

⇒ A strategy parameter set

- is part of each individual,
- represents the p.d.f. for mutation of the individual:

$$p(\vec{z}) = \sqrt{\frac{\det \mathbf{C}}{(2\pi)^n}} \exp\left(-\frac{1}{2} \vec{z}^T \mathbf{C} \vec{z}\right) .$$

- $\mathbf{C}^{-1}$ : Covariance matrix:

$$C_{ii} = \sigma_i^2$$

$$C_{ij, (i \neq j)} = \begin{cases} 0 & , \text{ no correlations} \\ \frac{1}{2}(\sigma_i^2 - \sigma_j^2) \tan(2\alpha_{ij}) & , \text{ correlations} \end{cases}$$

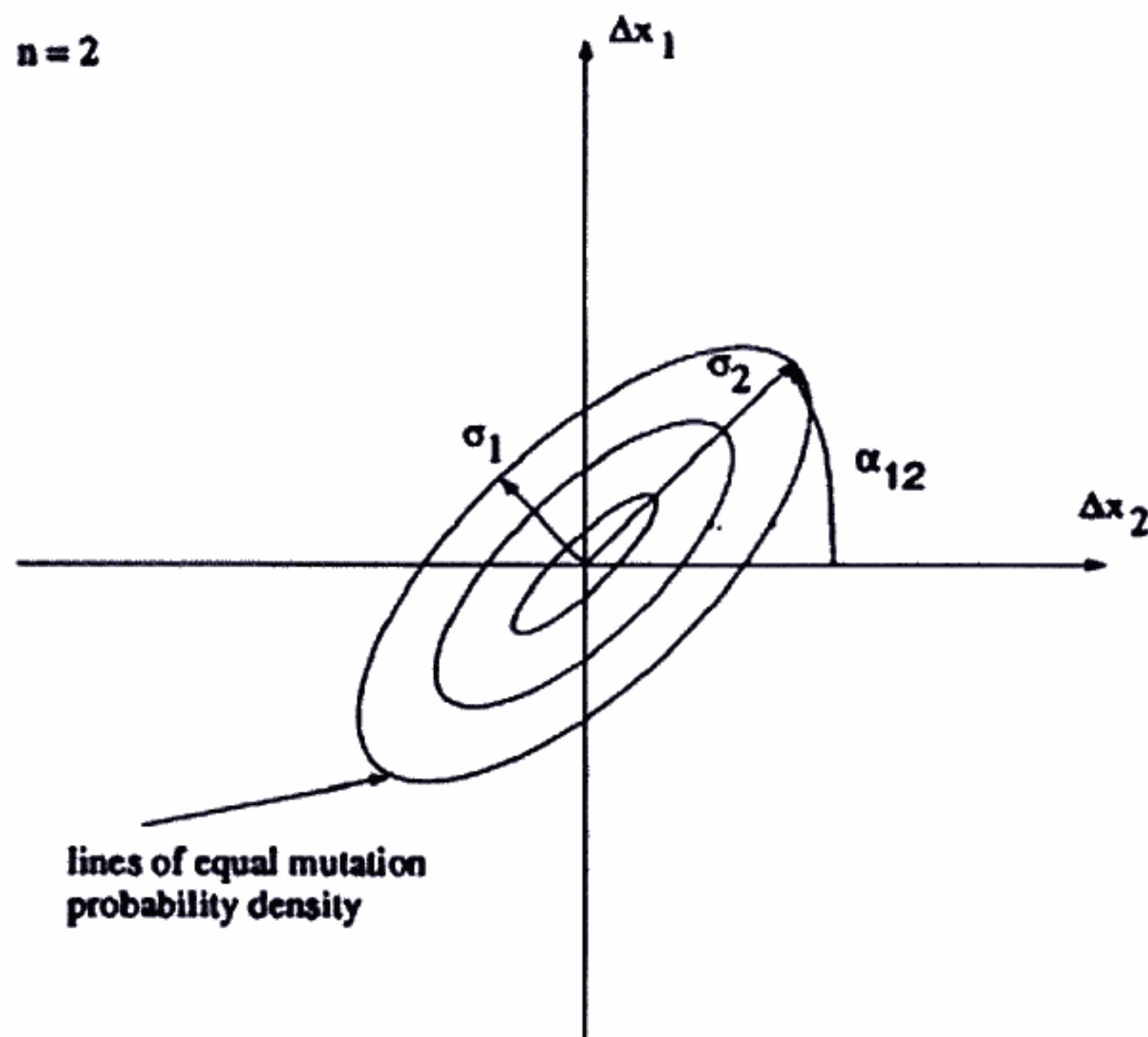


Figure 5: Illustration of the mutation ellipsoid for the case  $n = 2$ ,  $n_s = 2$ ,  $n_a = 1$ .