

ME 207– Biomechanics I
Assignment 7 – Due Wednesday November 7, 2007

- 1) Journal review
 - a. Read article: by Dupuis et al., on actin mechanics in the laser trap.
 - b. You will be split into groups, and expected to read the journal article and review literature beyond these studies. Groups I, ii, & iii will present on:
 - i. Overall study design and mechanical protocol
 - ii. Laser trap
 - iii. Mechanical analysis of actin
 - c. Be prepared to present in class next week. Presentations will be on Wednesday or Friday, more info will be provided then. You will be graded on your presentation, but please have the group submit something electronic to Prof. Iatridis with all participants names on it.

- 2) Matlab assignment
 - a. Get matlab code 'exam1_prob2.m' running
 - b. Tabulate the effect of failure location on results, choosing 3 failure points that might all be justified based on the data.
 - c. Using the lowest reasonable choice for failure strain (i.e., the most nonlinear curve), tabulate the effects of initial estimate on curve-fit results for the non-linear model (choose at least 5 estimates). Explain your findings.
 - d. Implement an additional nonlinear model using the program, as given, and plot your results. Submit a plot of your results, and the new function you needed to write.

- 3) Make progress on your project proposal/plan, as proposed in your timeline. This will not be graded and is not necessary for submission, yet I am happy to review your progress if you're looking for feedback.