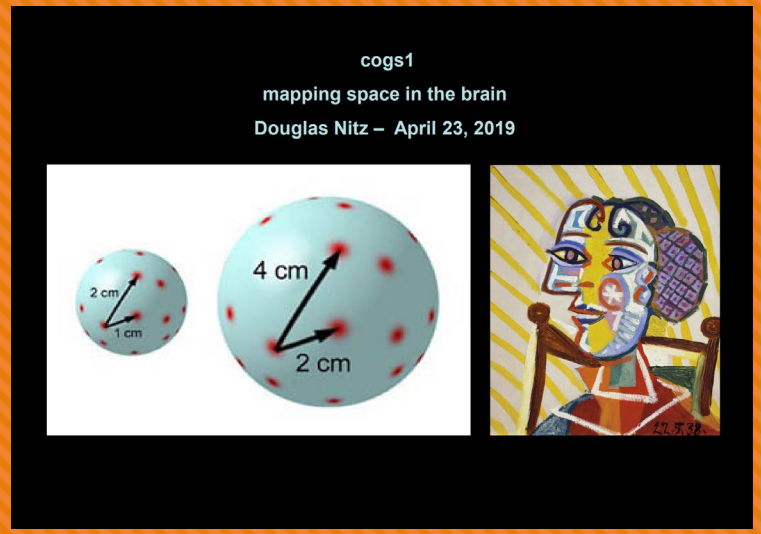
Review of Week 4



COGS1 – Spring 2019

Quiz D – in section during week 5

- Quiz D will be on week 4 reading and lecture material.
- Extra Credit Dr. Deak's reading:

5 Apr 30 – May 2		**Midterm-1** Exam in class (4/30) Covers weeks 1-3 Scantron provided. Bring a pencil & UCSD ID.	Quiz D in section Midterm 1 – April 30th in lecture.
	*How Babies Think (*EC Prereading quiz: opens on TritonEd Wednesday, May 1 @ 4pm – Tuesday, May 2 @ 10am.	Dr. **Deak** (5/2) How do we become socially skilled?	

- Midterm-1 is on Tuesday during lecture of Week 5
  - Midterm-1 covers all material from weeks 1 – 3.

Nitz– Space and Time in the Brain

1. What are the rules for mapping space in the brain?
2. Why are animal models (rats) used to study spatial cognition?
3. What is a cognitive map? How does it facilitate navigation?
4. Understand the function that each of the following type of cells has
    a) Place cells
    b) Grid cells
    c) Head direction cells
    d) Goal direction cells
    e) "Axis-tuned" neurons
5. In what animals and what brain regions have (i) place cells, (ii) grid cells, and (iii) goal direction cells been found by researchers?

Nitz– Reading Questions

1. What are the strategies animals use to navigate?
2. What are the cognitive maps? How do the maps help animals find their way?
3. What is the relationship between CA1 and entorhinal cortex? What are the differences?
4. Understand the sequence of the discovery of the different cell types that help animals to navigate. How do these cells coordinate to facilitate spatial navigation?

Nitz– Reading Questions

1. When do the "goal-direction cells" fire?
2. What is the evidence for the statement: "goals in the bat hippocampus are not merely sensory-based, but memory-based."?
3. What are the characteristics of "axis-tuned" neurons?
4. What is characteristic of encoding in the hippocampus?
5. Who are the Mosers? What is their contribution to understanding spatial navigation from a neuroscience perspective?
6. What are grid cells? What kind of firing pattern do they exhibit (i.e. when do they fire and when)?