

Homework #6
EMA 545, Spring 2013

- 1.) **Problem 3.41** in Ginsberg. Check your answer for $\lambda=1.0$ using FFT techniques with the `fft_easy.m` Matlab function from the course website.
- 2.) **Problem 3.50** in Ginsberg. DO PART (a) ONLY.
- 3.) **(20 points)** Find the steady-state response of the system in **Problems 3.45** and **3.46** from Ginsberg using FFT techniques. Perform your analysis with $\tau = \pi/(3\omega_n)$ as stated in the problem and also repeat the analysis for $\tau = 3\pi/\omega_n$. Which harmonic is dominant in the response in each case? Why? Create a plot of the steady-state displacement for each case.