

CS585: Image and Video Computing

Session 1: Introduction

Diane H. Theriault (deht@bu.edu)

Question of the Day:

- What is computer vision and why does anyone think that it is interesting?

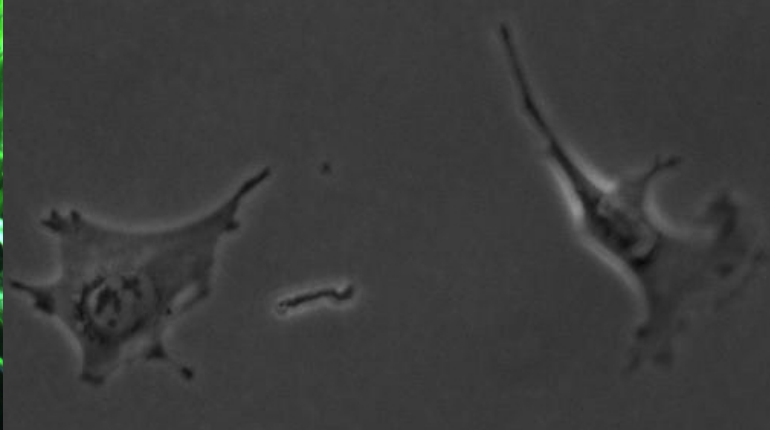
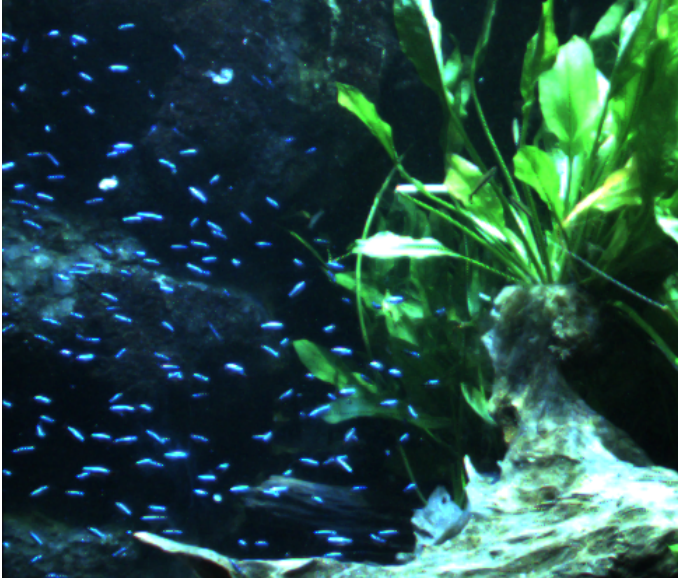
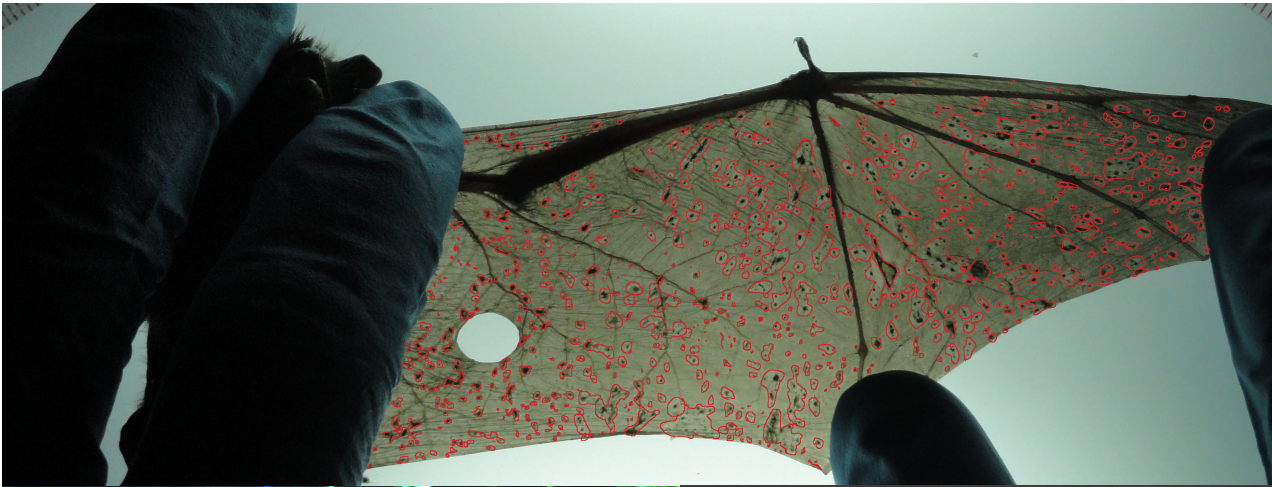
Computer Vision

