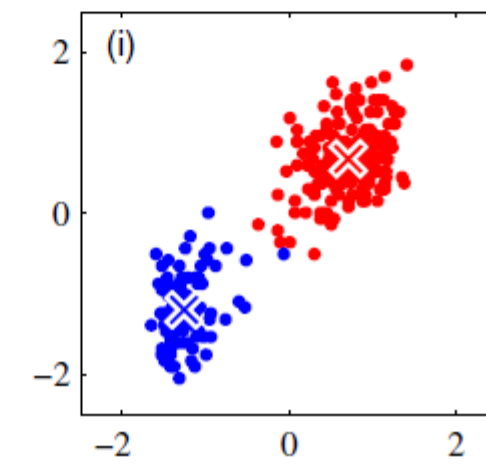
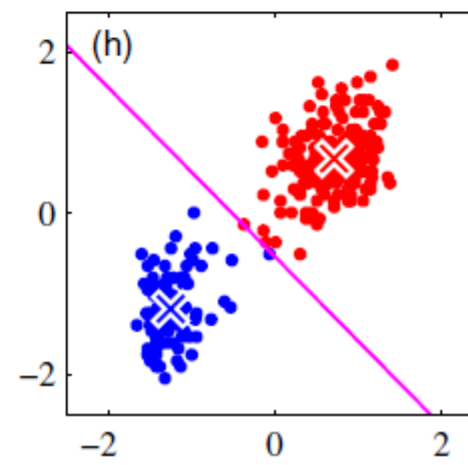
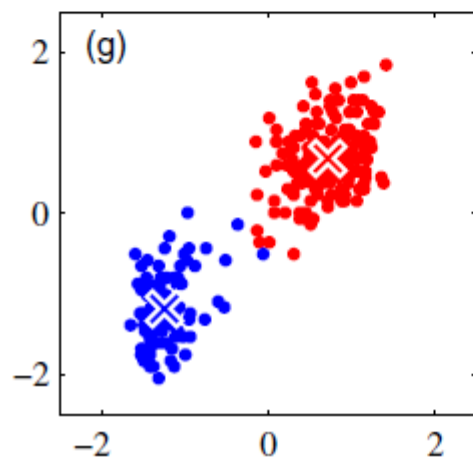
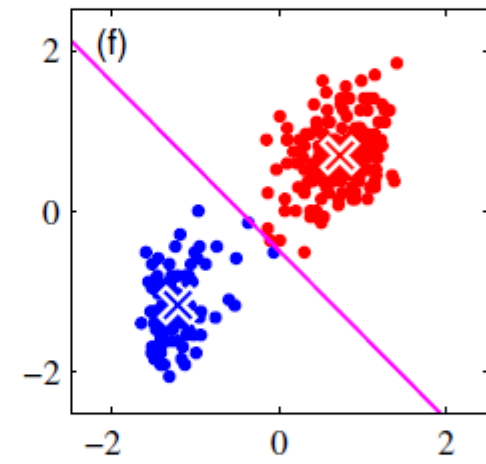
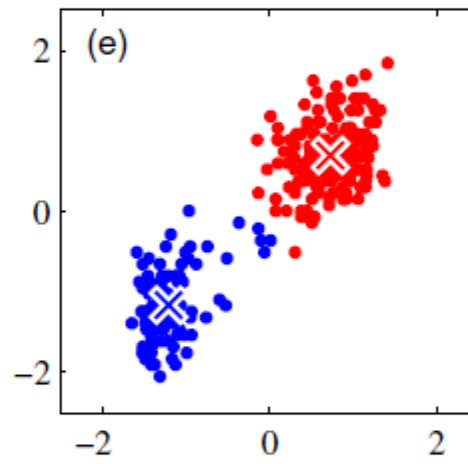
