Week 2: Writing Assignment

Answer one of the following questions based on this week's material (one-page typewritten response, double-spaced, due Friday 04/16/10).

- What do "push" and "pull" refer to in LGN and V1 neurophysiology?
- According to Hirsch, what is the hypothesized role of inhibitory (smooth) neurons in V1 in terms of simple cell push-pull receptive field properties?
- What are the advantages of whole-cell recordings that measure intracellular membrane potential (the methodology used by Hirsch), compared to the more standard methodology of extracellular recordings that only look at the action potentials?
- What do you think is the role of binocular rivalry (besides providing a fascinating experimental phenomenon for scientists)? In other words, what function could it serve in the brain in natural behavior?
- Is binocular rivalry a competition in dominance between eyes or between patterns? Provide evidence for either/both.

Extra credit (one paragraph, due Friday 04/16/10, up to 20% bonus).

- Can feedforward push-pull circuitry, as described by Hirsch, support binocular rivalry? Why or why not?

Last modified: Sat Apr 10 16:52:36 EDT 2010