- A branch of computer science concerned with developing information representations and algorithms used to analyze and interpret images and video
- Related fields:
 - Machine Learning / Artificial Intelligence
 - Image Processing

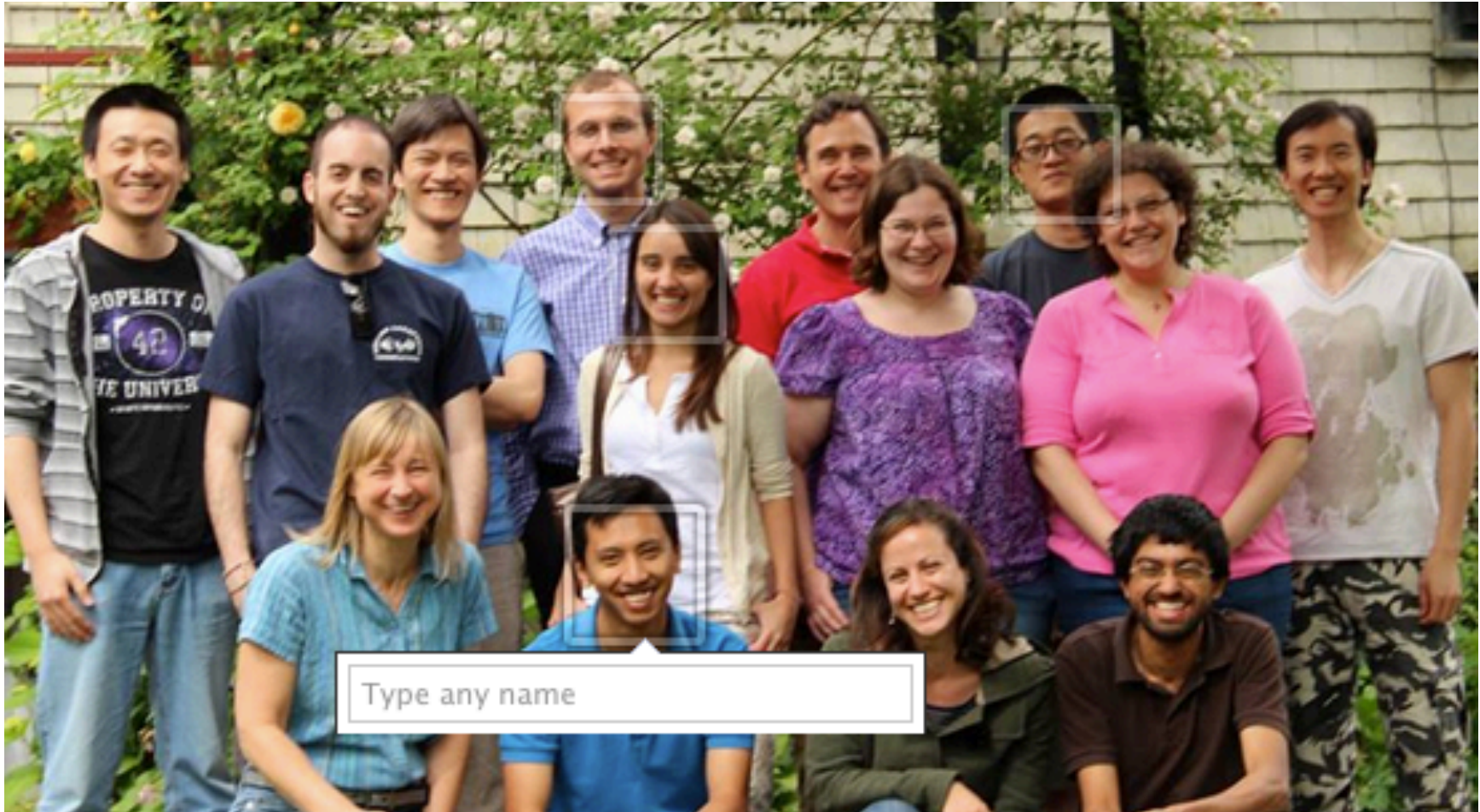
Teaching by Applications

- Object Detection
- Object Recognition
- Object Tracking
- Surveillance
- Study of Collective Motion (my research!)
- Robot Navigation
- Video Stabilization
- Image Mosaics

