

Various “flat”-priors

Parametrization

The flat prior has density

$$\pi(\tilde{\theta}) = 1 \tag{1}$$

(with obvious imprecise notation) for continuous $\tilde{\theta}$. Various transformations gives rise to different priors. The following priors are implemented:

flat for $\theta = \tilde{\theta}$

logflat for $\tilde{\theta} = \exp(\theta)$

logiflat for $\tilde{\theta} = \exp(-\theta)$

Specification

Example

Assume $\theta = \log \tau$ where τ is a precision. Then prior **flat** implies that $\pi(\theta) \propto 1$ or $\pi(\tau) \propto 1/\tau$, prior **logflat** implies that the prior for $\tilde{\theta} = \exp(\theta)$ is $\propto 1$ or $\pi(\tau) \propto 1$, and prior **logiflat** implies that the prior for $\tilde{\theta} = \exp(-\theta)$ is $\propto 1$ or $\pi(1/\tau) \propto 1$.

Notes