The Morris water maze and retrieving scientific literature

Today’s papers

Searching for scientific literature

- Keyword searches in search engines
- Finding papers on publisher websites
- Finding papers referenced in current paper
- Finding papers that reference current paper

Search engines – example Pubmed

- http://www.ncbi.nlm.nih.gov/sites/entrez

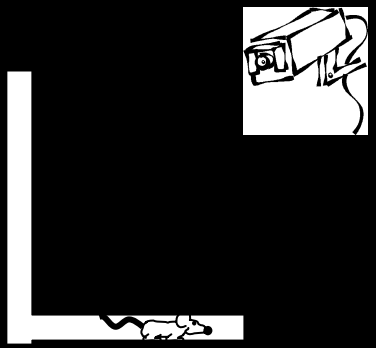
Literature search assignment

- Choose your favorite paper so far in the course.
- Find a (more recent) paper you like that cites your paper.
- Answer the following questions:
- Why you liked this (new) paper?
- What is the question it addresses?
- How does it address the question?
- In your opinion – did they answer the question?
- Due – October 30th (Field trip day).

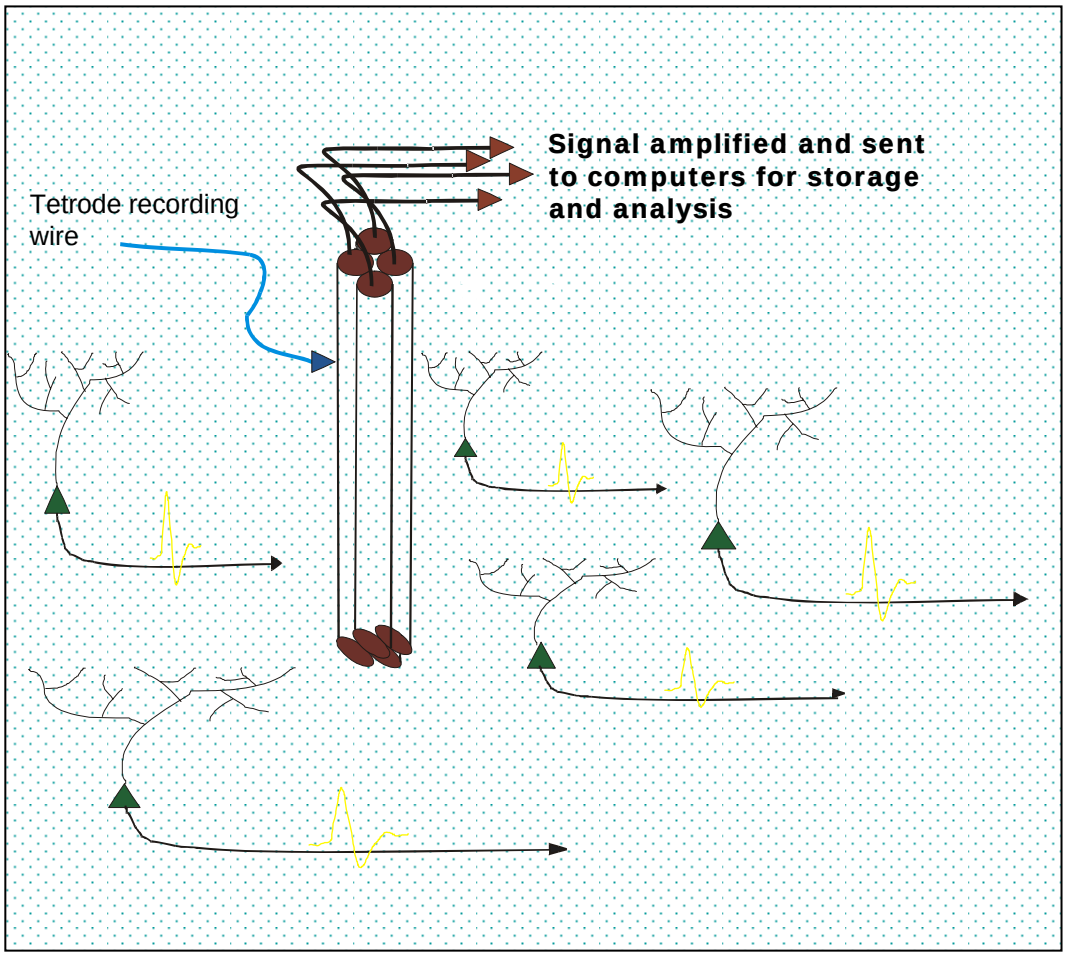
Next week’s papers “place cells”

