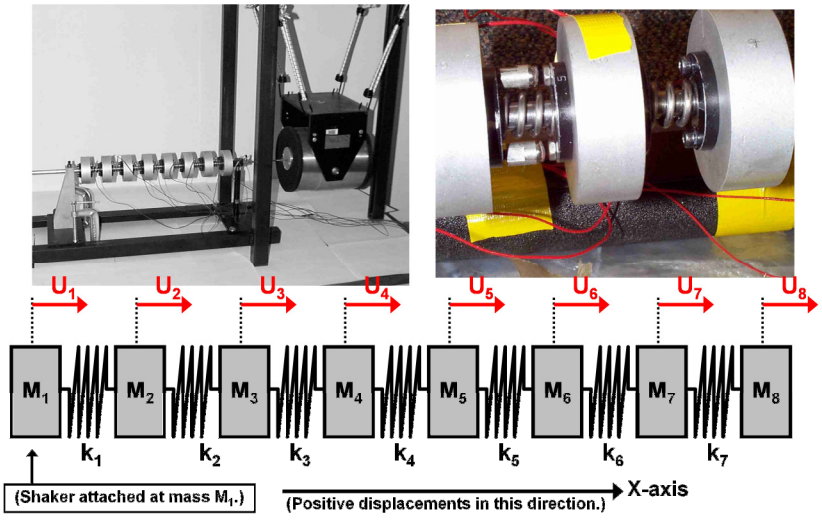
CE 8930

Group Assignment #2

Assigned: Thursday, January 23, 2014
Due: Thursday, January 30, 2014 (midnight)

Recall the second in-class exercise.
In class, you ran the driver m-file Spring8.m and reported the values of the seven non-rigid resonant frequencies (in Hertz) for both damaged and undamaged scenarios. Here damage was induced due to a 14% reduction in the 5th spring constant. You intend to use this finite element model as a tool for damage detection.



Below is the list of the experimentally identified natural frequencies. Write a two-page report (substantiated with figures and graphs) regarding the use of the finite element model. Explain what kind of actions you intend to take to ensure the success of your damage detection campaign.

Mode Number	Identified Frequency (Hertz)
1	22.30 Hertz
2	43.90 Hertz
3	64.80 Hertz
4	85.90 Hertz
5	100.00 Hertz
6	113.20 Hertz
7	131.90 Hertz