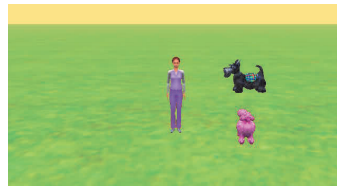# CompSci 94
Introduction to Programming Animation and Virtual Worlds
August 24, 2021

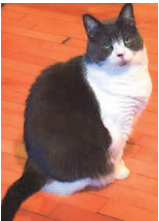Prof. Susan Rodger

Class Today

- Go over syllabus, web page
- Introduce computer science and Alice
- Demo of Alice
  - Simple world/sample Alice worlds
- Classwork – Get to know each other

www.cs.duke.edu/courses/fall21/compsci094/sec01/

About Prof. Rodger

How do you keep your sanity?

TA/UTA introductions

- Graduate TA: Derrick Adam (3:30pm Sec.)
- Undergraduate TAs:
  - Lauren Garbett (10:15am Section)
  - Alex Slover (10:15am Section)
  - Benjamin Keschner (10:15am Section)
  - Sara Azimi (3:30pm Section)

Course Web page

www.cs.duke.edu/courses/fall21/compsci094/sec01/

What is Computer Science?

- Computer science is no more about computers than astronomy is about telescopes.   - Edsger Dijkstra
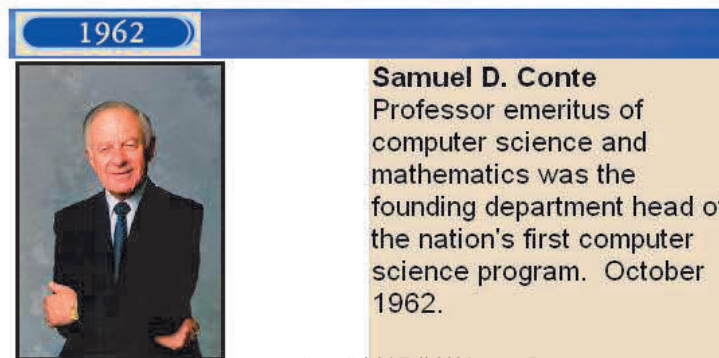

- Computer science is not as old as physics; it lags by a couple hundred years. However this does not mean that there is significantly less on the computer scientist's plate than on the physicist's: younger it may be, but it has had a far more intense upbringing!   - Richard Feynman

Computer Science is a young discipline
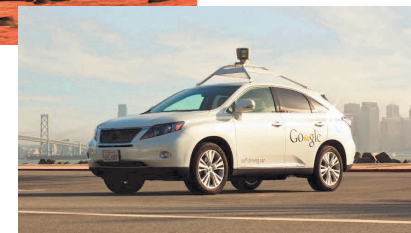
- First computer science department formed in 1962

What is Computer Science?

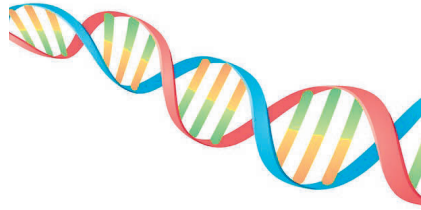- Artificial Intelligence

Roomba

Spirit, Mars Rover

Self-driving car

Personal Robot

What is Computer Science?

- Medicine, Genomics

What is Computer Science?

- Animation

What is Computer Science?

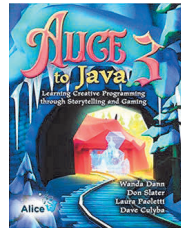- The Organization of Data, Sharing, and Searching

Computer Science and Programming

- Computer Science is more than programming
  - Called *Informatics* in many countries
  - Elements of both science and engineering
  - Elements of math, physics, cognitive science, music, art, and many other fields
- To some programming is an art, to others a science, to others an engineering discipline.
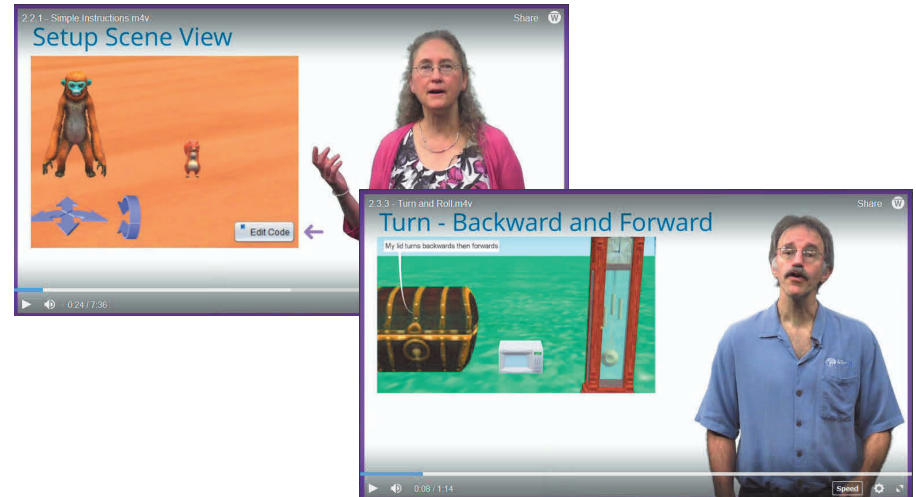
What Will We Do in CompSci 94?

