TPA 5:

Dress a Person: Simulating Worn Garments

Clothed virtual characters in varied sizes and shapes are necessary for film, gaming and on-line fashion applications. Dressing such characters is a significant bottleneck, requiring manual effort to design clothing, position it on the body, and simulate its physical deformation.

Objective:

To design an automatic method for animating realistic clothing on synthetic bodies with different body shapes and sizes. This algorithm should conform to the geometric requirements, pose variation, proportionality and fit of the garment.

Input:

Models of different persons, cloth type and texture, dress type (t-shirt, jogging shorts, trousers, hat, shoe).

Output:

Draping the input dress on characters with different body shapes, sizes, poses, limited movements

References:

1. DRAPE: DRessing Any PErson, Peng Guan, Brown University
   http://ps.is.tue.mpg.de/project/DRAPE:_DRessing_Any_PErson
   http://www.youtube.com/watch?v=3a3ihIM9dzU

2. http://ai.stanford.edu/~drago/Projects/scape/scape.html

3. 3D Clothing Fitting Based on the Geometric Feature Matching; Zhong, Xiaogang Jin, Brian Barsky, Jun Liu;

4. Example-Based Wrinkle Synthesis for Clothing Animation; Huamin Wang Florian Hecht Ravi Ramamoorthi James O'Brien; Computer Graphics Proceedings, Annual Conference Series, SIGGRAPH-2010;

5. Data-Driven Elastic Models for Cloth: Modeling and Measurement; Huamin Wang James F. O'Brien Ravi Ramamoorthi; ACM Transactions on Graphics, Vol. 30, No. 4, Article 71, July 2011.