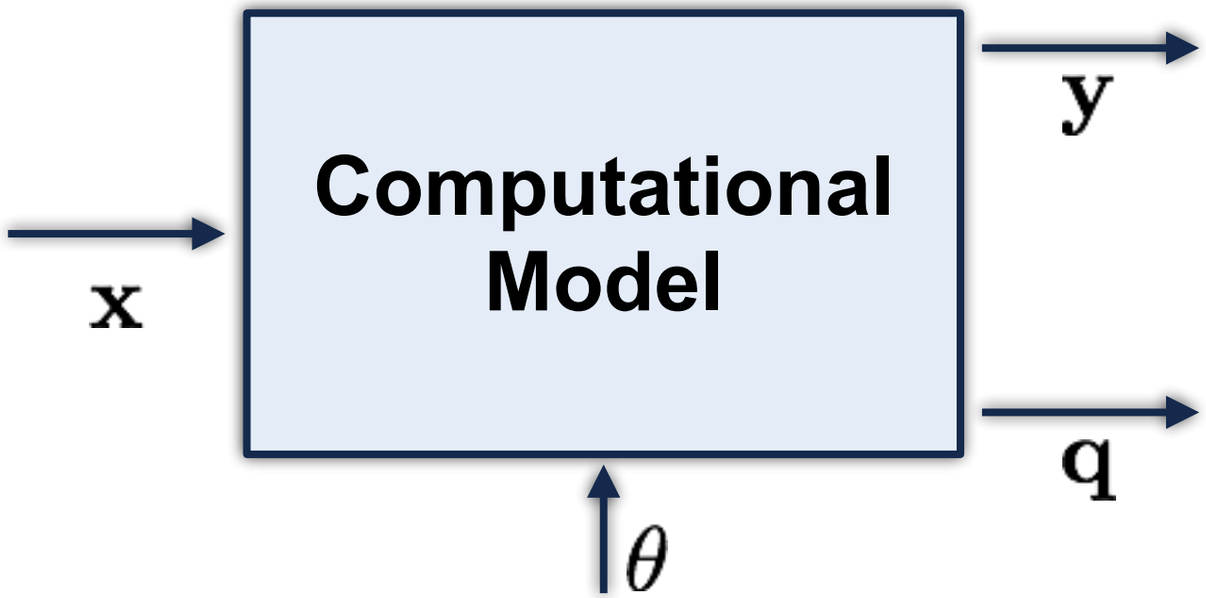
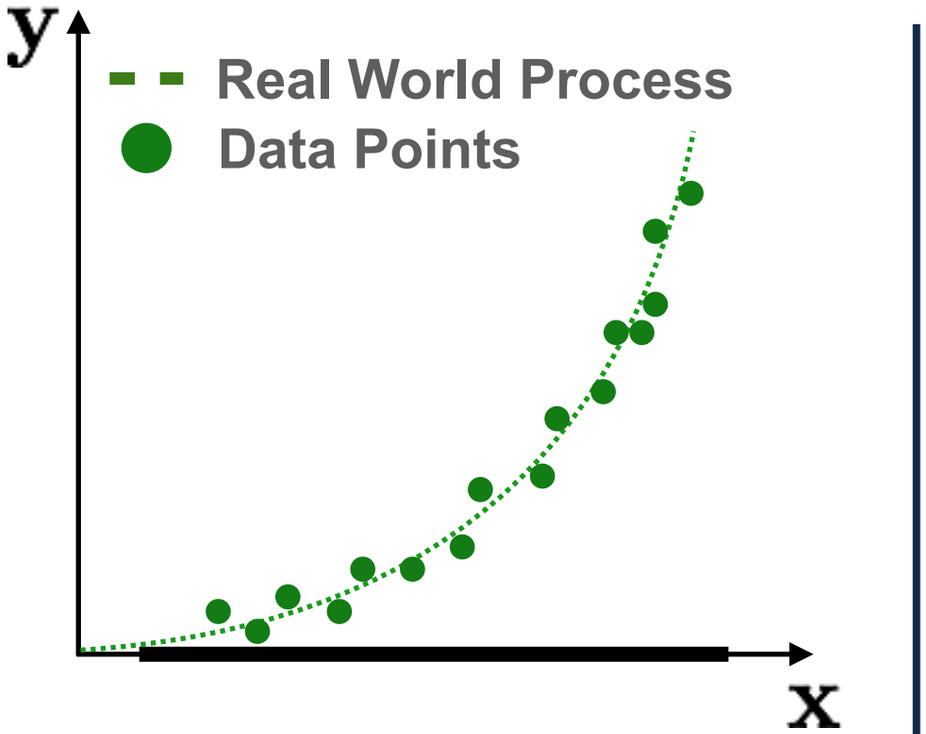
Classic Approach to Validation

One approach [2] for taking into account the uncertainties on the predictions relies on "appending" a statistical model directly to the observable quantities:





[2] Kennedy, M.C. and O'Hagan, A., "*Bayesian Calibration of Computer Models*", Journal of the Royal Statistical Society: Series B, Vol. 63, 2001.

