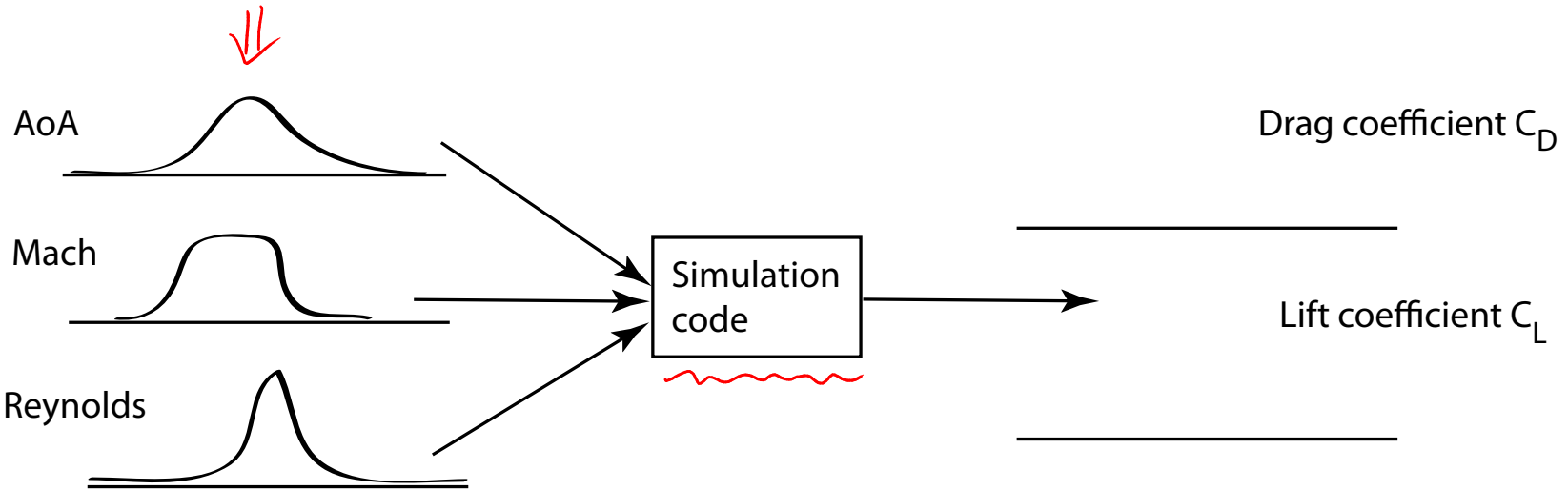
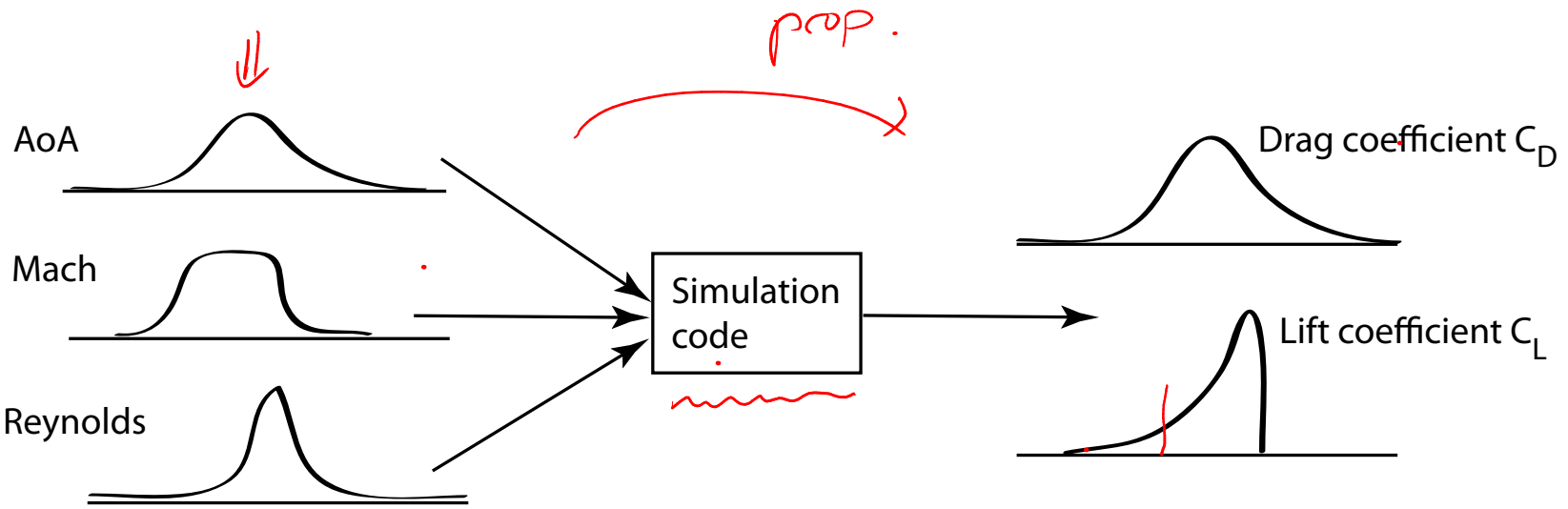