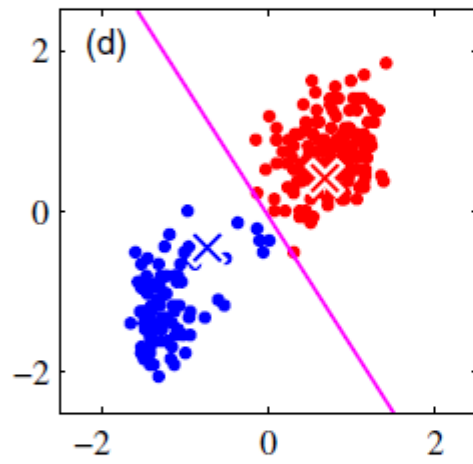
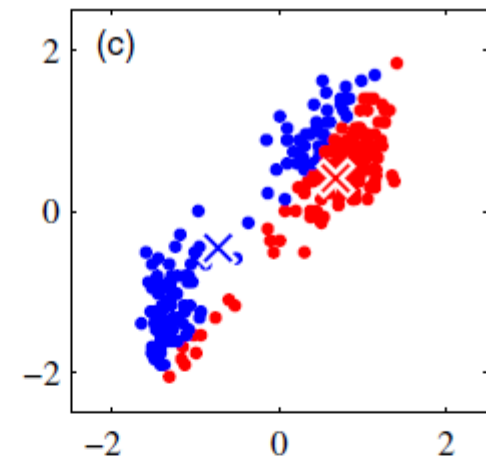
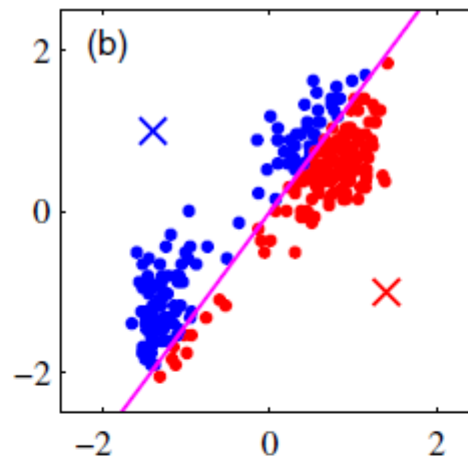
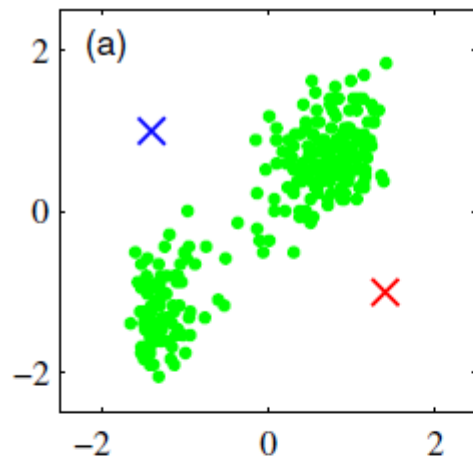
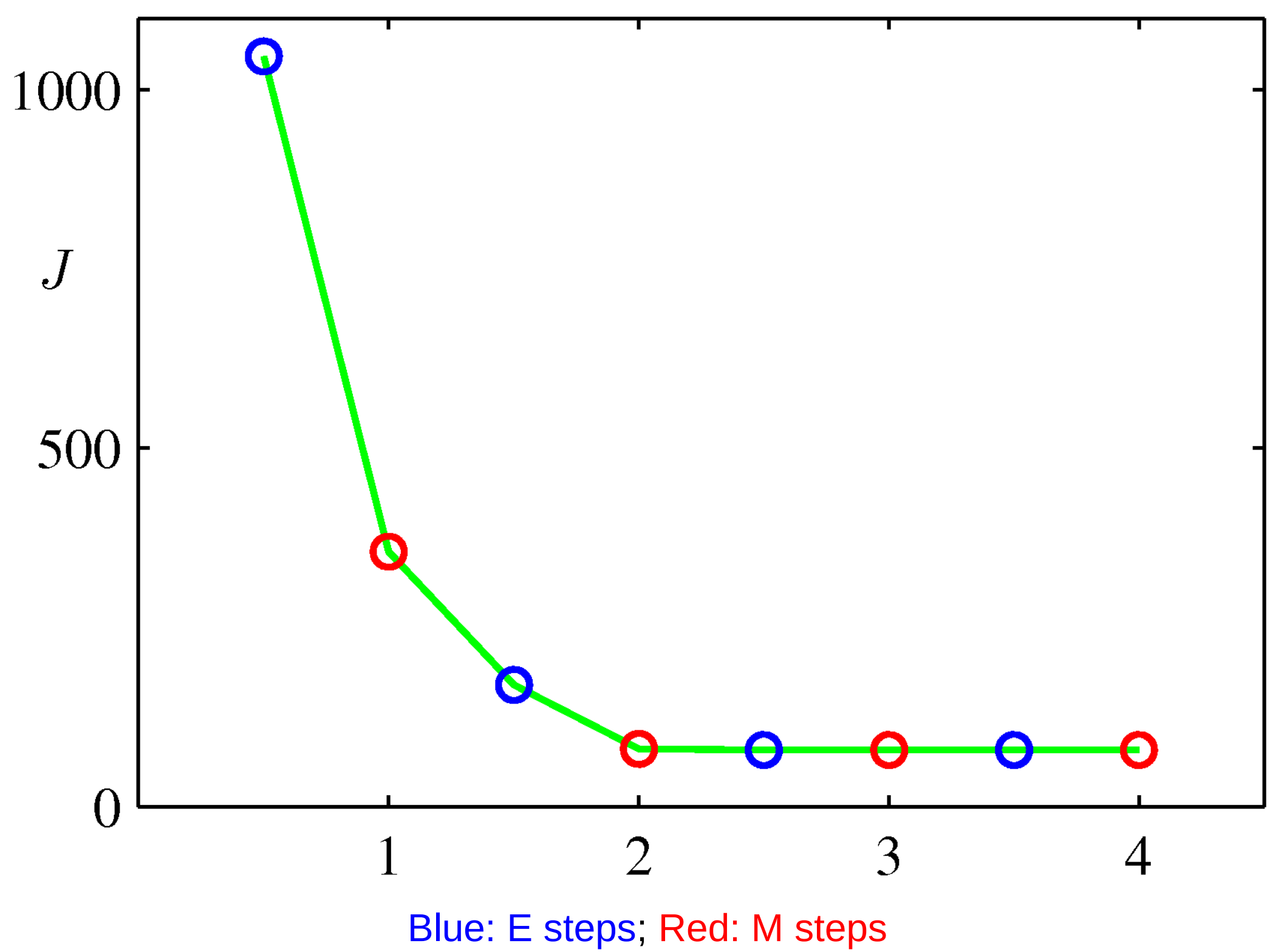


