PSYC 5090: Topics in Mathematical Psychology

Tarleton State University — Homework 7

The goal of this set of exercises is to investigate the numerical distance effect using ex-Gaussian modeling. The data and functions needed to perform this modeling are available in lecture7.R.

1. From the Schwarz (2001) data, pull the subset of RTs for which the distance is equal to 1 (i.e., d==1). Fit an ex-Gaussian model and plot the resulting ex-Gaussian curve on top of the histogram of observed RTs. Be sure to write down the parameter estimates for μ, σ, and τ.
2. Repeat Exercise 1, but this time consider the trials for which distance is equal to 4 (i.e., d==4).
3. What effect (if any) does manipulating numerical distance have on the ex-Gaussian parameters μ, σ, and τ?