TPA 10: Skeleton Driven Deformable Body Characters Modeling

Generating realistic behaviors of deformable bodies is an interesting topic in computer graphics. Use the rigid skeletons for motion control and the surface geometries for deformation, and couple them properly to support two-way interactions.

Objective:

Generate realistic motions of self-propelled deformable body characters by considering the two-way interactions among the skeleton, the deformable body, and the environment in the dynamic simulation.

Input:

Skeleton, surface model, poses, animations.

Output:

Simulation of deformable soft character movements for two different characters with 4 poses each.
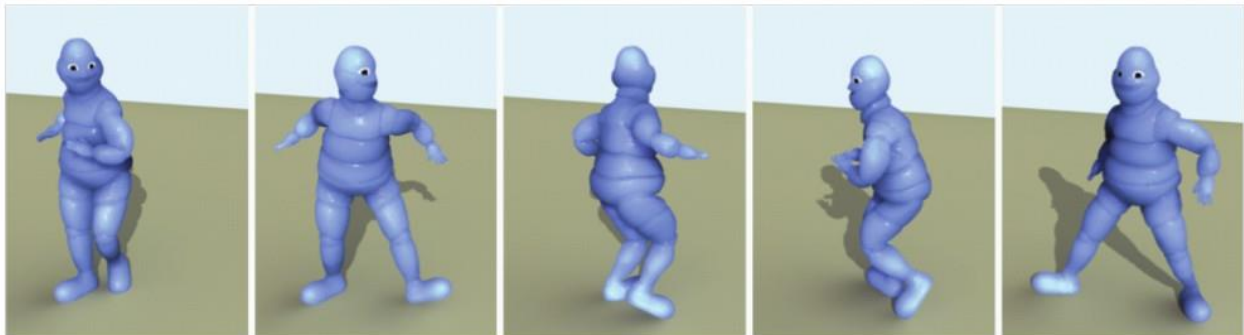
References:

1. Fast simulation of skeleton-driven deformable body characters, Junggon Kim and Nancy S. Pollard. 2011. ACM Trans. Graph. 30, 5, Article 121 (October 2011), 19 pages. http://doi.acm.org/10.1145/2019627.2019640

1. Simulation and control of skeleton-driven soft body characters, Libin Liu, KangKang Yin, Bin Wang, and Baining Guo. 2013. ACM Trans. Graph. 32, 6, Article 215 (November 2013), 8 pages. http://doi.acm.org/10.1145/2508363.2508427.
2. Liu, L., Yin, K., Wang, B., & Guo, B. (2013). Simulation and control of skeleton-driven soft body characters. ACM Transactions on Graphics (TOG), 32(6), 215.