

Neuro 430
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Modeling Assignment Proposal

Human Salt Bridge

We propose to create a simplified electrical circuit stimulating neuronal signaling. The circuit would explain the effects of membrane capacitance and membrane resistance on the efficiency of signal conduction.

We would like to use a heavy cardboard model of a human form wired from head to toe, transmitting signals. Some of these signals will be weak, some strong, depending on the capacitors, resistors, and the gauge of the wires we use along the wired pathways. We are not sure if we will be able to show that one signal is slower than another because electricity flows about the speed of light through an electrical system. But what we will show is one signal is stronger than another by the brightness of lights used along the wired pathway.

Material List

1. Cardboard Model.
2. Wirer
3. Batteries
4. Capacitors
5. Resistors
6. Lights