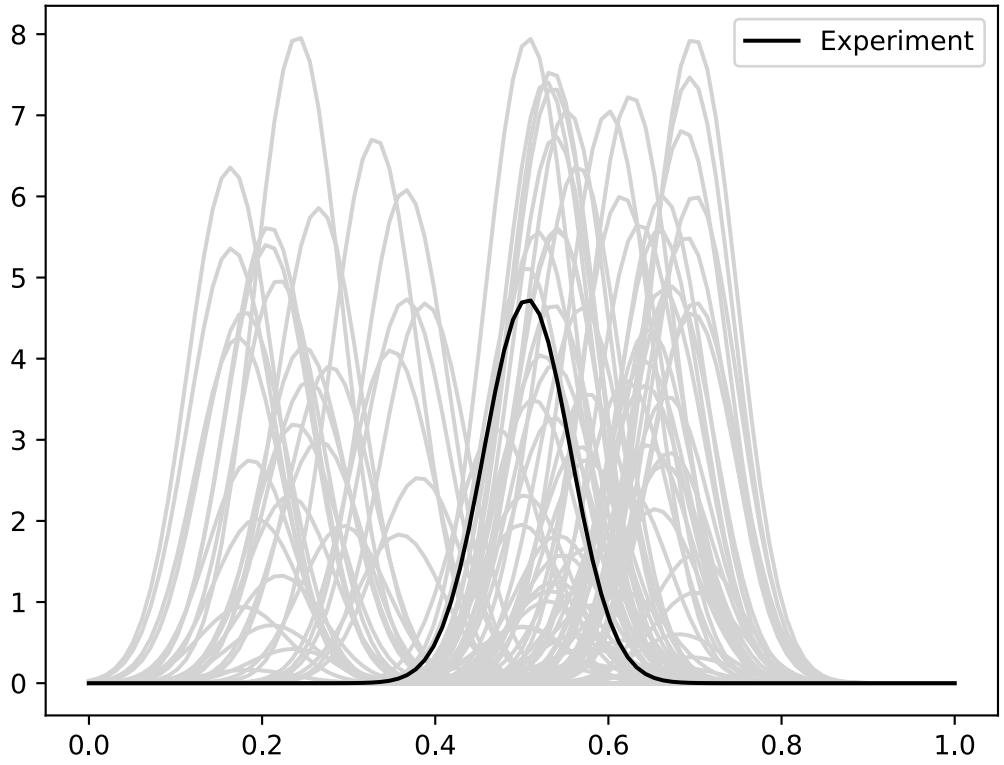
Simulation

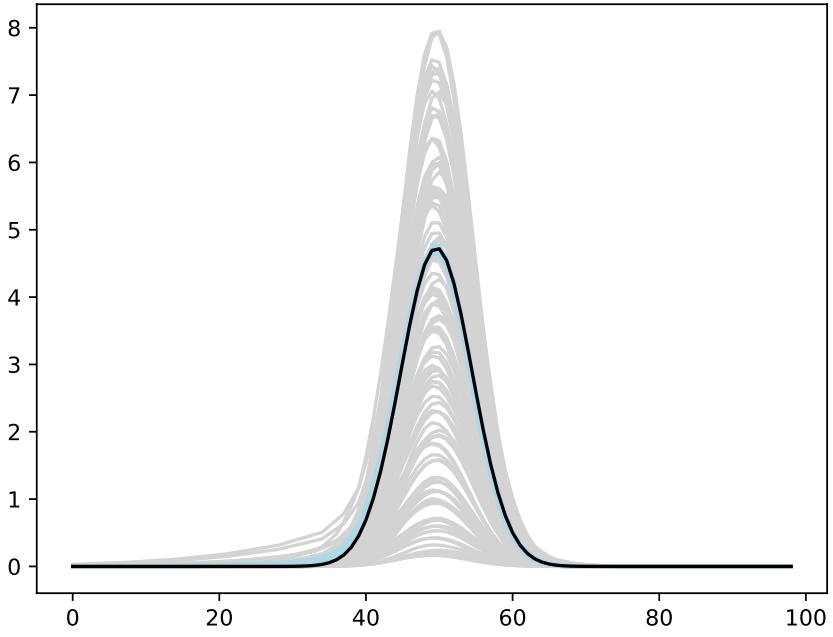


- Simulation study where each function is parameterized Gaussian pdf

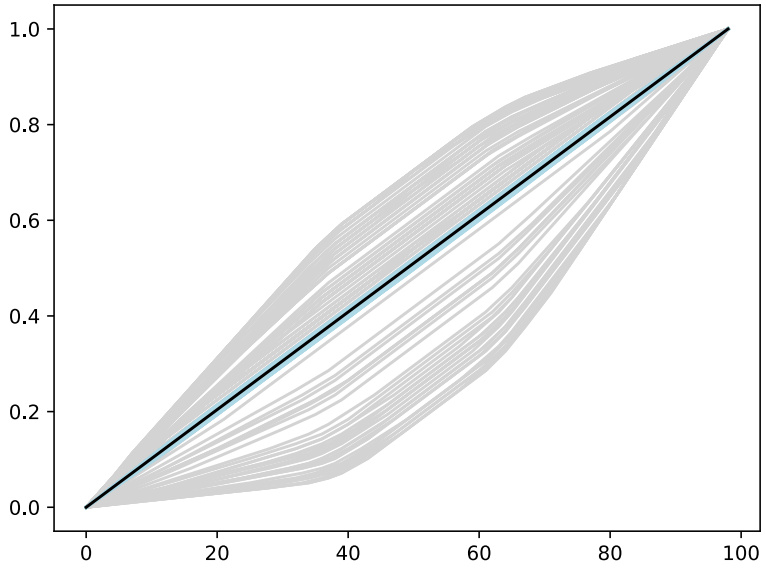
$$f_i(t) = \frac{\theta_1}{0.05\sqrt{2\pi}} \exp\left(-\frac{1}{2}\left(\frac{t - (\sin(2\pi\theta_0^2)/4 - \theta_0/10 + 0.5)}{0.05}\right)^2\right)$$

- A set of 100 functions were simulated with θ_0, θ_1 being drawn from a $U[0,1]$
