Diagramas de Dispersión y Autovectores

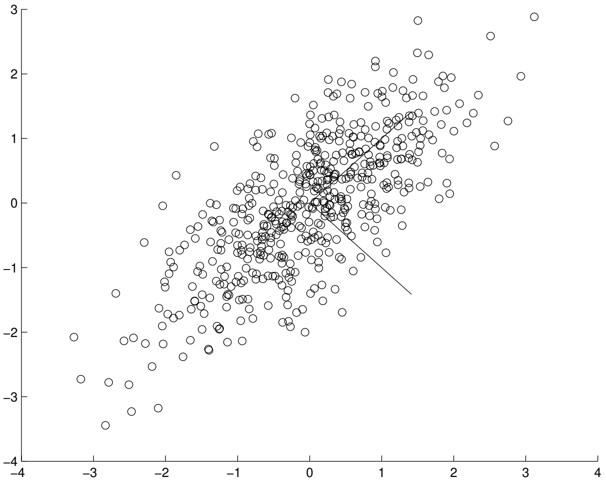
$\mathbf{X}$ e $\mathbf{Y}$ gaussianas de media nula

$$-1 \leq \rho_{XY} \leq 1$$

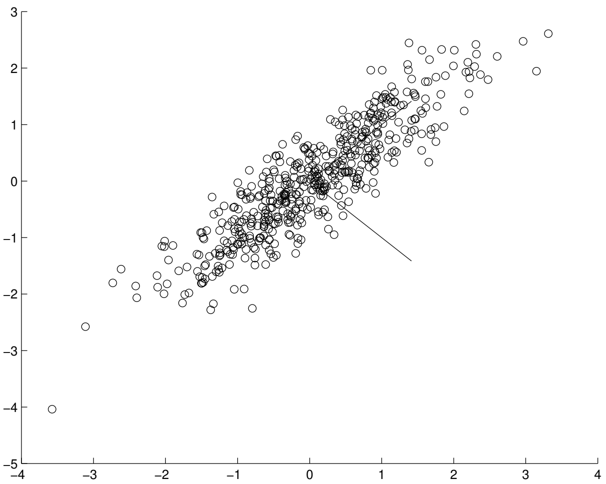
$$\mathbf{C} = \begin{bmatrix} \sigma_x^2 & \rho_{XY}\sigma_X\sigma_Y \\ \rho_{XY}\sigma_X\sigma_Y & \sigma_Y^2 \end{bmatrix}$$

$$\mathbf{\Phi}(\sigma_X = 1, \sigma_Y = 1) = \frac{1}{\sqrt{2}} \begin{bmatrix} 1 & 1 \\ -1 & 1 \end{bmatrix}$$

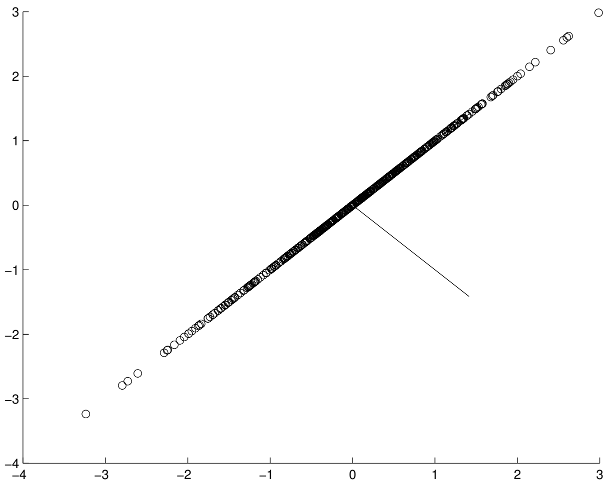
$$\mathbf{\Lambda}(\rho = \mathbf{0.7}) = \frac{1}{\sqrt{2}} \begin{bmatrix} 0.3 & 0 \\ 0 & 1.7 \end{bmatrix}$$



$$\mathbf{\Lambda}(\rho = \mathbf{0.9}) = \frac{1}{\sqrt{2}} \begin{bmatrix} 0.1 & 0 \\ 0 & 1.9 \end{bmatrix}$$



$$\mathbf{\Lambda}(\rho = \mathbf{1.0}) = \frac{1}{\sqrt{2}} \begin{bmatrix} 0 & 0 \\ 0 & 2 \end{bmatrix}$$



$$\mathbf{\Lambda}(\rho = -\mathbf{0.9}) = \frac{1}{\sqrt{2}} \begin{bmatrix} 1.9 & 0 \\ 0 & 0.1 \end{bmatrix}$$