Tentative Schedule of Remaining Course Activities

- Proposal presentation, 4/29 (9:00?), 5/6
- Assignment 3, 5/19 (announced on 4/29)
- Paper presentation, 5/27
  - if you choose not to do assignment 3
  - paper topic needs to be approved by me before 5/13
  - If needs more slots, 5/20 can be used

Final Project Proposal

- 2 members per team
- 5 min oral presentation on 4/29, 5/6
  - TA will announce the presentation order on E3
- Written proposal due on 4/28 23:59
  - Slides are not a proposal!
- Final project demo on 6/3 (9:30 -- 12:00, 12:30 – 14:30)

Three Tracks of Final Project

- Propose a new problem and solution
- Implement a paper
- Produce an animation

Content of Proposal

- No more than 5 pages
- Title
- Goal / Motivation
- Related work / background
- Proposed approach / storyboard and tools
- Expected results / what you'll learn
  - things that are guaranteed to work
  - things that may work
- Tasks of each member

Some ideas about the final project

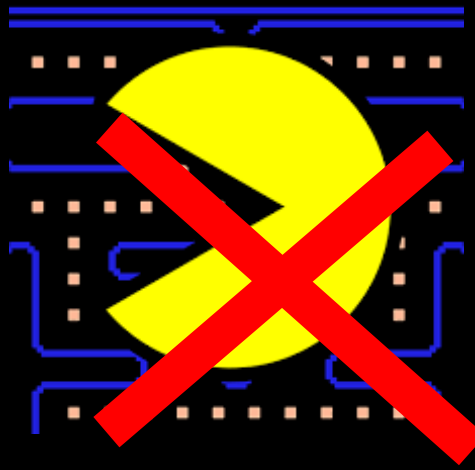
- Animation using Maya or Blender
  - Interesting story with nice rendering!
  - Story! Story! Story!
- Character animation
  - IK for interaction constraints
  - Synchronize motion with sound
  - Interaction between actors
  - Retargeting
  - AI-based motion generation

Some ideas about the final project

- Physics-based Simulation
  - Flexible objects
  - Natural phenomena
  - Fluid, fire, smoke, etc.
  - Cloth motion with self-collision
  - Hair, fur
  - Large scale rigid body simulation
- Group behavior
  - Crowd
  - Birds, fishes, firebugs

Avoid the following “clichés”!

- Solar system
- Pendulum (double/triple/quadruple)
- Pacman
- MikuMikuDance



Policy for Using Code/Freeware

- You are allowed to use any code available on the web!
- But please list the source and describe how you use or/and modify the code!

Some useful resources

- Dynamics simulation
  - Open Dynamics Engine (ODE), Unreal, PhysX
- Musculoskeletal dynamics simulation
  - OpenSim: https://simtk.org/home/opensim
- Fluid simulation: Adaptively Sampled Particle Fluids
  - https://simtk.org/home/aspf
- Deformation: FEM and Reduced coordinate
  - http://www-bcf.usc.edu/~jbarbic/code/index.html
- Rendering using ray tracing
  - POV-ray: http://www.povray.org/