

Assignment-4 Submission

Indian Institute of Technology Delhi

Simulation and Keyframing

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1 Cloth Simulation

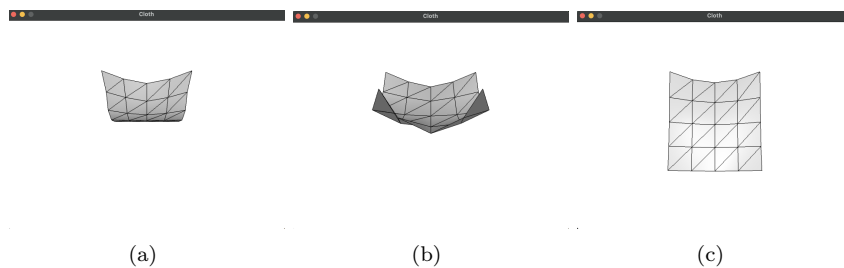


Figure 1: Cloth simulation under gravity (no constraints)

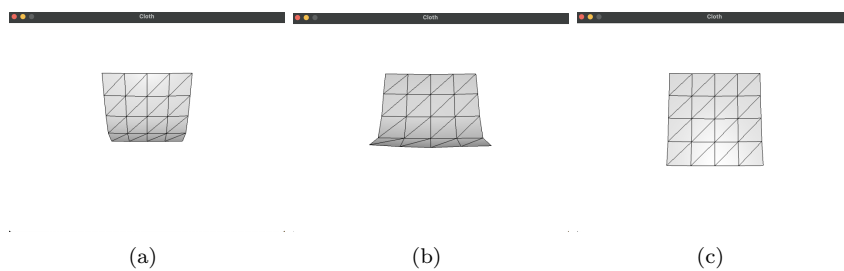


Figure 2: Cloth simulation under gravity (with inextensible constraints)

Link to the animation videos: [Cloth](#) and [Cloth_PBD](#)

2 Collision Detection and Resolution

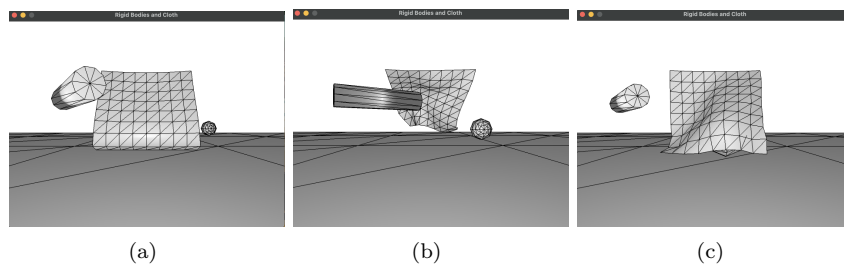


Figure 3: Cloth colliding with: (a) Plane, (b) Cylinder, (c) Sphere

Link to the animation video: [Cloth_Collision](#)

3 Keyframing Character Animation

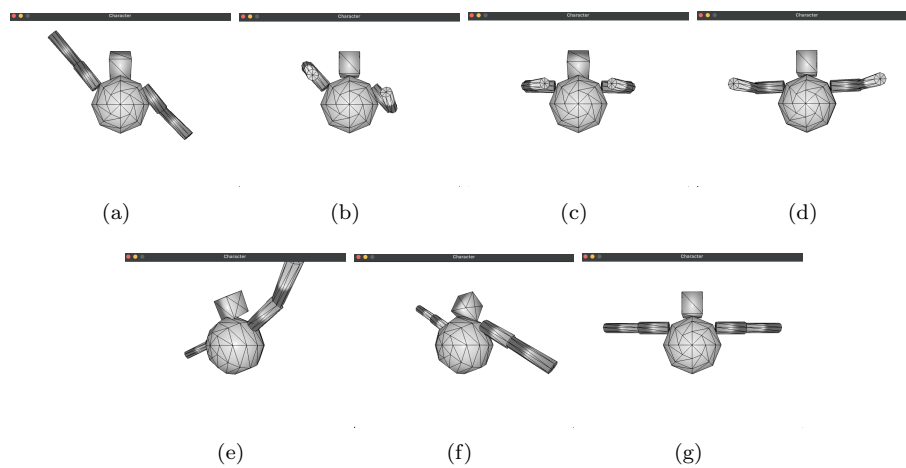


Figure 4: Animated character (upper body only)

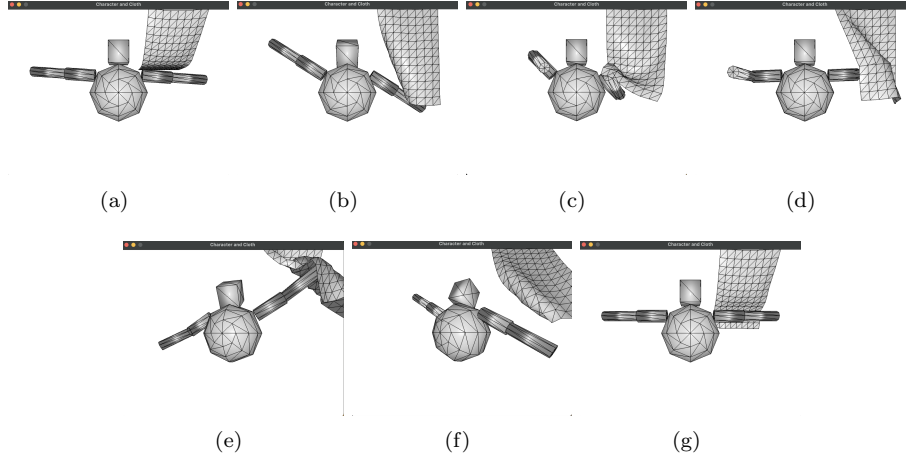


Figure 5: Animated character with simulated cloth

Link to the animation videos: [Character](#) and [Cloth_Character](#)

Note: We have followed and implemented the details mentioned in the problem statement. The optional task completed is the implementation of position-based dynamics to model structural-inextensibility constraint in cloth-simulation. We did not implement other optional tasks due to paucity of time. Other than that there are no unusual features in our program.