

# Bayesian Hyperparameter Optimization

## **Surrogate Function**

The surrogate function approximates another function. In our case we want estimate the values of the black box function to find the (global) minimum. [1] The Gaussian Process (GP) returns not only the expected function, but also an expected confidence interval at each area of the function. This gives us the opportunity to search more specifically in places where the function is still uncertain or where the function suspects good scores. [2]

- For time-consuming objective functions