ECE 590 Neural Engineering Student:_____
Spring 2008 Nathalia Peixoto

HOMEWORK 11

Due Thursday, May 1st

1. Simulate the logistic equation. Present your code (commented) and the resulting waveform (over time) for a=2.7; 3.1; 3.5; 4; 4.7; 5.
2. Plot the state space for the logistic equation. Show the code and the resulting figure.
3. What are the differences, from a measurement and instrumentation perspective, between ERG and EOG?
4. Discuss biocompatibility issues of implants in the retina
5. Suggest at least five technological design criteria for an epiretinal implant. In this case, assume design criteria are the requirements and specifications of the system.
6. Draw a possible block diagram of the optic nerve implant with a cuff electrode. The input to the implant is a camera, the output is the electrical stimulation of up to 1024 electrodes located on the surface of a cuff electrode which wraps around the optic nerve.