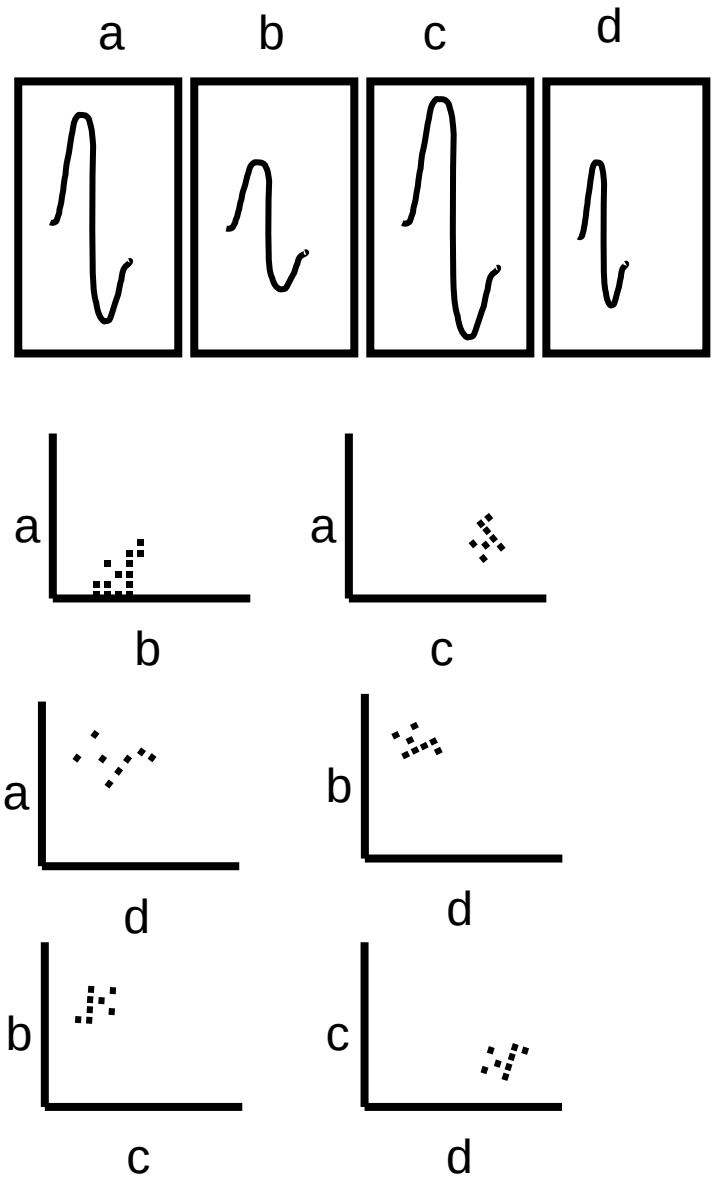
- How place fields are recorded.
- LFP (EEG) and units
- “replay”

Recording hippocampal “place cells”



The tetrode microdrive



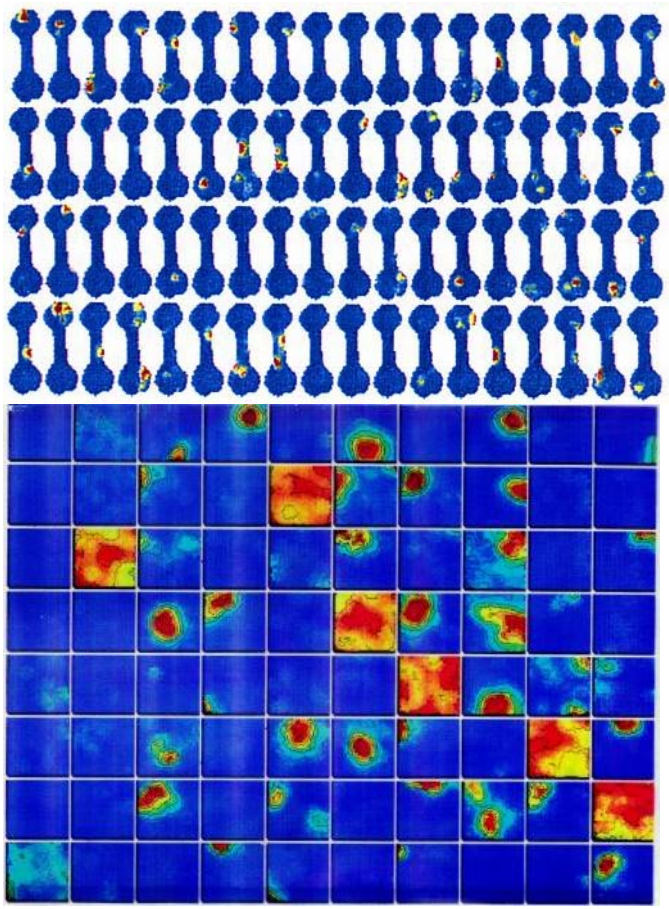


Nomenclature

- LFP – local field potential
- EEG – electro encephalo gram

- Unit – isolated activity of what is presumed to be a single neuron.

“Replay”



- Cells active in adjacent locations on the track correlate in the timing of firing.
- This correlation is maintained and “replayed” in subsequent sleep sessions.

Questions for next week

- O’Keefe and Dostrovsky – Define a hippocampal spatial unit.
- Ji and Wilson –
- Focus on introduction and discussion – the results section is very technical.
- Choose the figure that in your opinion captures the essence of the paper. Be prepared to explain it.