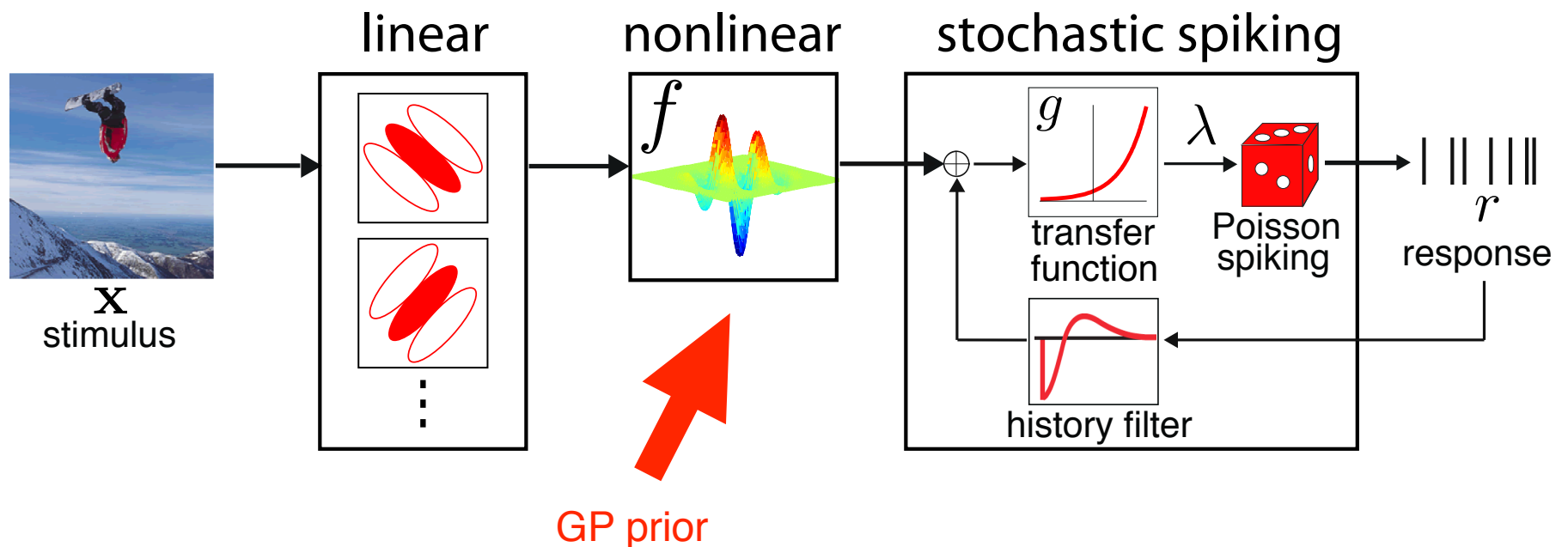


Active learning of neural response functions with Gaussian processes

Mijung Park,
Greg Horwitz,
& Jonathan Pillow
