

# MAST30027: Modern Applied Statistics

## Week 11 Lab Sheet

1. Suppose that  $X \sim \text{pois}(\lambda)$  and put  $\mu = \mathbb{E}X$ . Show that the Jeffreys prior for  $\mu$  is  $\propto \mu^{-1/2}$ . Show this prior is improper. How would you approximate this (improper) prior using a gamma distribution?