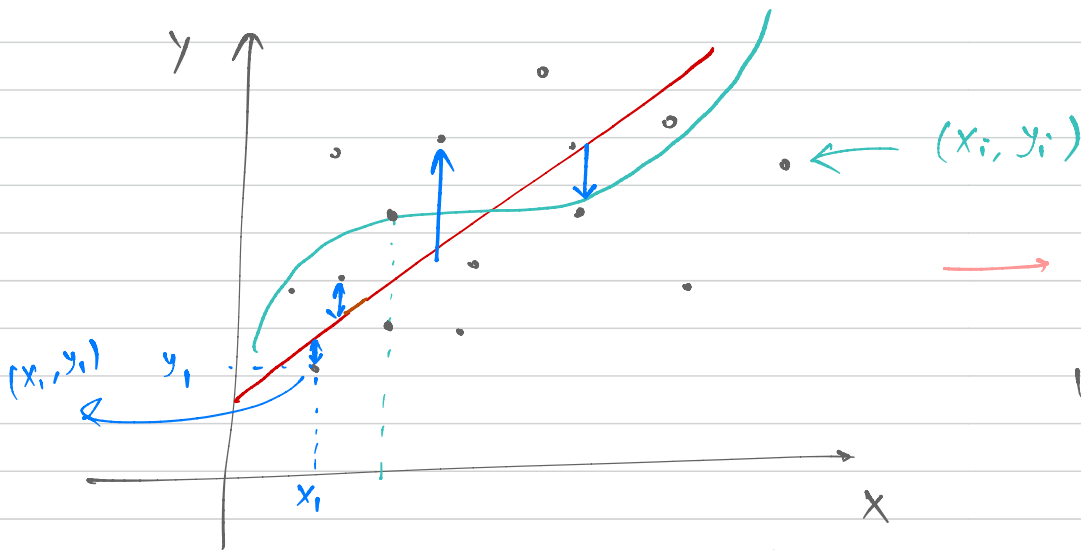


lecture 23

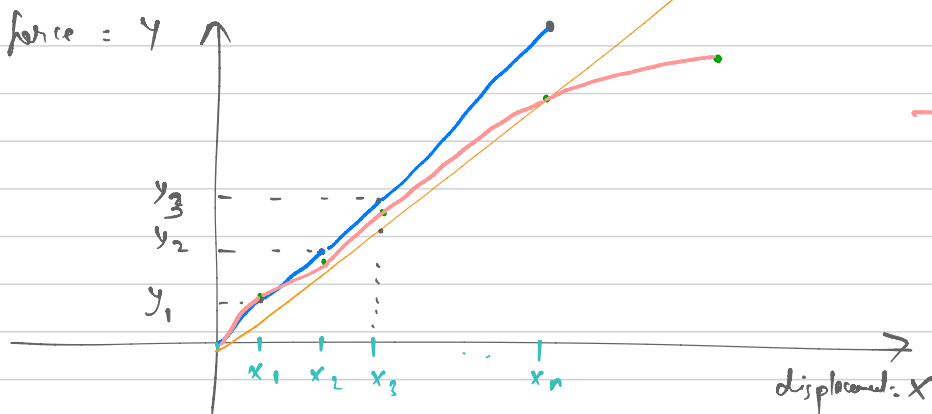
Curve fitting & interpolation

Pick straight line



→ curve fitting

- ↓
- least squares
 - linear least square
 - polynomial least square
 - nonlinear (exp, log, tanh)



→ interpolation

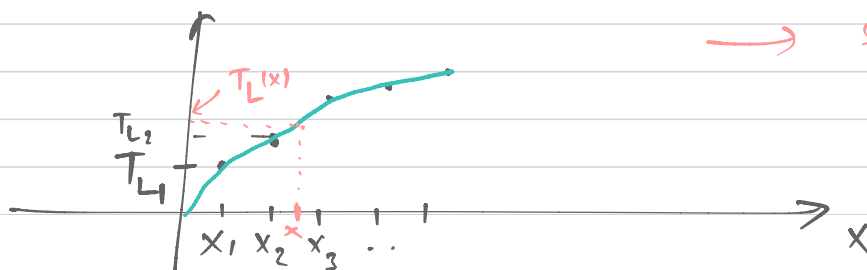
Suppose you have very complex model

Temperature

$$-ka \frac{d^2 T}{dx^2} = q_{ext}$$



temperature free T_L



→ surrogate model

Least square for curve fitting

→ deterministic

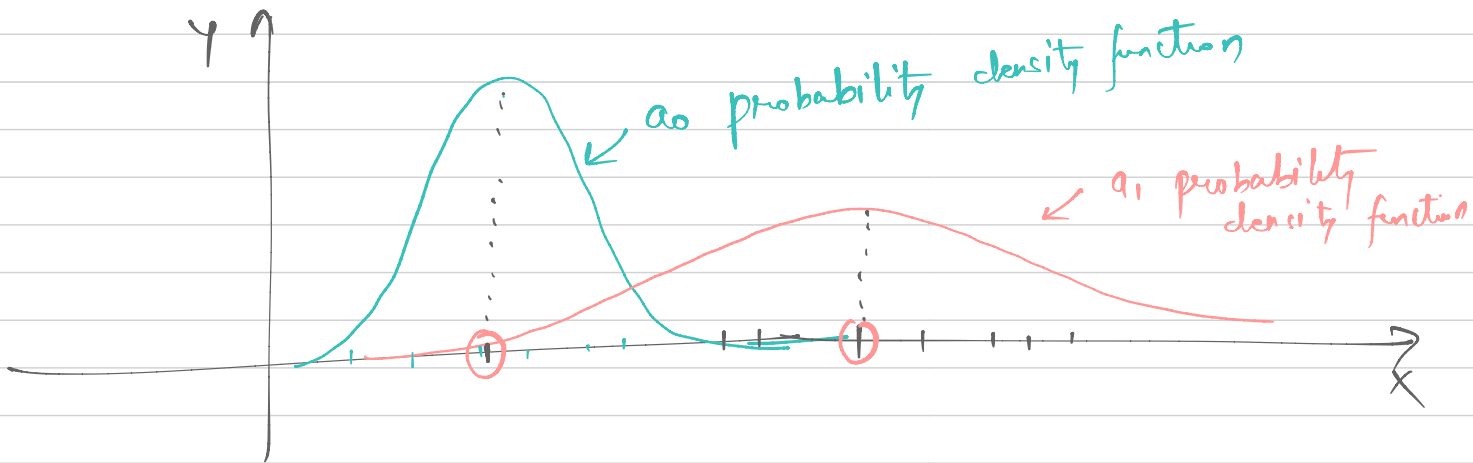
$$y(x) = a_0 + a_1 x$$

The value of a_0 and a_1

Monte-Carlo based methods

→ probabilistic

probability distribution
of a_0 and a_1



Neural Network

Preliminary statistics