# K-means





# K-means for image segmentation

$K = 2$



$K = 3$



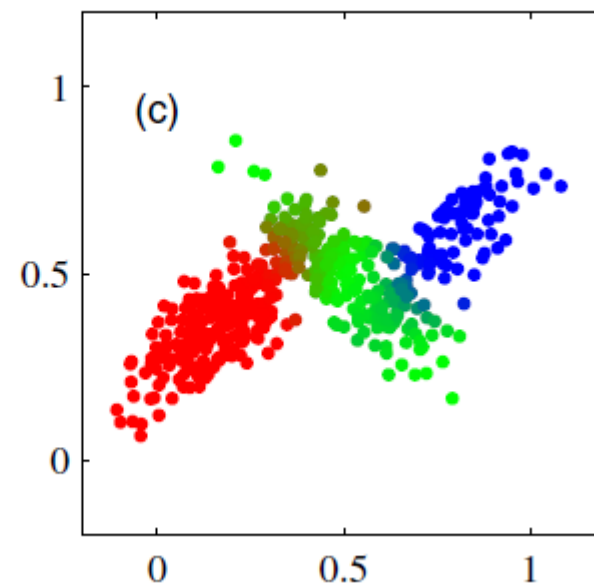
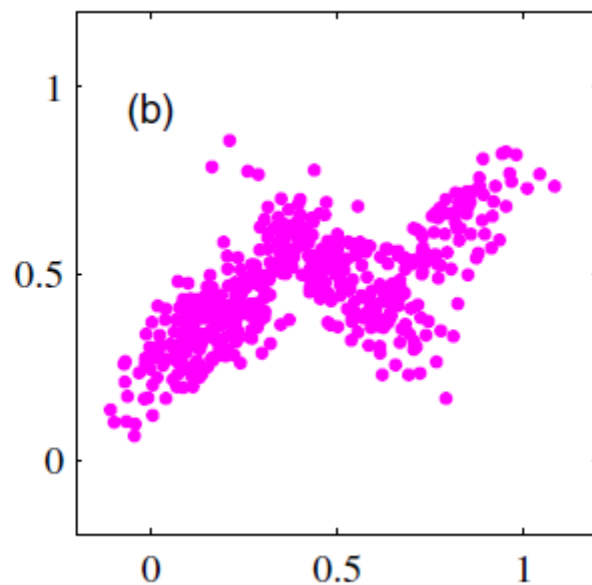
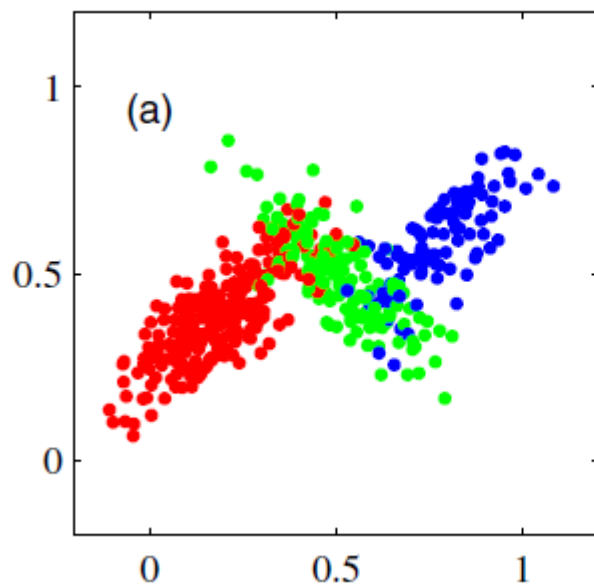
$K = 10$



Original image



# Gaussian Mixture Modelling



$$p(\mathbf{x}|w_1=1)$$

$$p(\mathbf{x}|w_2=1)$$

$$p(\mathbf{x}|w_3=1)$$

$$p(\mathbf{x})$$

$$\gamma(w_{n1})$$

$$\gamma(w_{n2})$$

$$\gamma(w_{n3})$$

# EM Algorithm

