y_1),S_2(x_2,y_2),\ldots,S_i(x_i,y_i),\ldots,S_n(x_n,y_n)\}\\ xy\iota,j\in\\ \{1,2,\ldots,n\}S_iS_jR_{ij}\\ SR_{ij}\iota,j\in\\ \{1,2,\ldots,n\}\mathcal{G}\\ \mathcal{GV}=\\ \{v_1,v_2,\ldots,v_i,\ldots v_n\}\mathcal{S}i\in\\ \{1,2,\ldots,n\}\\ S_i\rightarrow\\ v_i\mathcal{GE}\tau i,j\in\\ \{1,2,\ldots,n\}R_{ij}<\\ \uparrow\\ e_{ij}\in\\ \mathcal{E}\\ \mathcal{G}e_{ij}v_iv_j\mathcal{GE}\mathbf{A}=\\ \{a_{ij}\}_{n\times n}\end{array}$$

$$\begin{array}{l}(7)a_{ij}=\{1,e_{ij}\in\mathcal{E},0,e_{ij}\notin\mathcal{E}.\\ \mathcal{G}v_iv_ji j\mathcal{GS}=\\ \dot{\bigcup}_{i=1}^m\mathcal{C}_i\\ Sm??\\ \tau\mathcal{S}(x,y)\\ \mathcal{K}\\ \mathbf{A}=\\ \{a_{ij}\}_{n\times n}=\\ \{0\}_{n\times n}\mathcal{C}=\\ 0\mathcal{K}=\mathbf{v}=\\ (\mathcal{K})\end{array}$$