

# CPSC 526: Computer Animation

Term 1    Tue Thu   3–3:30   DMP 101

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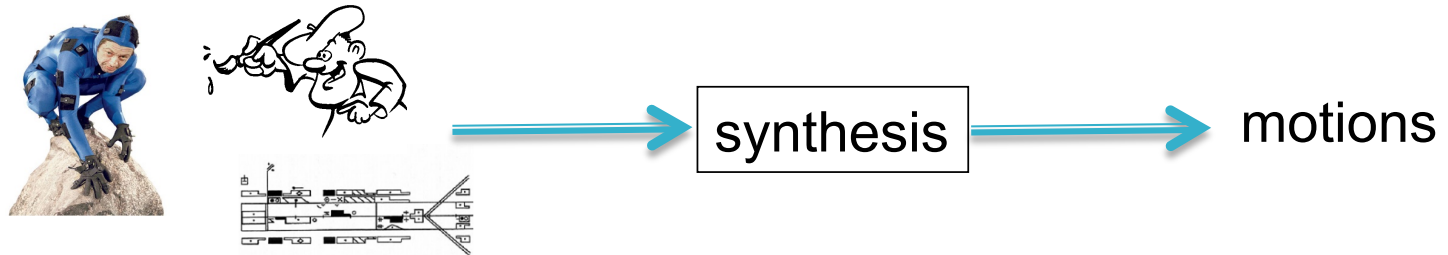
# Motivation

- ▶ computer graphics
- ▶ computer vision, HCI
- ▶ robotics, HRI
- ▶ machine learning
- ▶ biomechanics & motor control

