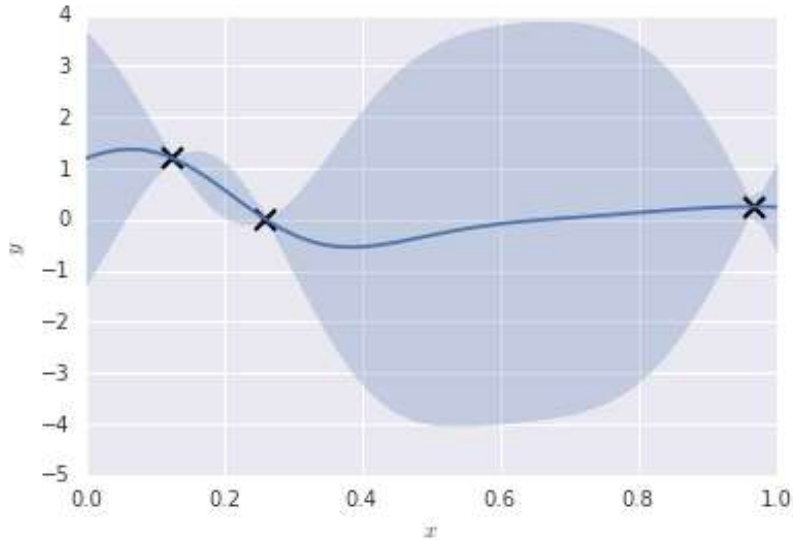


Lecture 23: Bayesian global optimization

Professor Ilias Bilonis

Maximum upper interval

Maximum Upper Interval



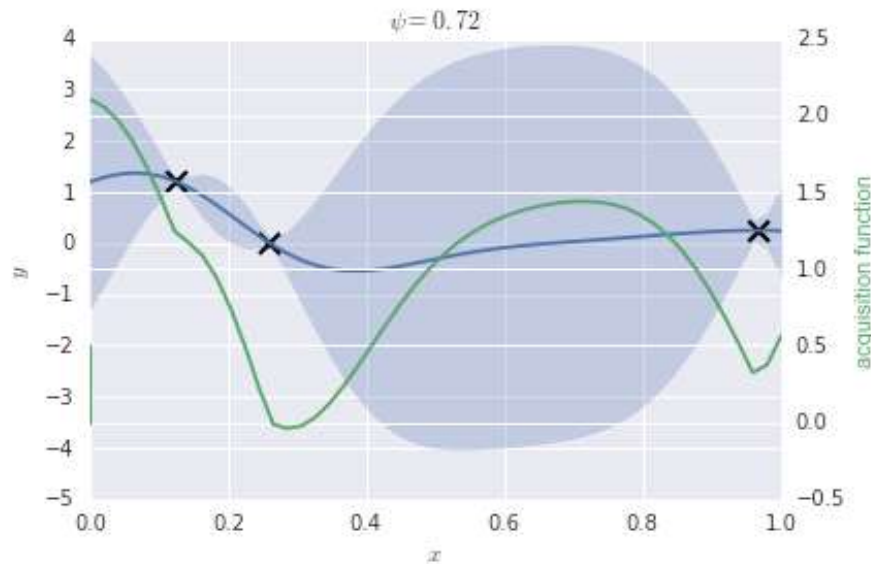
Use the variance to explore:

$$a(x) = m_n^*(x) + \psi \sigma_n^*(x)$$

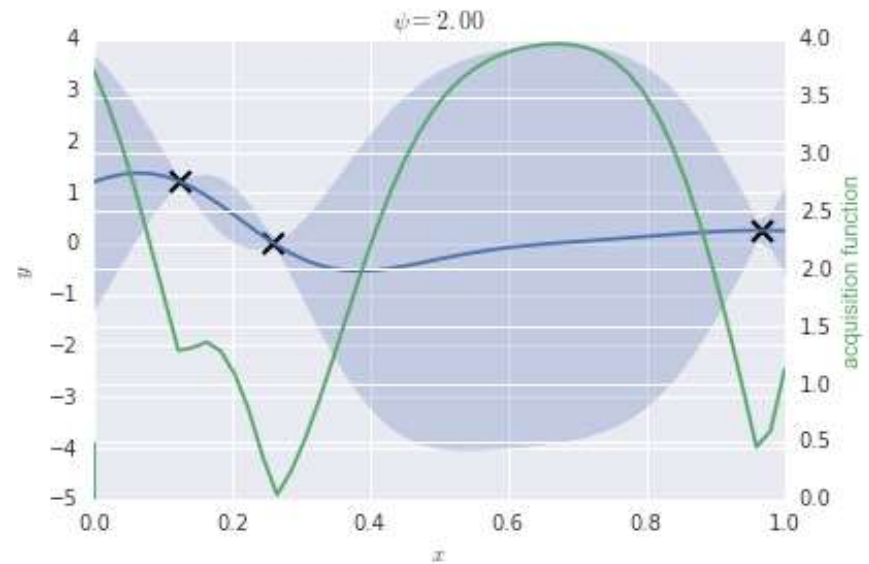
Provable convergence to the
global maximum!

Maximum Upper Interval

$$a(x) = m_n^*(x) + \psi \sigma_n^*(x)$$



Small ψ exploits more



Large ψ explores more

How to pick ψ ?