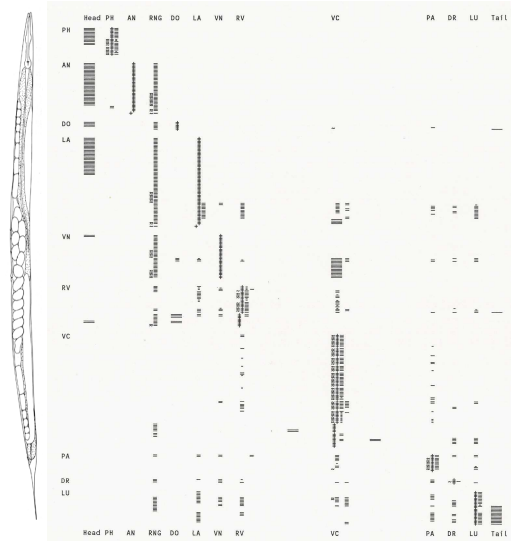
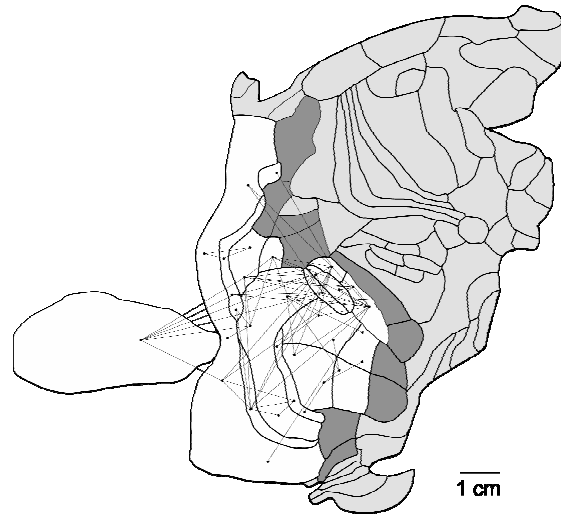


PHILOSOPHY OF NEUROSCIENCE



Connection-map of complete nervous system of *C. elegans*. Actual layout requires least total connection length of 40 million alternative possible layouts.



Macaque visual cortex: areas and connections.[1] For minimizing connection costs, actual layout ranks in top one-millionth of all alternative layouts.

PHIL 485 / 788G **Philosophy of Neuroscience** C Cherniak
[TuTh 2:00-3:15] Sp2007

Methodological issues relating to brain science, including: the place of neuroscience in cognitive science, the nature of mental representation and processing in brains, optimization[1] and bounded-resource models in neuroanatomy and neurophysiology. This occasionally-offered course explores interrelations between these issues and empirical research programs within neuroscience.

Prerequisite: six credit hours in philosophy; or a neuroscience major; or instructor's consent. Students not majoring in philosophy are welcome.

[1] Cherniak et al. Global optimization of cerebral cortex layout. Proc Nat Acad Sci 101 (2004). www.glue.umd.edu/~cherniak/