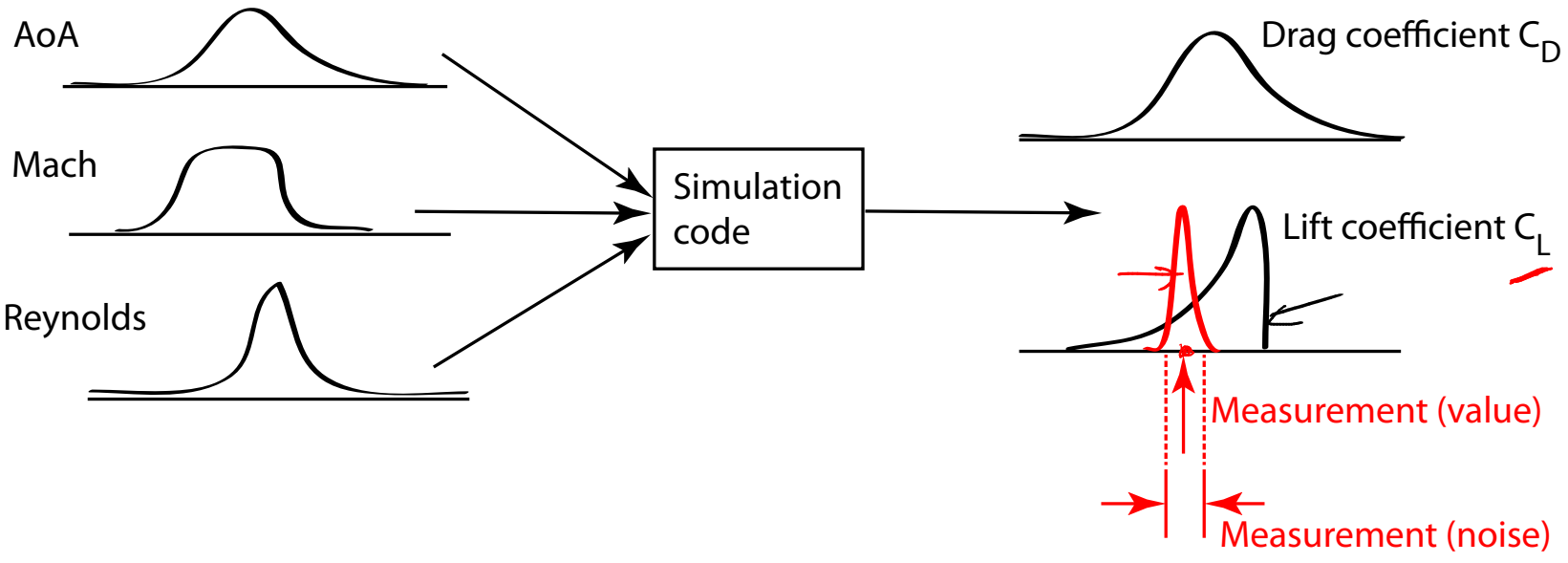
Uncertainty quantification - Cartoon