Segmentation / Object Detection



Object Recognition



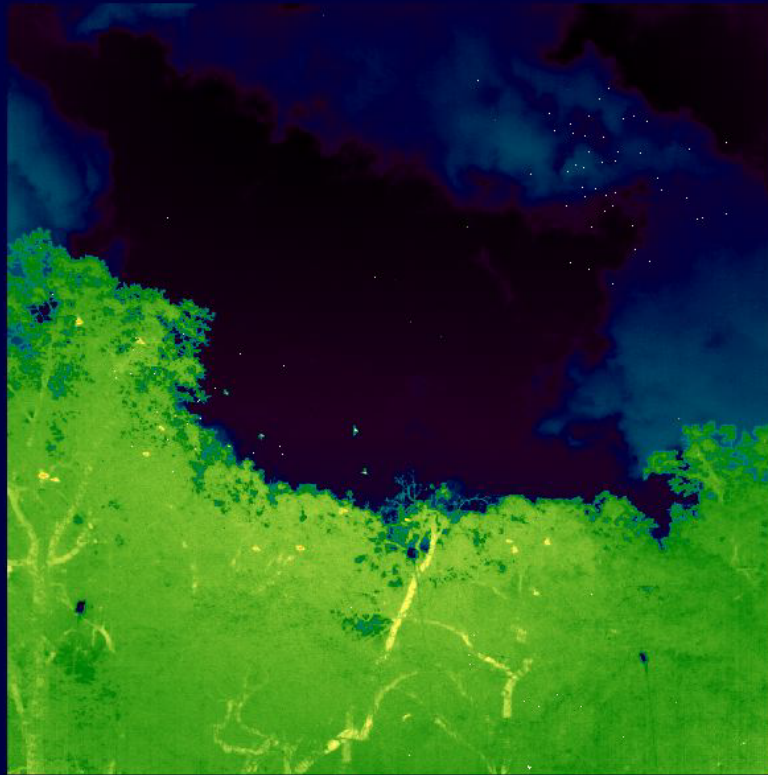
Object Tracking



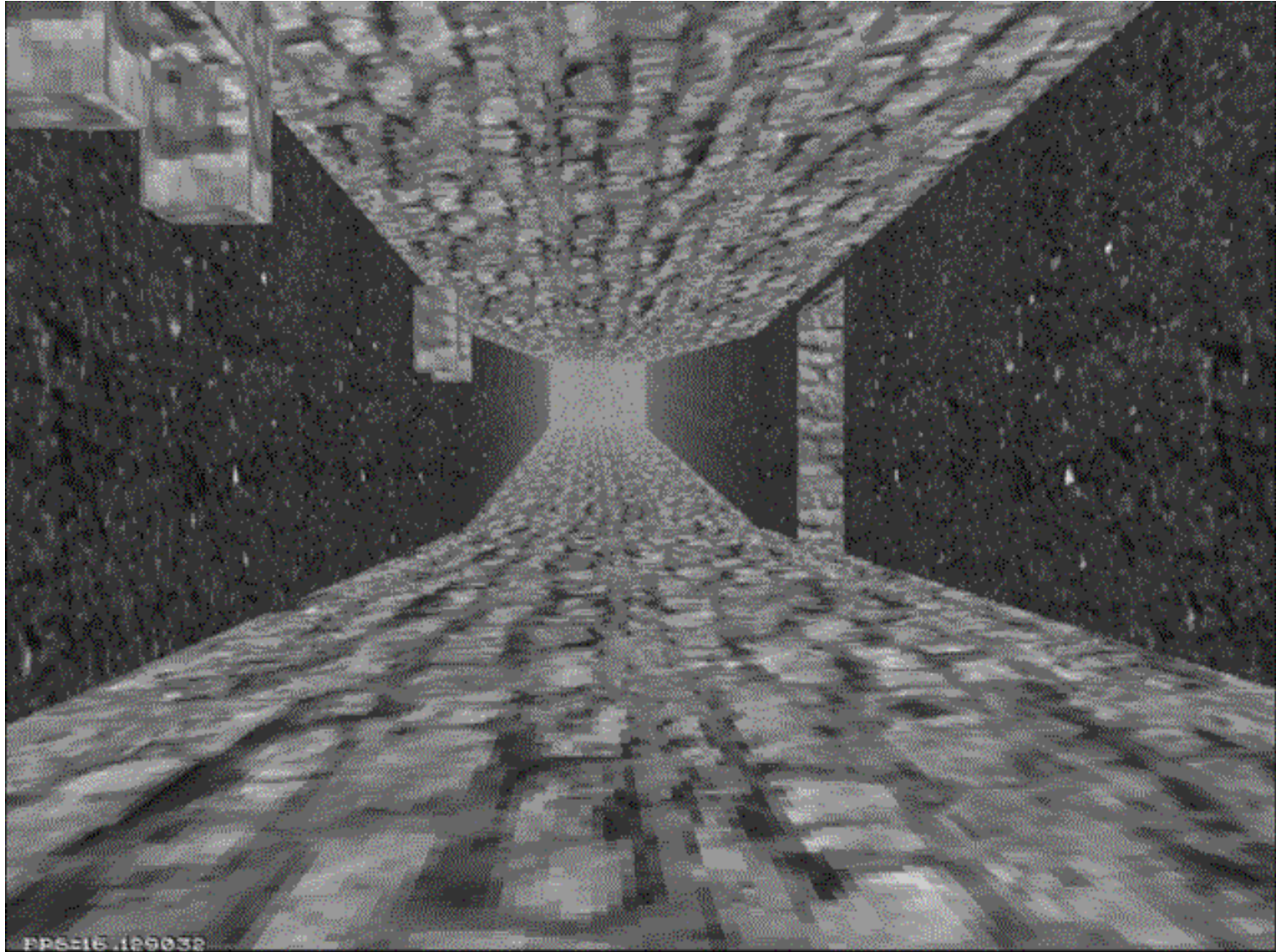
Surveillance



Collective Motion



Robot Navigation



Video Stabilization

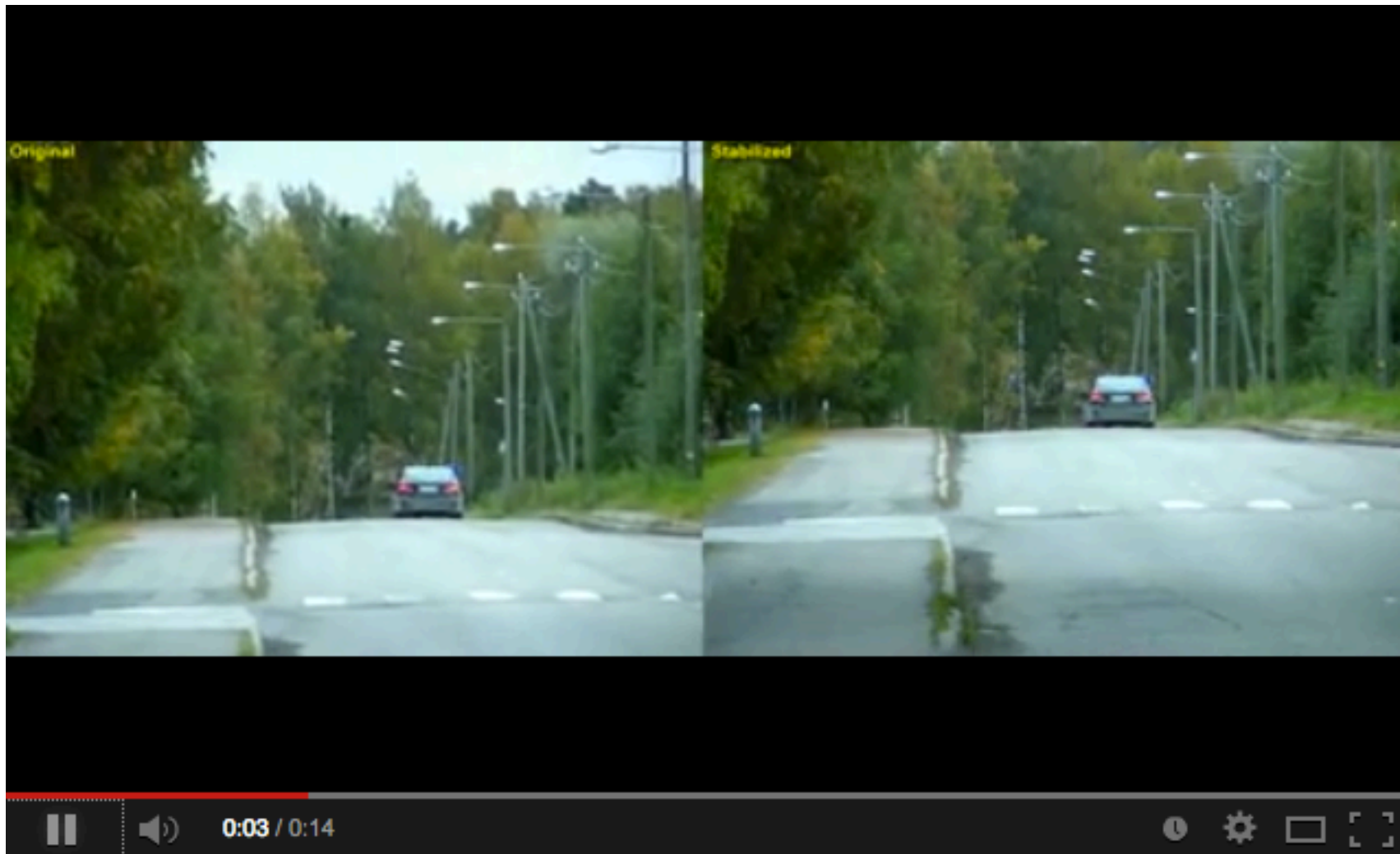


Image Mosaics



Peer Instruction

- Students discussing the material is more effective than the teacher talking about the material

Discussion Questions

- What are applications of computer vision that you are familiar with?
- What do you hope to learn this semester?
- Why did you decide to take this class?

Syllabus Review and Grading

- Material most important to me is for the projects
- Next most important is for homework and labs
- Next most important is for in-class discussion
- Next is for plain lectures