- Alice 3 programming
- Logistics – bring to online lecture
  - laptop/computer
  - **optional** Textbook
  - Instead: Free videos

Optional

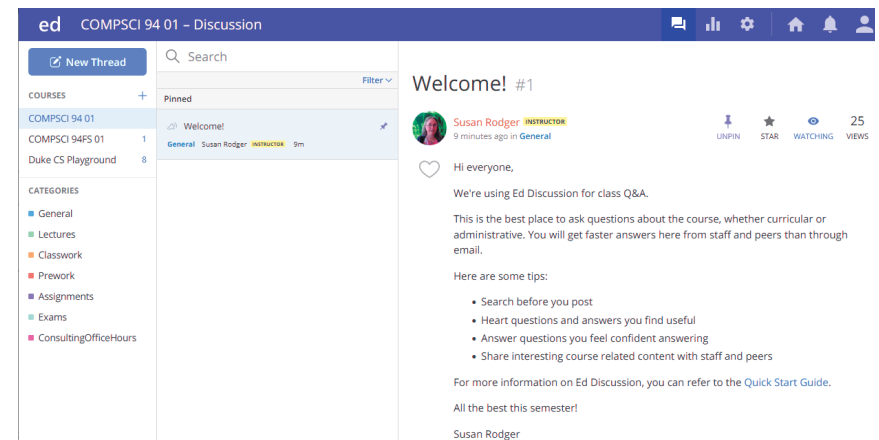# Videos – Watch and take online quiz (on Sakai) before class
Prof. Susan Rodger/Prof. Steve Cooper

How CompSci 94 Will Work

- In Class
  - Lecture/demos - short
  - Classwork
  - REQUIRED ATTENDANCE
  - Checkoff Classwork
- Outside of class
  - Complete work not finished in class
  - Watch Videos – before class
  - Online Quizzes – before class
  - Assignments

Don't Send email, use Ed Discussion to ask questions!
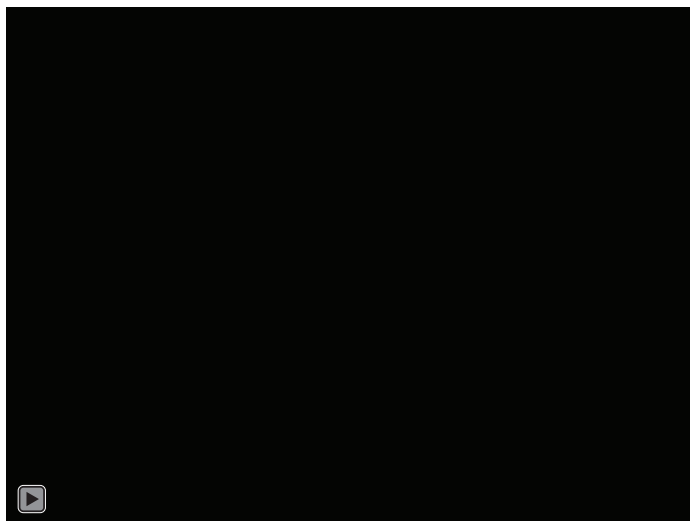
What Is Alice?

- A modern programming tool
  - 3-D graphics
  - 3-D models of objects
- Animation
  - Objects can be made to move around virtual world (a simulation or video game)

What does Alice run on?

- Alice is written in Java – should run on many systems
  - supports Mac and PC
- Which version of Alice are we using?
  - Alice 3 (NOT netbeans version, NOT beta)
  - Alice.org, see the CompSci 94 resources page
    - Version 3.6
  - Note: Alice 3 is quite a bit different from Alice version 2

Example from Alice 2
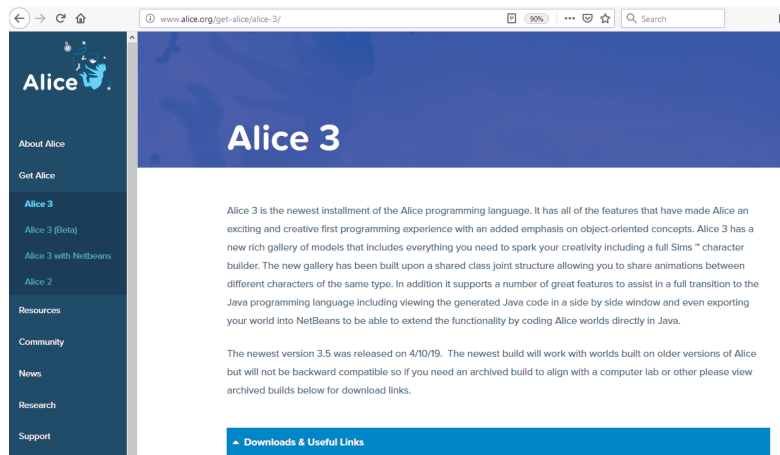
Some Alice 3 examples

Who are you?

https://bit.ly/cps94f21-0824-1

The Power of Alice

- Automatically keeps track of 3-D objects
  - What objects are in the virtual world
  - Types of objects
  - Positions of objects in the world

Download Alice 3 from alice.org, NOT Alice 2! NOT netbeans, NOT Beta!

Alice Demo

Code

For Thursday!

- No Alice classwork today but usually you would finish it
- Download Alice 3 if you haven't yet
- Assignment 1 out – Due Sept 2
  - This assignment does not use Alice
- Watch videos and answer questions for online quiz BEFORE coming to class.