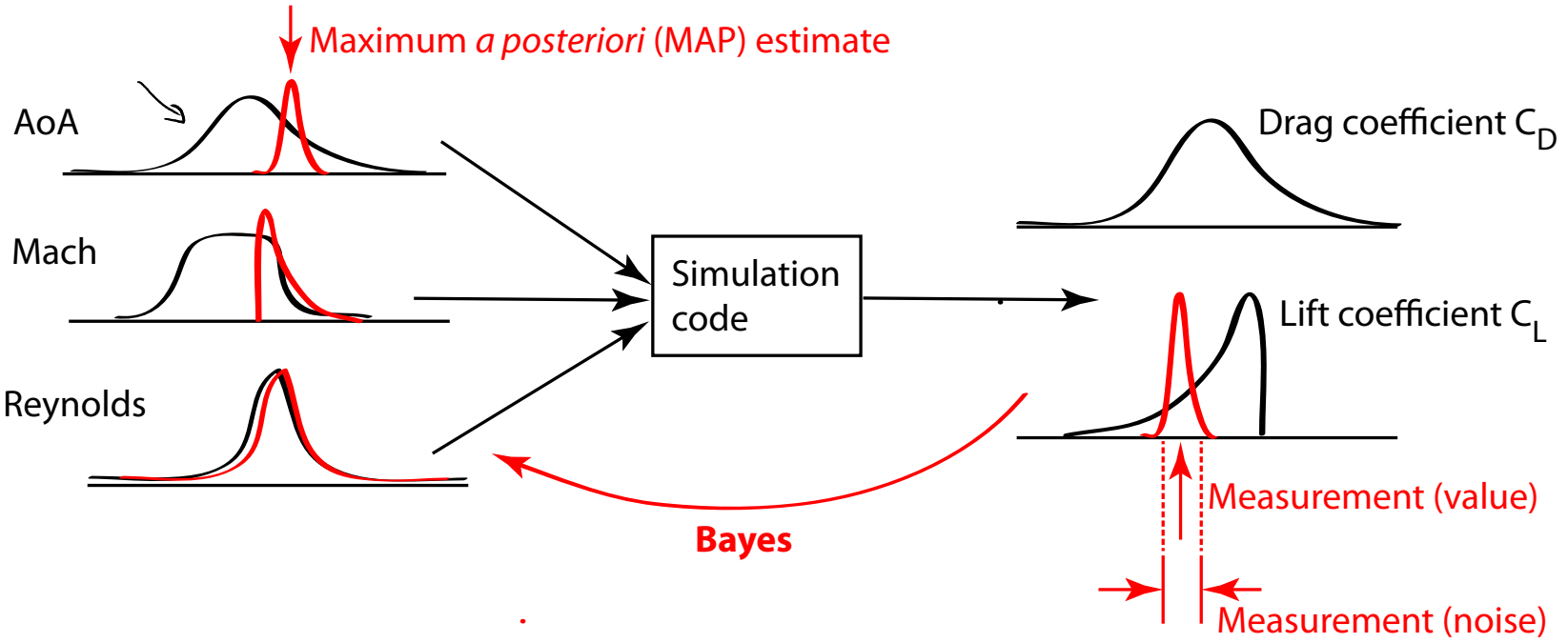
Uncertainty quantification - Cartoon



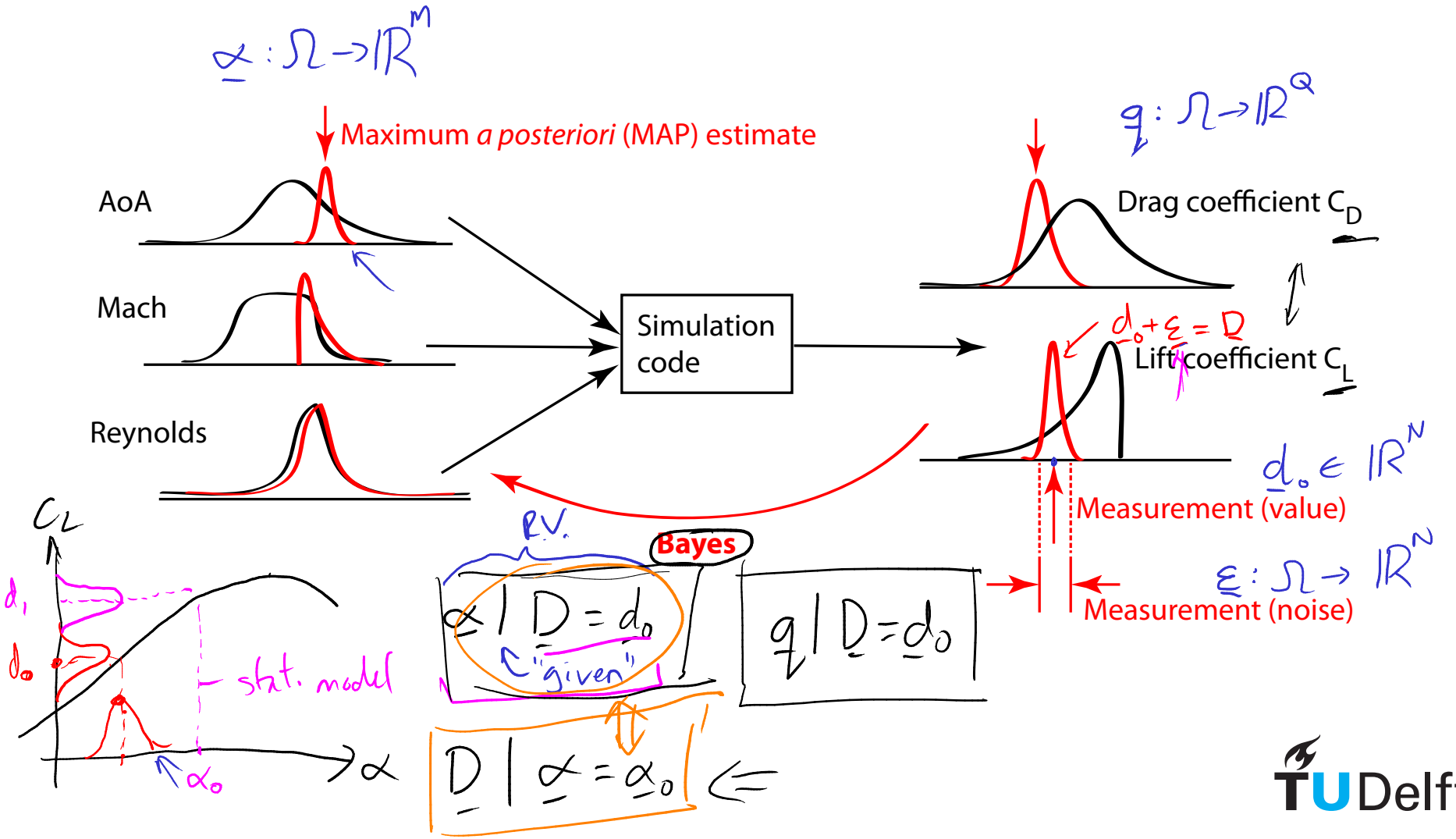
Uncertainty quantification - Cartoon



Uncertainty quantification - Cartoon



Uncertainty quantification - Cartoon

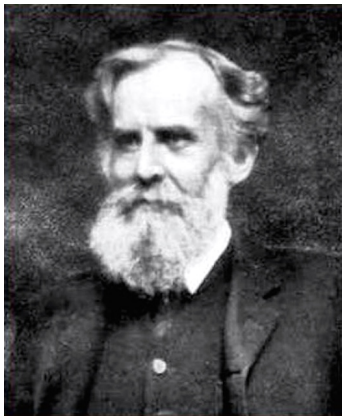


TU Delft

Bayesian vs. Frequentist

Given: We use probability to model "lack-of-knowledge"
Then: Need way of reducing uncertainty given new information!

- If you can't count it, you probability has no meaning.
- Basis of most statistical-significance studies (p-values, etc.)



Frequentist probability: *Bayesian* probability:

- Beliefs can be encoded in probability (subjective).
- Past beliefs (*priors*), are subject to updating given new info.
- Bayes Theorem relates prior belief to posterior (updated) belief.

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