Exam II Information

The second midterm exam will be held in class

3017 ECE Bldg Thu, Nov 16, 9:30 – 10:50 a.m.

Calculators will not be helpful, but you may bring a simple non-graphing calculator. You may bring two sheets of notes, double-sided.

*Any formulae that you may need should be included on this sheet of notes!*

The exam will cover all of the material covered up to the lecture given on Thursday, November 2. In particular, I expect you to understand perfectly,

1. Frequency domain basics: Bode plots, Nyquist plots, how to sketch them, how to relate them for a given transfer function.
2. Bode’s gain-phase relationship.
3. Frequency domain design: Crossover frequency; bandwidth; phase and gain margins; PD/lead and PI/lag compensation; choosing lead/lag parameters to satisfy given specs (bandwidth, PM/GM, steady-state tracking errors).
4. The Nyquist Stability Criterion: \( N = Z - P \); reading stability ranges given the Nyquist plot and knowledge of open-loop poles and zeros.
5. Reading stability margins (PM and GM) off a Nyquist plot.

*Office hours:* Prof. Raginsky will hold office hours on Tuesday, Nov 14, 2:00-3:00 pm, 162 CSL.