# Proposal Review

**Team 6 - Concussion Simulation and Prevention**

Concussion Simulation is a great idea, since the brain has elastic properties presented by dendrites and axons, which is suitable to be considered as mass-spring-damper system.

However, the brain is usually composed with 14~16 billion neurons, if you construct the brain model considering every single neuron, the simulation is definitely power-consuming. So, I think the model could be simplified properly. For example, since the concussion is often related to the outer structure of the brain, maybe the brain can be considered as a net with several layers. Inner layers can possess higher elastic modulus than the outer layers, which indicates higher density inside.

As for other methods, the prerequisite of the simulation of discrete shell, as far as I understand, is the object should be considered with no thickness. Obviously, the brain can’t be considered as no thickness. So, if the discrete shell method will be applied, multiple shells should be used in this simulation, and I think, how to deal with the interaction among those shells can be a great problem to deal with.

I may not know these methods well, and the above contents are just some first reactions that come to my mind, so if there are any omissions, I hope you will understand.

Your project can be a very tough one. Hope you guys can make it.

**Team 7**

The dressing robot sounds promising, since the cloth industry still highly depends on cheap labor, and dressing robots can liberate those labor in the near future.

Designing a dressing robot may be hard, but the project mainly focuses on how to design a reliable uncommon button hook used by the robot, which make the problem a bit simpler.

The planned deliverables clearly illustrate the whole process of the project. The plan sounds reasonable and closely related to what we learn in the class. I think the major challenge for this project is that, the boundary conditions may be hard to decide. Since the hooking process is compliant, if haptic manipulators are considered to be used, the extreme boundary conditions may be hard to reach. So, even if the hook can survive from the extreme situation, such design may still lack practicality.

This may be too strict for this project. The proposal is so reasonable that I believe all the tasks make sense.