poster T020

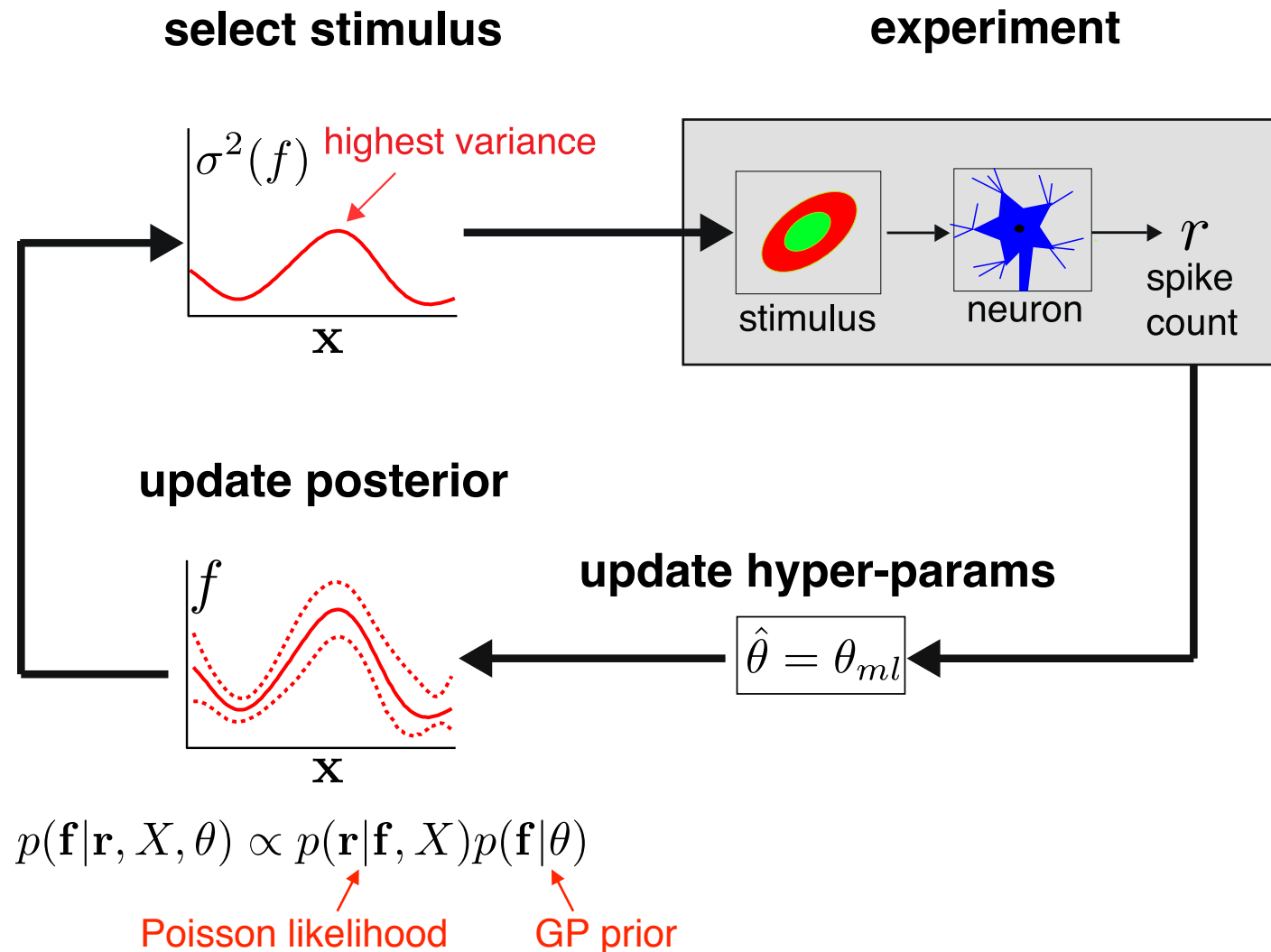
“cascade” neural encoding model



Question: how to efficiently learn neural response nonlinearities?

