Quiz questions

Signal, Signal Processing, and Acquiring Data: Lecture 1

Question 1 — 0 pts

Describe the advantages or disadvantages of using a regular versus random synchronization signal (for example, from a TTL pulse or LED).

Question 2 — 0 pts

Why might you encounter saturation of a signal and how can you address such an issue?

Question 3 — 0 pts

What was the most helpful information you learned in this session?

HTML Editor

Question 4 — 0 pts

How could this lecture and/or zoom delivery of course material generally be improved?

Lecture 2: Signals

Question 1 — 1 pts

Explain the concept of aliasing and how you can avoid it.

Question 2 — 1 pts

What are some of the sources of noise when you are collecting physiology data?

Question 3 — 1 pts

What did you learn in this lecture that will be most applicable for your research?

Question 4 — 1 pts

What suggestions do you have for improving the content for this topic?

Lecture 3: Electrophysiology

Question 1 — 0 pts

If you wanted to make extracellular recordings in behaving animals, which probe would you choose and why?

Question 2 — 0 pts

What are important points to keep in mind when you are grounding your physiology setup?

Question 3 — 0 pts

What did you learn in this lecture that was most useful for your own experiments?

Question 4 — 0 pts

What would you change about this lecture?

Lecture 5: Fluorescent proteins, genetically encoded sensors and actuators

Question 1 — 0 pts

Describe your personal choice of genetically encoded actuator to achieve a short term excitation of a small population of neurons in the cortex?

Question 2 — 0 pts

What would be your choice of opsin/dreadd to inhibit a large portion of cortical neurons?

Question 3 — 0 pts

What is the concern of fusing an actuator to a fluorophore and how might you overcome this issue?

Question 4 — 0 pts

Name some things that you found very useful in this lecture.

Question 5 — 0 pts

Any comments for improving this lecture?

Lecture 6: In vivo imaging

Question 1 — 0 pts

What are the main advantages of 2p microscopy compared to 1p microscopy?

Question 2 — 0 pts

How is the resolution of an image determined? Is resolution equivalent to magnification? Why or why not?

Question 3 — 0 pts

What topics in the lecture were most valuable for your future research?

Question 4 — 0 pts

Do you have suggestions for improving this lecture?

Lecture 7: In vivo imaging 2

Question 1 — 0 pts

Describe what "bleedthrough" is. How might you try to prevent bleedthrough? Why does it occur even with appropriate settings you just described?

Question 2 — 0 pts

What is the reason for using image registration with in vivo imaging? Why might you lose neurons during this process if you are registering a 2p movie?

Question 3 — 0 pts

Are you already familiar with using ImageJ?

Question 4 — 0 pts

What else might you like to cover with respect to image analysis?

Lecture 8: Anatomy

Question 1 — 0 pts

What is the difference between pseudorabies and pseudo-typed rabies?

Question 2 — 0 pts

What are some factors that influence tropism of a virus?

Question 3 — 0 pts

What were some valuable points you learned in this lecture?

Question 4 — 0 pts

What information would be valuable to add to this lecture?

Lecture 9: Lesions, Pharmacology, and Genetic Manipulations

Question 1 — 0 pts

What are some problems with using transgenes? What are the alternatives?

Question 2 — 0 pts

What is the significance of the spacer region in a loxP/FRT/rox site?

Question 3 — 0 pts

What material was most useful from this lecture?

Question 4 — 1 pts

What would you change about the content in this lecture?