

$$\mathbf{x}_i$$

$$\mathbf{z}_i$$

$$\boldsymbol{\mu}$$

$$\boldsymbol{\Sigma} = \mathbf{U}\mathbf{D}\mathbf{U}^T$$

and

$$\mathbf{z}_{12}$$

$$\mathbf{z}_{23}$$

$$\{\mathbf{x}_1,\mathbf{x}_2\}$$

$$\{\mathbf{x}_2,\mathbf{x}_3\}$$

$$\boldsymbol{\mu}_{12}$$

$$\boldsymbol{\mu}_{23}$$

$$\boldsymbol{\Sigma}_{12}=\mathbf{U}_{12}\mathbf{D}_{12}\mathbf{U}_{12}^T$$

$$\boldsymbol{\Sigma}_{23}=\mathbf{U}_{23}\mathbf{D}_{23}\mathbf{U}_{23}^T$$

$$N$$