COGS 107B

TA: Alexander Johnson
abaj009@ucsd.edu

Office Hours: CSB114 1-2 Mondays
Week 1

● Technically no section this week.

● You’re here so let’s get to know each other.
  ○ What is your year? Major/specialization?
  ○ What do you want to get out of the class?
  ○ Have any fun-facts you want to share?

● Any questions about the set-up of the class?

● Any questions about the material so far?
My background

- Undergrad at University of Michigan - GO BLUE!
  - Studied Neuroscience
  - Got into a basal ganglia electrophysiology lab (Berke Lab - now at UCSF)

- Worked for ~3 years as a lab manager in a molecular neuroscience lab
  - Hnasko Lab here at UCSD
  - Got to help publish 2 papers on glutamate/dopamine

- Now I work with Prof. Nitz
  - How does the hippocampal “cognitive map” form?
  - What representations do structures around it have?
Week 1 Material

- What is a system in the brain?
  - Do you have any examples?

- Transformation of information & Across fiber coding

- Frames of reference
  - Whole brain as a system & Hippocampus as a system
Week 1 Material

- Santiago Ramon y Cajal v Camillo Golgi
- Dynamic polarization
- How can we ‘listen’ to the language of neurons?
Week 1 Material

- Going from ion channels to LFP
  - Channels allow EPSP/IPSP to occur
  - Across many channels on many neurons the charge is summated
  - These LFPs often organize action potentials

- Mechanoreception
  - Going from physical things to ideas
  - Representational qualities

Bonus Question: What occurs at the connection between S1 and S2?

Convergence
Thank you!

- Next week will be a full section
- Email me! You are paying for this, make it your own
  - What will help you engage with the material better?
- See you all next Friday 1/18/2019