

**Table S5:** Prior distributions of the parameters for the Lotka-Voltera model.

Parameter	Meaning	Prior interval	$\theta^*$
$c_1$	Prey birth	$[\exp(-6.2) \exp(2)]$	1
$c_2$	Predator consumptin of Prey	$[\exp(-6.2) \exp(2)]$	0.005
$c_3$	Predator death	$[\exp(-6.2) \exp(2)]$	0.6

For the Lotka-Voltera model inference problem presented in this paper, each parameter was assigned an independent uniform log prior distribution in the interval listed in the table.