Motion Blur and Chicken Heads
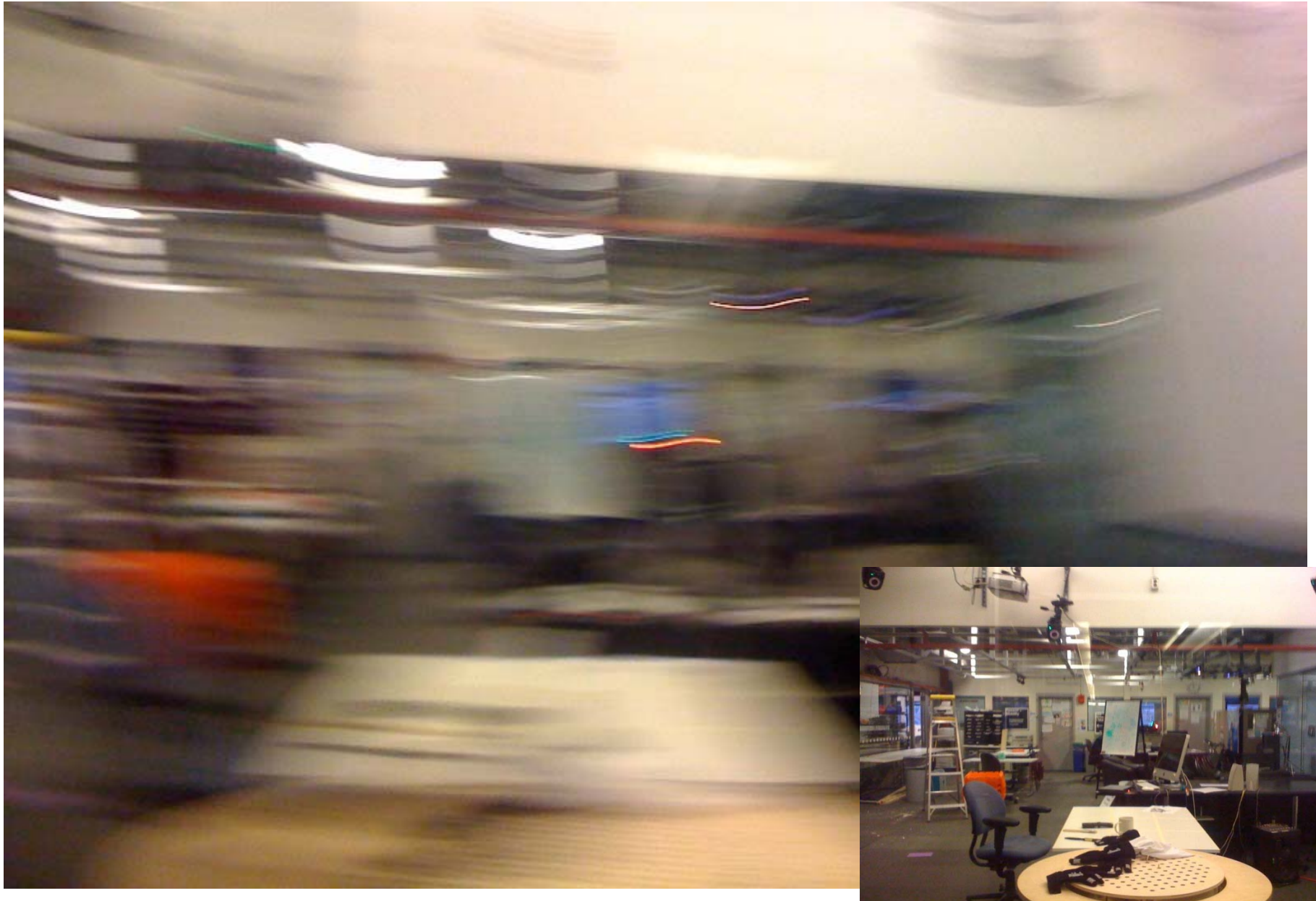
Anonymous MIT student
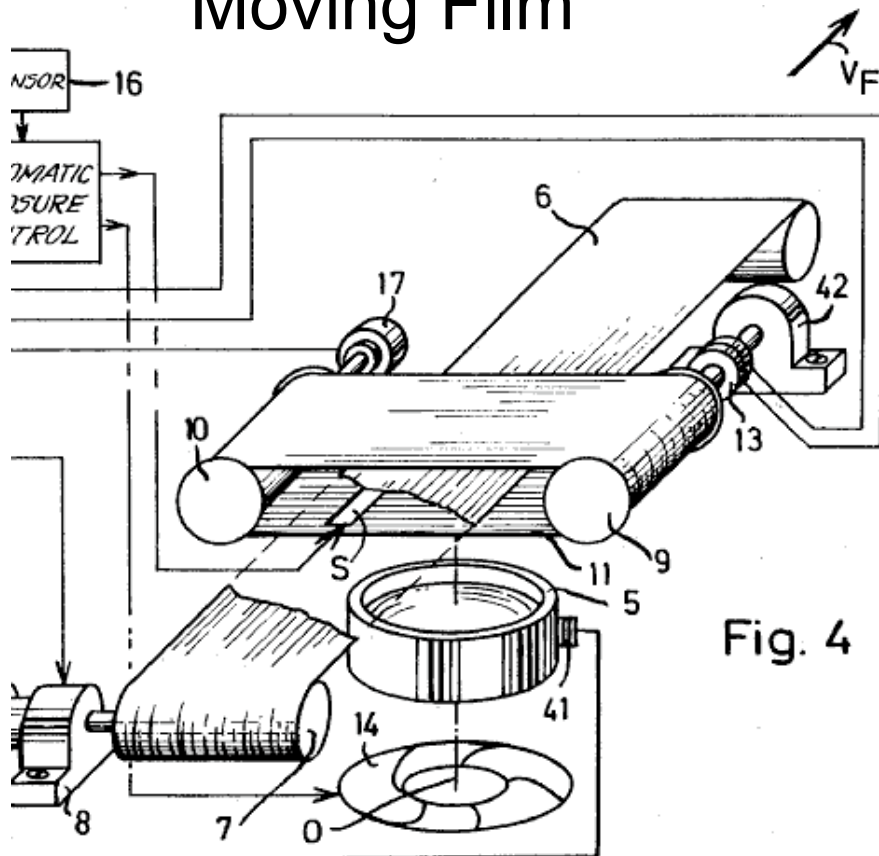
Computational Photography 2009

