## CS5789/Art4455: Kinetic Art and Embedded Systems Individual Project #1: DrawBot

For this assignment we'll hand out a small set of materials so that everybody starts with the same raw components. This bag of materials includes:

- Some piano wire
- A small motor
- A couple batteries
- A roll of electrical tape
- A pencil
- Some wire

You should use the materials in the bag to make a machine that makes drawings. It should be autonomous in the sense that you can start it up and then let it go to make a drawing on its own. You should not have to hold onto it or guide it. You can use a few other materials if you like, but you should make your DrawBot primarily from the materials in the bag. This is not to limit you - it's to help you focus on one set of materials.

On demo day we'll have an 16x20 picture frame that we can set on top of the paper to be a "corral" for your DrawBot. That is, your DrawBot can bounce off the edge of the frame to keep it on the paper. You don't have to use the frame, but we've found that it's often helpful to keep the DrawBot focused on the paper that you want it to draw on.

You should plan to demo your DrawBot in a live demo/critique in class. You should also bring to that demo some examples of drawings that you've made with your machine – either as prototypes while you're developing your DrawBot, or examples of what the finished machine can do. It's often the case that the DrawBots make mildly interesting drawings in the few minutes of the demo, but make much more interesting drawings if you let them go for a longer period of time.

You should make some sketches in your sketchbook as you're developing your machine. Those sketches become part of the record of how you started thinking about your DrawBot, and how it evolved to become a finished object.