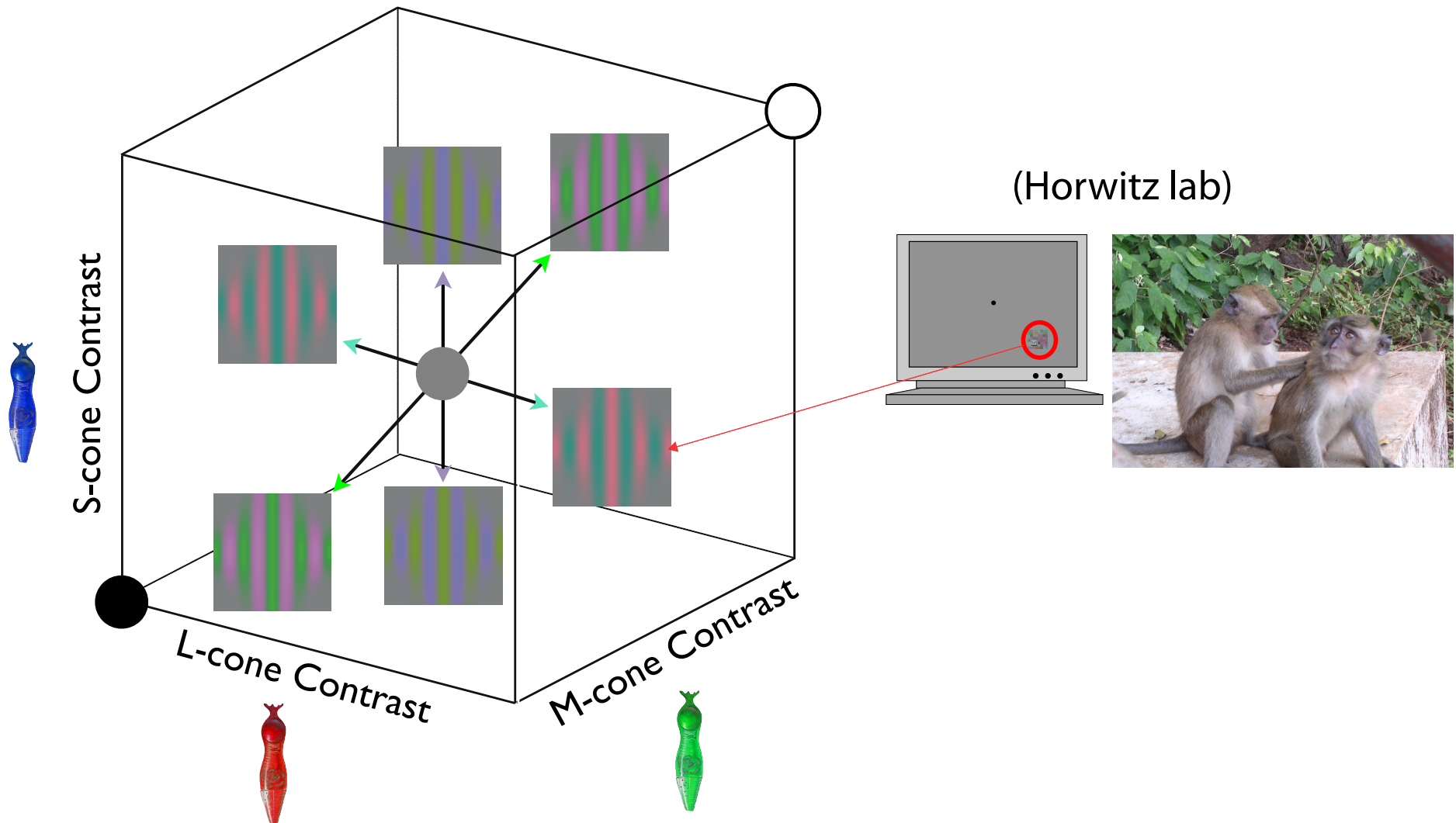
Adaptive stimulus selection

- “closed-loop” experiment
- select \mathbf{x} for which $f(\mathbf{x})$ has highest uncertainty



Experimental Methods

- color-tuned neurons in macaque V1
- spectrally-modulated Gabor stimuli (3D cone-contrast space)

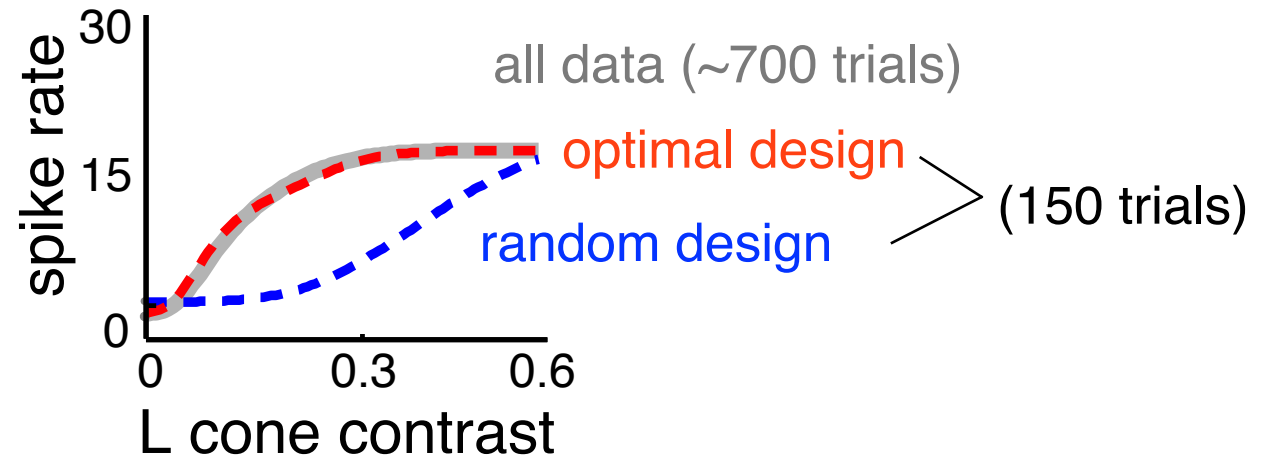


Results

For more details, visit poster T020 !

- example V1 complex cell

1D nonlinearity:



2D nonlinearity:

