

$$\pi(x) = \exp\left(-\frac{1}{2}(x-\mu)^T P (x-\mu)\right)$$

$$= \exp\left(-\frac{1}{2} \underline{\underline{x^T P x}} + \underline{\underline{\mu^T P x}} - \underline{\underline{\frac{1}{2} \mu^T P \mu}}\right)$$

