

*ECE 590 Neural Engineering* Stud Spring 2008 Nathalia Peixoto

Student:

## **HOMEWORK 7**

Due Thursday, April 3rd

- 1. Discuss the relevance of muscle contraction to the development of neural prosthetic devices.
- 2. Describe, in terms of ionic fluxes and electric charges, how the depolarization and repolarization of an action potential occurs (use at least Na and K).
- 3. Prepare 10±3 slides about your project (you will present them to me, individually, during the second or third week of April). REQUIREMENTS: make the presentation with white background. Print 2 slides/sheet. I need a hard copy so I can go through them and give you feedback on each slide. If you need guidance on what to write on each slide, here's some help:
  - a. Title/author/affiliation
  - b. Outline
  - c. Background (physiological basis, explanation of where the idea comes from, maybe clinical applications)
  - d. Main body of your project (at least three slides with figures, ideas described in bullets. Add references if you take images or ideas from papers or websites).
  - e. Your own analysis of the ideas presented. Problems you identified. How to solve them (here would be a good place to add your own block diagram, your own words/graphs/pictures.
  - f. Conclusions / future work