A moving camera creates blur

Current solutions

Moving Film

Multiple cameras in a line
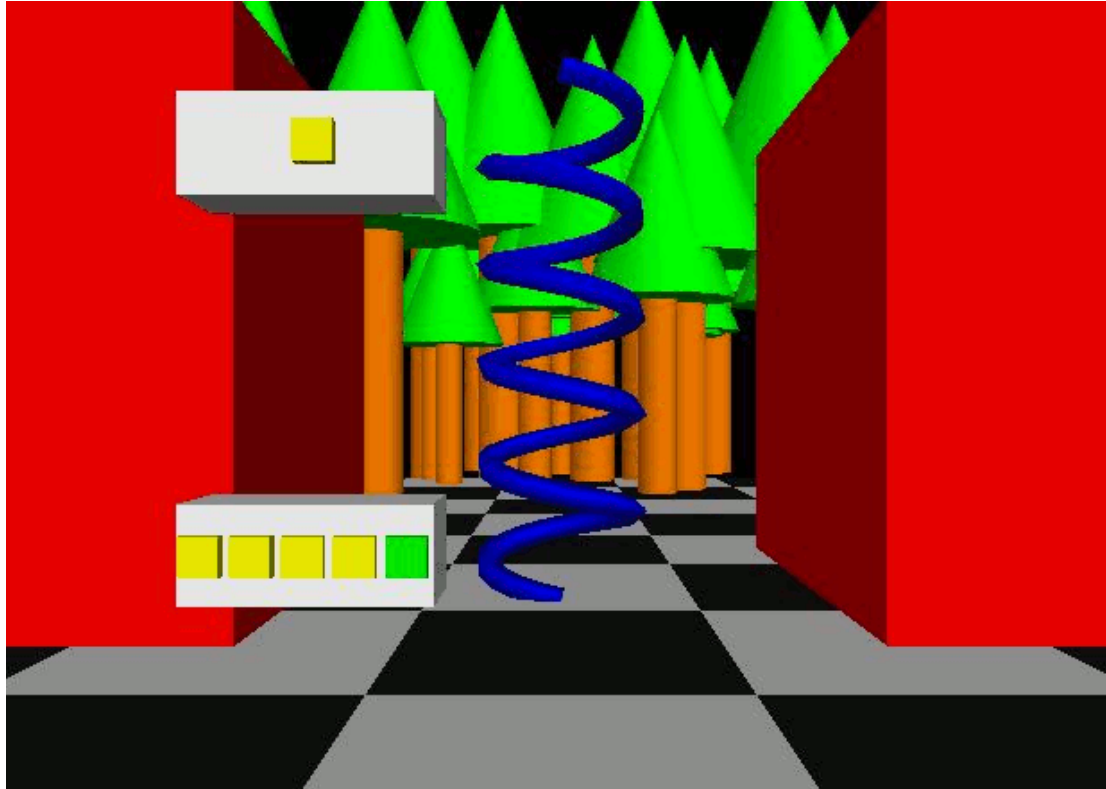
Motion

Fig. 4

Linescan cameras

Nature Inspired

