We looked at a sequence of four recent papers on the topic of modeling and simulating the human body.

The first paper used a data driven approach to obtain simulation parameters for a finite element model of the body.


The second applied an inner volumetric muscle model to facilitate growing a range of body types, all of which could be physically simulated.


The third used a custom probe to measure skin deformation properties at various points of the body and utilized a sliding puck representation of body material to some depth under the skin.


The fourth developed and tested a 4 degree-of-freedom model of the human foot and showed its effectiveness for simulated balance situations.


During class, I mentioned two related papers which I could not find. Here is the first, which shows transfer of anatomical models to all sorts of characters and body types.

The second, which represents Prof. Dinesh Pai’s early use of probes to extract deformation properties is here. Be sure to check out the video.