Classic Approach to Validation

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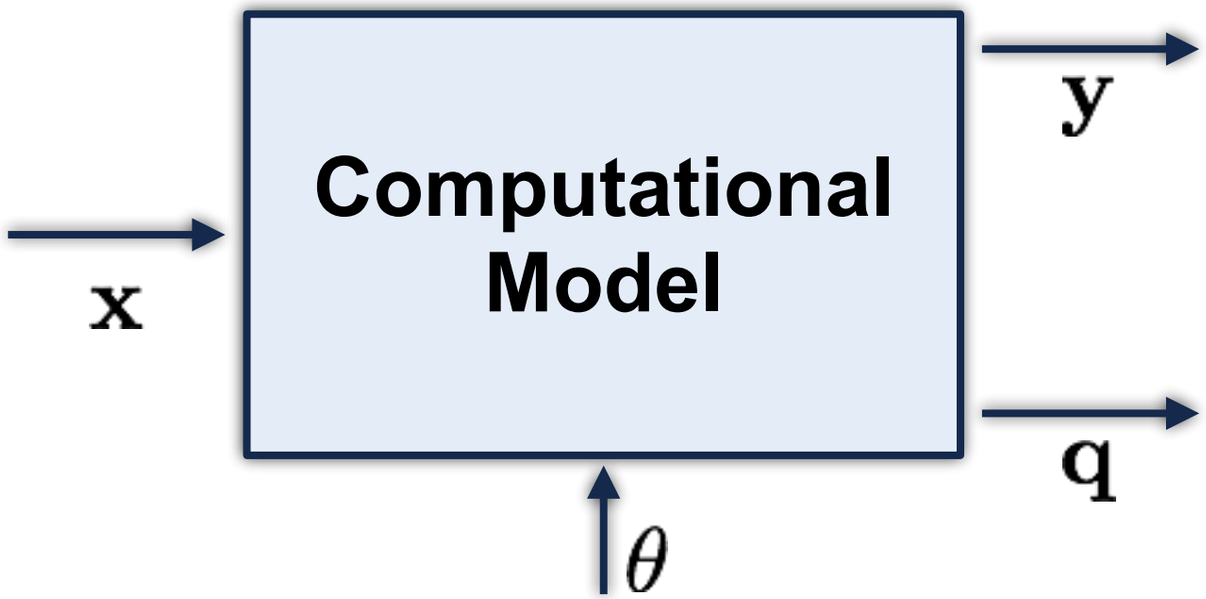

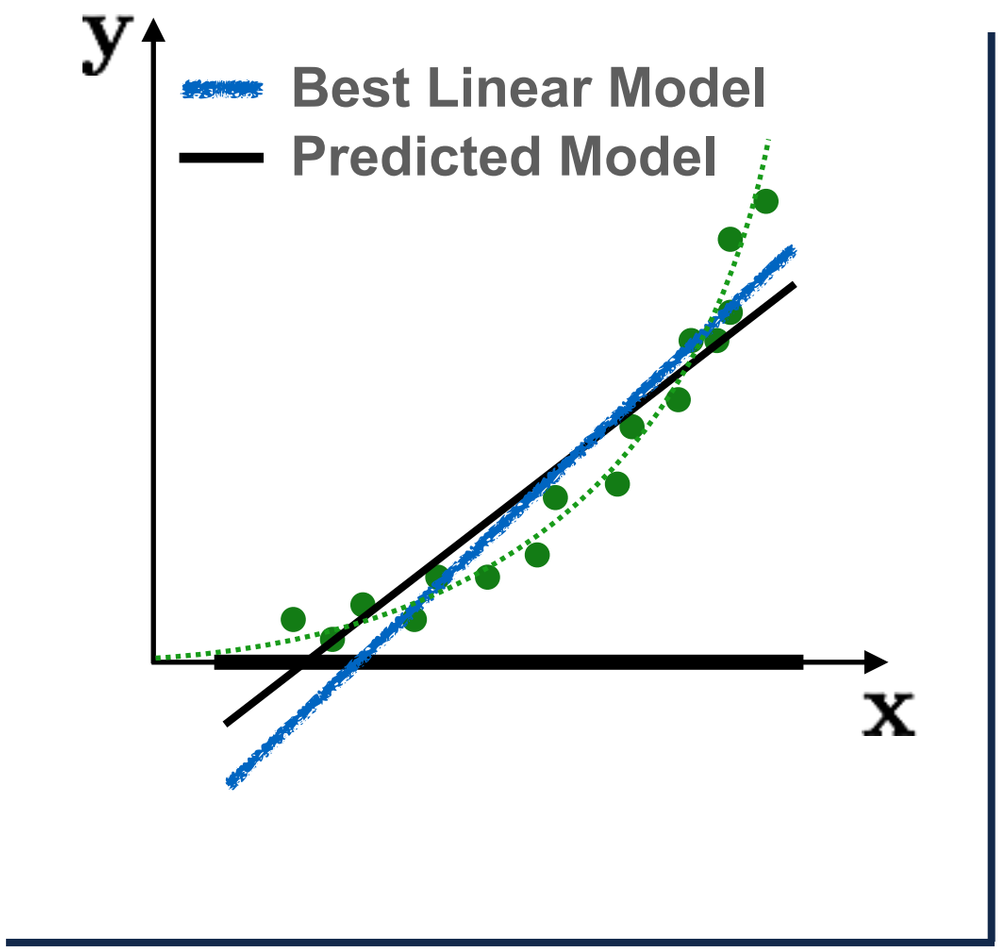

The causes of the difference between the true value of the real world process and the code-value are:

- **Experimental** or **Measurement** or **Observation Error**: ● vs ▬ ▬
- **Model Uncertainty** or **Structural Inadequacy**: ▬ vs ●
- **Parameter Uncertainty**: ▬ vs ▬