

Emulation numerical experiment

- » Methods: GPy, PCGPwM, and PCGPwMatComp
- » Functions: borehole, OTL circuit, Wing weight, and piston
- » Number of locations: 15
- » Number of training parameters, n :
25, 50, 100, 250, 500, 1000, 1500, 2500. ($15 \times 2500 = 37500$)
- » Failures are $\{\text{random, structured}\} \times \{25\%, 75\%\}$ levels.
- » 1 hour timeout for every run
- » x are sampled uniformly in $[0, 1]^{d_x}$, fixed across n .
- » θ are sampled from latin hypercube sampling in $[0, 1]^{d_\theta}$
- » 1000 test parameters are sampled uniformly in $[0, 1]^{d_\theta}$
- » Comparison metrics:
 - » RMSE, MAE, median absolute error, mean error (bias)
 - » 90% coverage, 90% prediction interval width
 - » interval score, CRPS