CS419/552 Computer Animation

Instructor: Eugene Zhang
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Prerequisite: Linear Algebra, Trigonometry, Computer Graphics CS450/550

Description:
Advanced course in computer graphics and scientific visualization focusing on fundamental and state-of-art techniques in computer animation. Topics include:
- Shape representation for animation
- Inverse kinematics
- Collision detection, avoidance, and response
- Example-based animation
- Physical simulation
- Mesh-based deformation
- Meshless deformation
- Hair animation
- Cloth animation
- Crowd simulation

Textbooks:
  (Recommended)

Reading Materials:
A collection of recent papers in the field of computer animation.

Projects and Grading:
There are two homework assignments, one lecture, and one final term project. Each homework is worth 20% of the final grade, while the lecture and final project is worth 20% and 40%, respectively.

Late Policy
Late assignments will be marked off 10% for each weekday that it is late.

Academic Dishonesty
Please do your own work. The default consequence for academic dishonesty is a failure for the course. It is okay to discuss with other students general ideas about implementing a program. It is not okay to copy another student's program. It is okay to discuss possible program bugs. It is not okay to debug another student's program.
Expectations
Students are expected to attend lectures, participate in the discussions, and work with their group members on group projects. You should come to class prepared and speak up when something is not clear. Being prepared means completing the assigned reading and assignments. Students are expected to be creative and have fun!

Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should be aware of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, and no later than the first week of the term. Class materials will be made available in an accessible format upon request.