

# Homework #1

Special Topics in Signals & Systems: Biomedical Imaging  
ECEn 682R, Section 3

**Due:** Tuesday 9/15/2009 by midnight in the box outside Dr. Bangerter's office.

**Homework help sessions:** I will be holding a homework help session (in addition to my regularly scheduled office hours) for each homework assignment. For Homework #1, the help session will be Monday 9/14 from 5-6pm in 460 CB (the ECE conference room). If you need help and cannot make the help session, please see me during office hours or contact me to arrange an alternate time.

All problems below are from the textbook (Prince & Links)

2.1 (a), (c), (d)

2.2

2.6

2.7

2.8 **Note:** A system is BIBO stable if and only if its point spread function  $h(x,y)$  is absolutely integrable:

$$\int_{-\infty}^{\infty} \int_{-\infty}^{\infty} |h(x,y)| dx dy < \infty$$

2.9

2.10