- A third nuisance parameter θ_2 drawn from $U[0,1]$

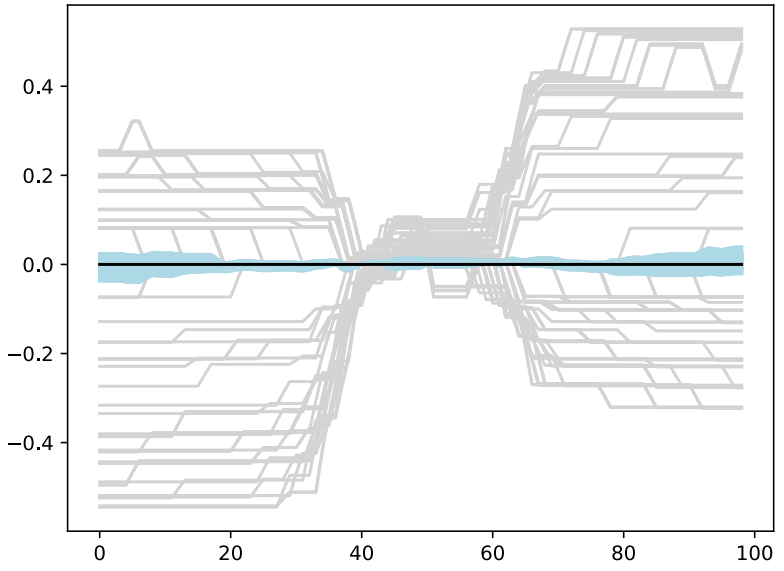
Calibration



Aligned Data



Warping Functions



Shooting Vectors

- Trained BASS Emulator on Aligned Functions and Shooting Vectors (using elastic fPCA)
- Calibrated using framework with tempering and adaptive MCMC
- Blue shows draws from posterior distribution at 95% credible interval