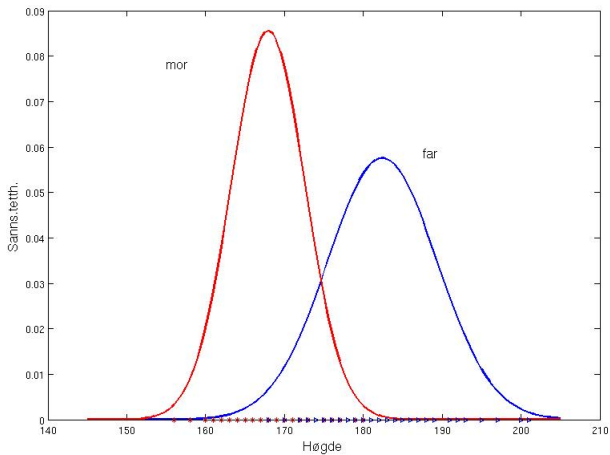


Kap. 11.12 Korrelasjon

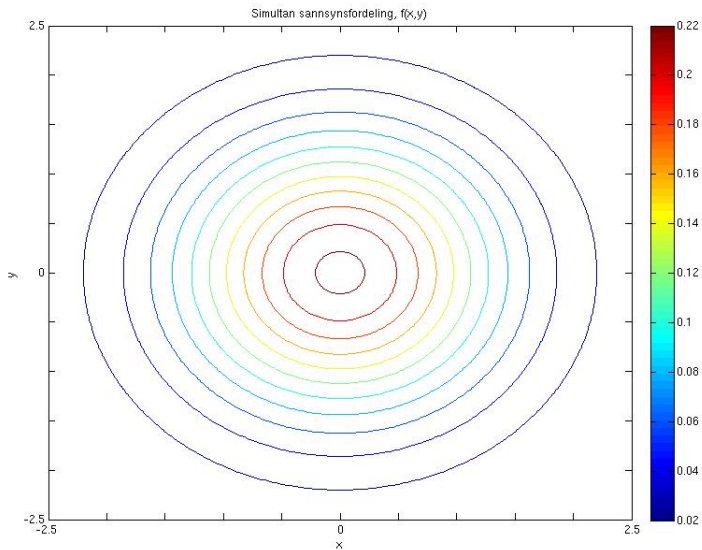
Skal binde saman:

- ▶ Kap. 3.4 Simultan sannsynsfordeling
 - ▶ To stok.var., X og Y , $f(x, y)$
- ▶ Kap. 4.2 Varians og kovarians av stokastiske variable
 - ▶ Kovarians $\sigma_{XY} = E((X - \mu_X)(Y - \mu_Y))$
 - ▶ Korrelasjon $\rho = \frac{\sigma_{XY}}{\sigma_X \sigma_Y}$, $-1 < \rho < 1$
- ▶ Kap. 11.2 Enkel lineær regresjon
 - ▶ Kjenner forklaringsvariabelen x . $Y = \alpha + \beta x + \epsilon$, $\epsilon \sim N(0, \sigma_\epsilon^2)$.
- ▶ Kap. 11.5 R^2 : Tilpassingskoeffisienten.
 - ▶
$$R^2 = 1 - \frac{\sum_{i=1}^n e_i^2}{\sum_{i=1}^n (y_i - \bar{y})^2}.$$
$$e_i: \text{Residual}$$

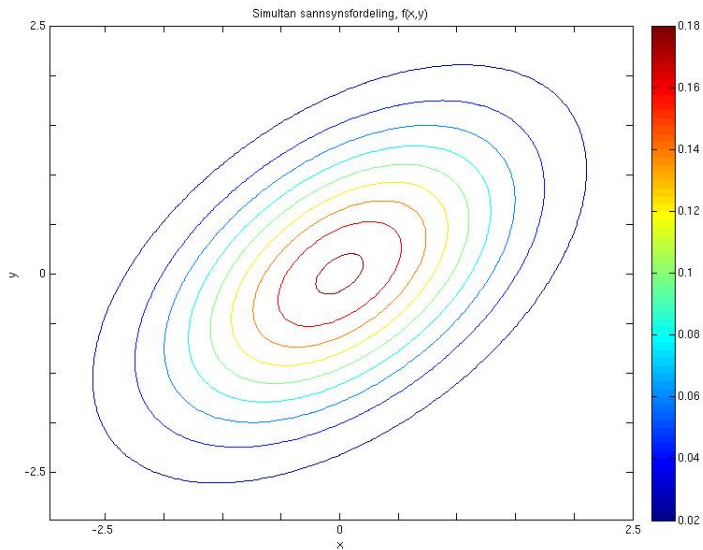
Mor - far marginale sanns.fordeling og data



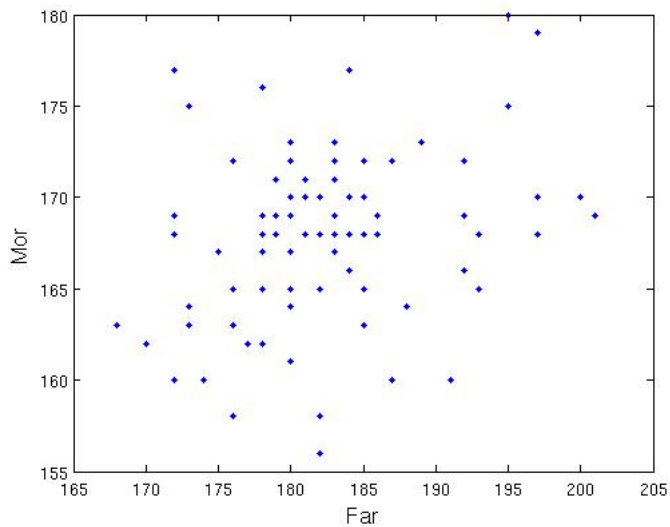
Simultanfordeling 1, marginale $N(0,1)$



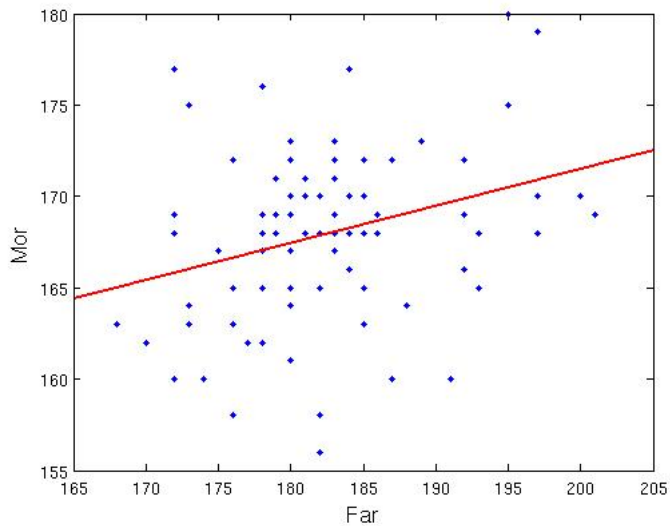
Simultanfordeling 2, marginale $N(0,1)$



Data høgde far høgde mor



Lineær modell høgde far høgde mor



Simultanfordeling højde far højde mor

