Homework 1 – Topics, Brainstorming, and Meet your Professor
Due: by Thursday, Sept. 13th

1. Sign up to meet with me in my office (MSC W402, right by the front desk). We will circulate a sign-up sheet during class on Tuesday, Sept. 4th and Thursday, Sept. 6th. Then, show up at my office at your selected time, and be prepared for an approximately 15 minute meeting (based on item #2 below). This would also be a great time if you wish to discuss anything privately with me such as disability accommodations.

2. In this class, you will have several writing projects which can be about topics in robotics that interest you. Come prepared with at least three ideas/topics for your writing. Some possible ideas are listed below, but I strongly encourage you to think broadly and propose topics which interest you. You will need to conduct some preliminary research on your topics. At this point, it's acceptable to read Wikipedia pages or use Google to find useful resources about your topic. Write up a brief outline/summary for each of your potential topics. At a minimum, document the following:
   a) The general topic you're interested in.
   b) Why this topic is interesting to you (3-4 sentences).
   c) Problems you think you might encounter or things you don't understand about your topic. (2-3 sentences).

Bring a hard copy of your brainstorming/topics with you to our meeting. This will be your turn-in for this homework.

Grading: This assignment is worth 50 points. 10 points for each topics, 20 points for the office visit.

A few ideas:

- Robotics in <subject area>. Possible <subject areas> are things like the military or wartime, the medical field, inter-space exploration, education, music etc.
- Robots that are designed to be or act like <living organism>. Scientists often try to build robots which act like other organisms to learn more about the organisms, robotics, or both. Think about things like fish, insects, birds, snakes etc.
- Human-robot interaction. Investigating interactions between humans and robots and how we respond to things which we know to be non-human.
- Subsumption architectures. Introduced by Rodney Brooks in seminal paper “Elephants Don't Play Chess.” Breaking down of complicated behavior into simple behavior modules. This style of programming behavior is extremely influential in AI and autonomous robotics.
- Portrayal of robots in popular media, science fiction, or news.
- Robots for specific age/ability groups. Often, robots are designed to target certain age/ability groups such as the elderly, infants, or people with motor impairments.