**Physics-Inspired Garment Recovery from a Single-View Image**

*Technology #16-0167*

Most recent garment capturing techniques rely on acquiring multiple views of clothing, which may not always be readily available, especially in the case of pre-existing photographs from the web. This technology provides a method that is able to compute a rich and realistic 3D model of a human body and its outfits from a single photograph with little human interaction. The algorithm is not only able to capture the global shape and geometry of the clothing, it can also extract small but important details of cloth, such as occluded wrinkles and folds. Unlike previous methods using full 3D information (i.e. depth, multi-view images, or sampled 3D geometry), this approach achieves detailed garment recovery from a single-view image by using statistical, geometric, and physical priors and a combination of parameter estimation, semantic parsing, shape recovery, and physics- based cloth simulation. The technology has applications in virtual try-on and garment transfer applications, as well as cloth animation for digital characters.
Video: https://www.cs.unc.edu/~alexyang/videos/SIGASIA2016demo25401mq.mp4

Related Publications:

- Detailed Garment Recovery from a Single-View Image
  arXiv:1608.01250v4 [cs.CV]

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