Still image from video by destinws2. "Chicken Head Tracking – Pennywhistle Productions." 15 June 2008. YouTube. Accessed 1 June 2010. http://www.youtube.com/watch?v=_dPlkFPowCc
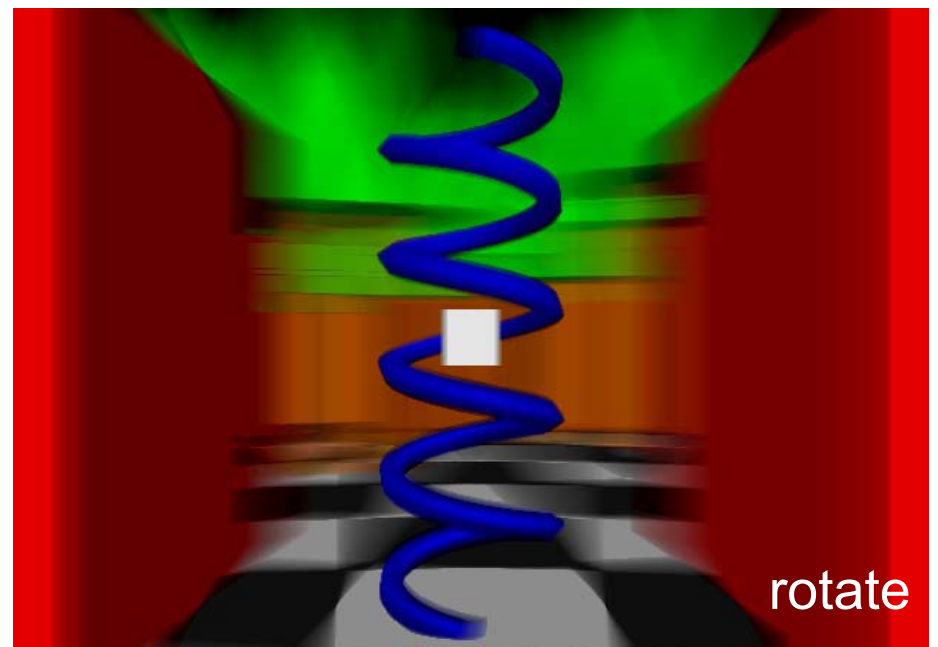
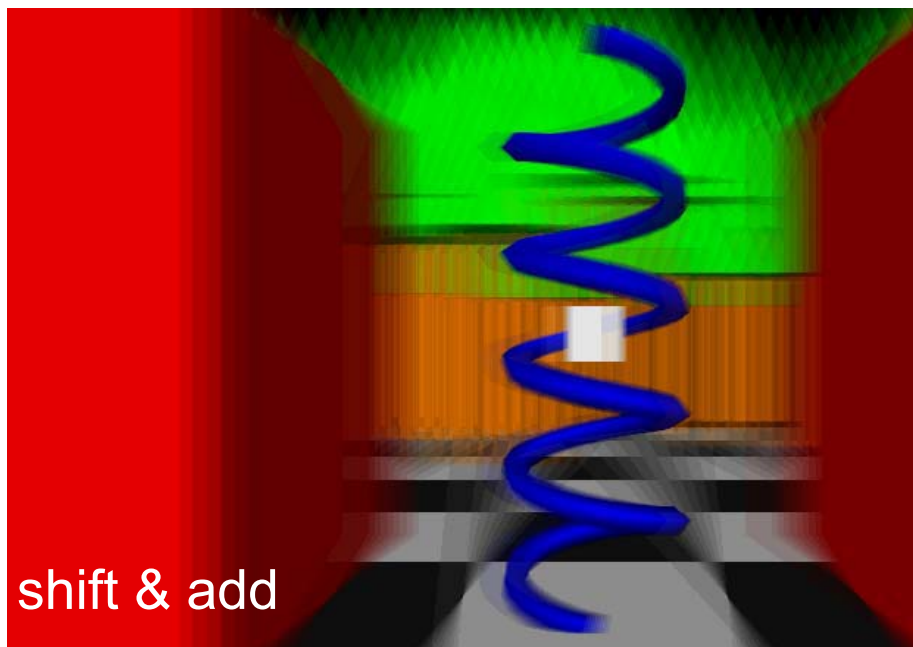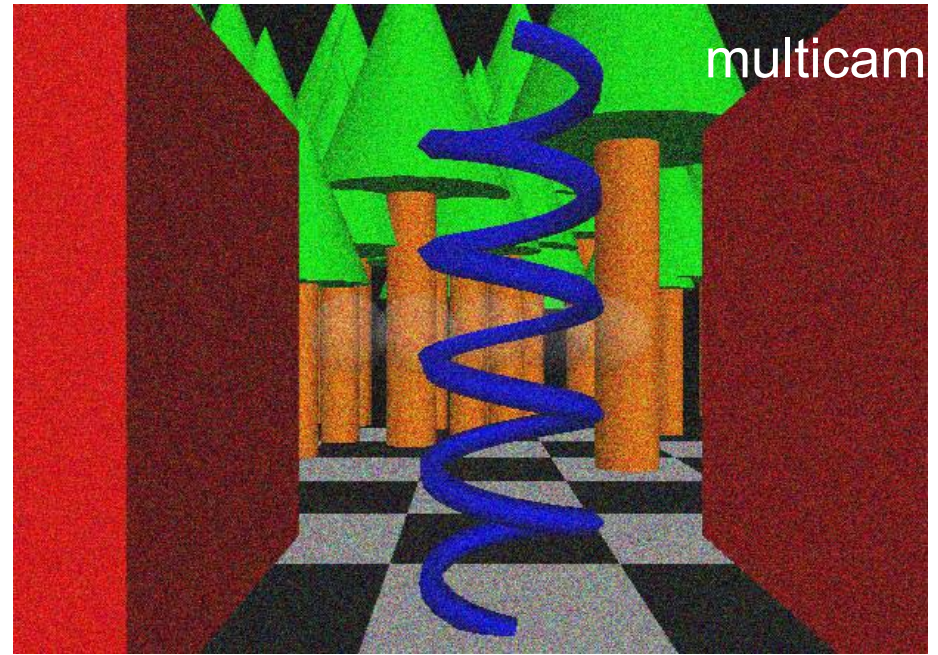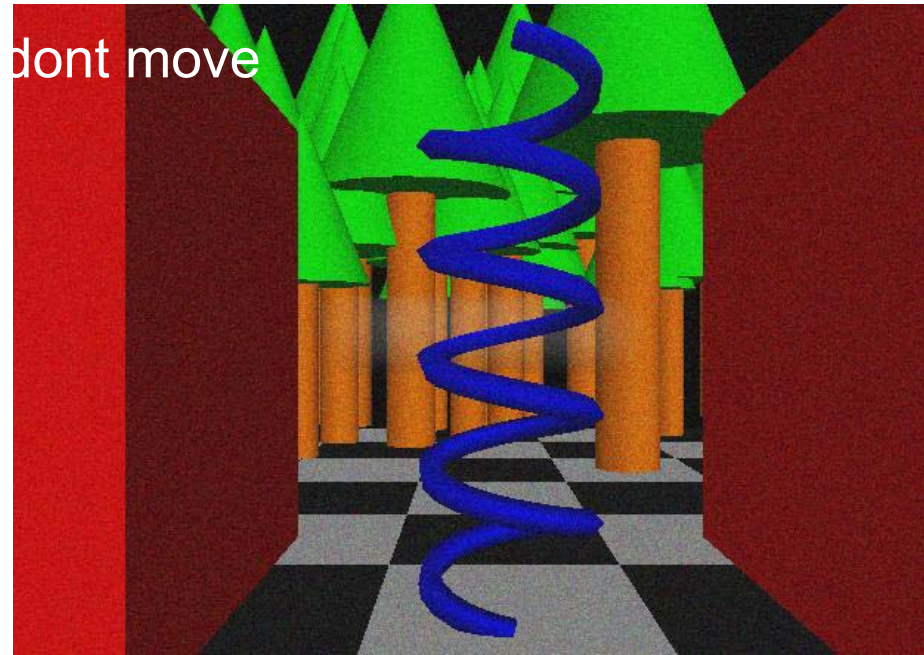# Idea: Don't Move the Camera (relatively)

