

	Prior	Likelihood	Example
Classic Bayes	$\theta \sim \pi(\theta)$	$Y^F \sim F(\theta)$	$\theta = (\mu, \sigma^2)$ $Y^F \sim \mathcal{N}(\mu, \sigma^2)$
Bayesian Inverse Problem	$u \sim \pi(u) \rightarrow$ <div> <div><math>m(\cdot)</math></div> <div><math>\uparrow</math></div> <div><math>X^F</math></div> </div> $\rightarrow \theta$	$Y^F(X^F) \sim F(\theta)$	$\theta(u) = (\mu(X^F), \Sigma(X^F))$ $Y^F(X^F) \sim \mathcal{N}(\mu(X^F), \Sigma(X^F))$