Lecture 25: Animation II – Review Questions

- Current research in physically based modeling revolves around a number of problems. Some of these problems are listed below. For each, describe some strategy for solving this problem:
  - handling many collisions (e.g., an avalanche) in an efficient way
  - doing effective self-intersection for clothing (especially when it may be forced to pass through itself! – for example, see the work of Baraff, Witkin, and Kass on Monsters Inc, published in SIGGRAPH 2003)
  - capturing the different appearance of different fabrics
  - capturing the different appearance of different types of natural phenomena (water, fire, smoke)
  - making simulations of natural phenomena easy to direct (e.g. to form specific shapes)
- What other problems do you notice in current technology? Are there things we can't yet do well (or easily) in CG? Why do production houses still work with so many physical models and practical effects (e.g., explosions)? Why do we still need human actors? ☺