Benefits
- Digital
- More light
- Consistent angle

Limitations
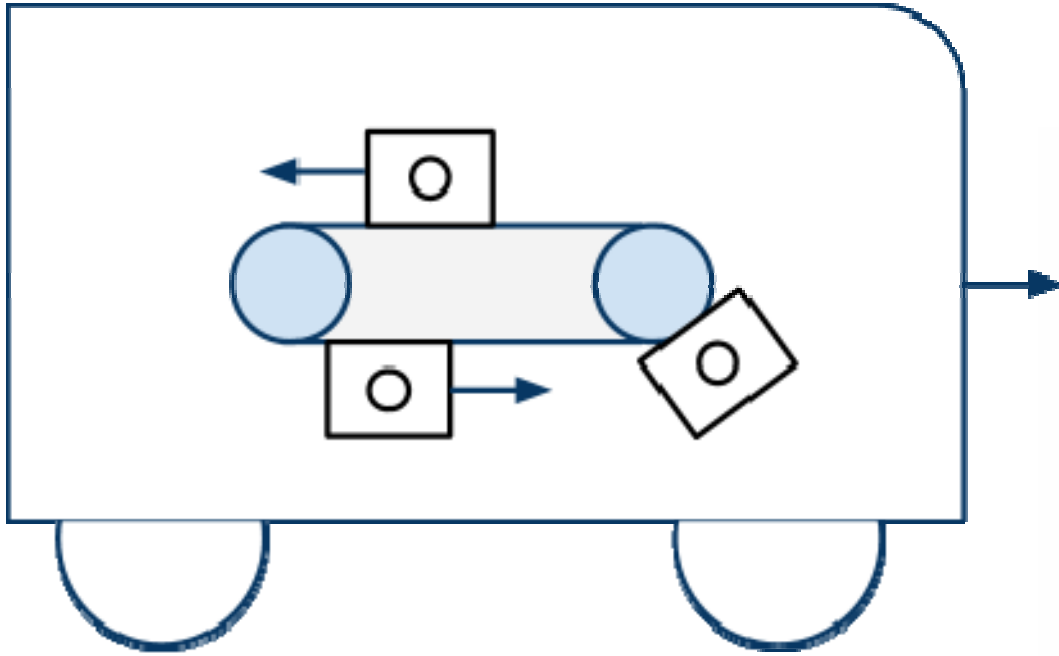- Moving parts
- Speed sensor
- 1 dimensional

Simulated Results

Physical Prototype

Performance

Prototype
- Chain vibrates camera
- Camera wires tangle
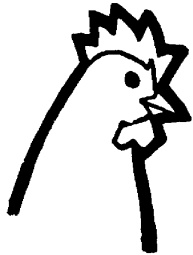- Two cameras not enough
- Unreliable direct-drive
- < $20

Future
- Smooth belt systems
- wireless
- many, small cameras
- Sensors and motors
- $$$$

Summary

Q. How do we take a sharp image of a static scene from a moving vehicle?

A. Don't move the camera

6D robot arms

South Facing Chariot

Google Street View

Photo of robot arm removed due to copyright restrictions.

Photo of chariot removed due to copyright restrictions.

Photo of car with cameras attached to roof removed due to copyright restrictions.`

MAS.531 Computational Camera and Photography

Fall 2009