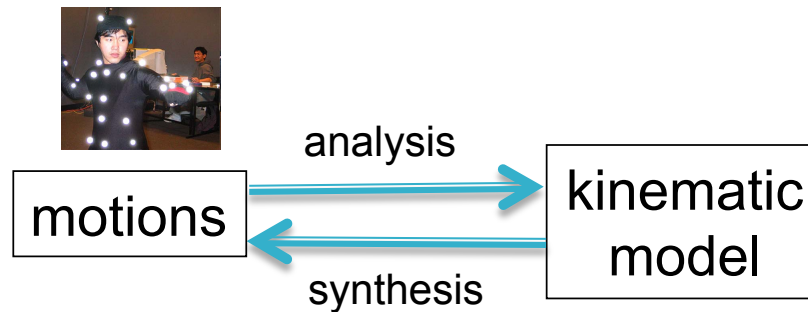


Models of human/animal/robot motion

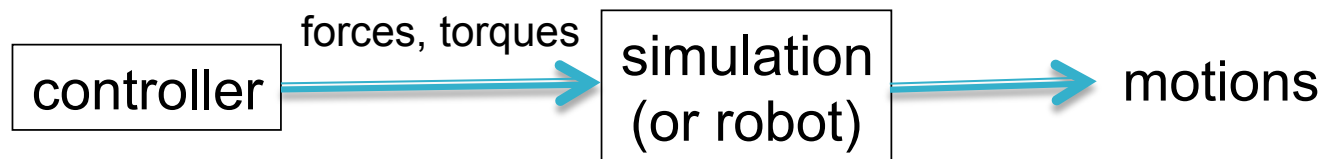
## Artist or performer driven

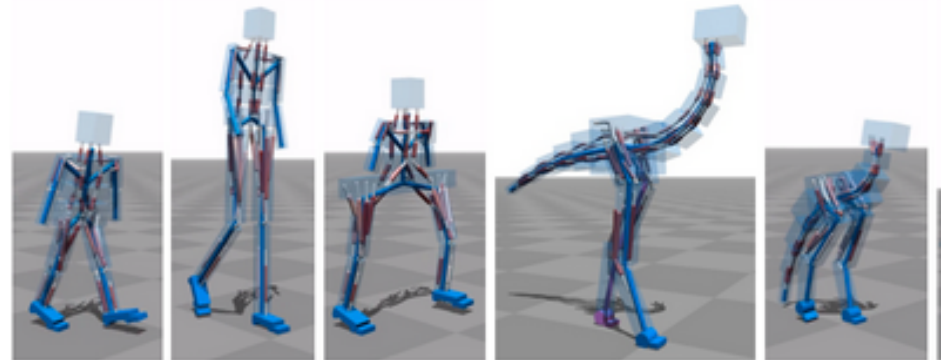
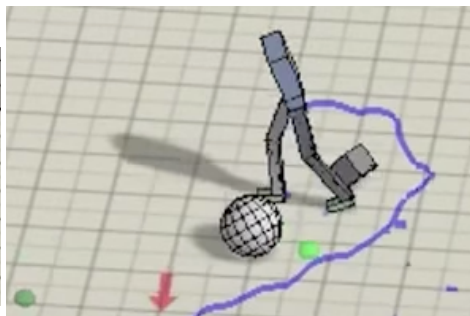
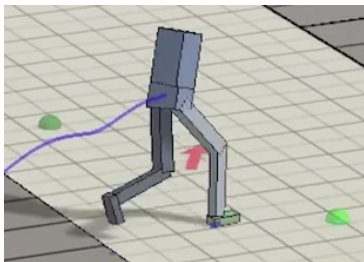
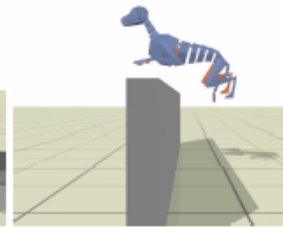
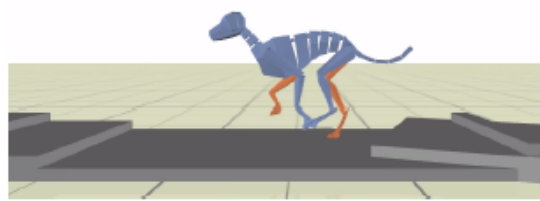
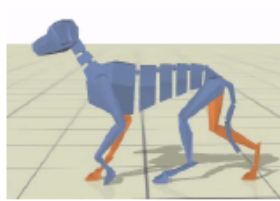
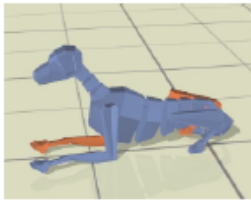
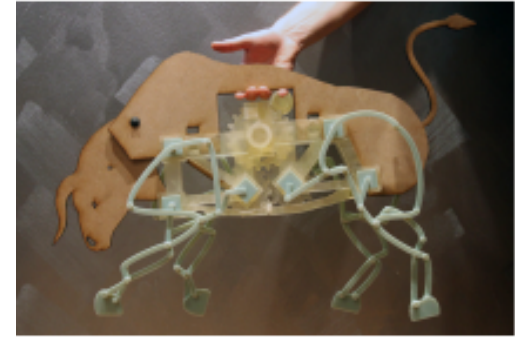
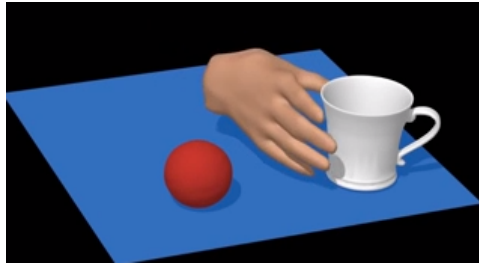


## Data-driven



## Physics-based skills





# Topics

- ▶ introduction
  - history, cameras, displays, notation systems
- ▶ representations
  - kinematics, quaternions, ...
- ▶ data-driven models (ML)
- ▶ physics-based simulation
- ▶ control
  - model-based, reinforcement learning

- ▶ not about:
  - CGI tools, passive simulation (cloth, fluids, FEM)
- ▶ background – very helpful, but not necessary:
  - computer graphics
  - AI, machine learning, computer vision
- ▶ course structure
  - 50% lectures, 50% paper discussion
  - 50% assignments, 50% presentations + project

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