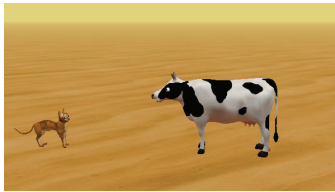


# CompSci 94

## Introduction to Programming Animation and Virtual Worlds

August 27, 2024



Prof. Susan Rodger

## Class Today

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

[www.cs.duke.edu/courses/fall24/compsci94](http://www.cs.duke.edu/courses/fall24/compsci94)

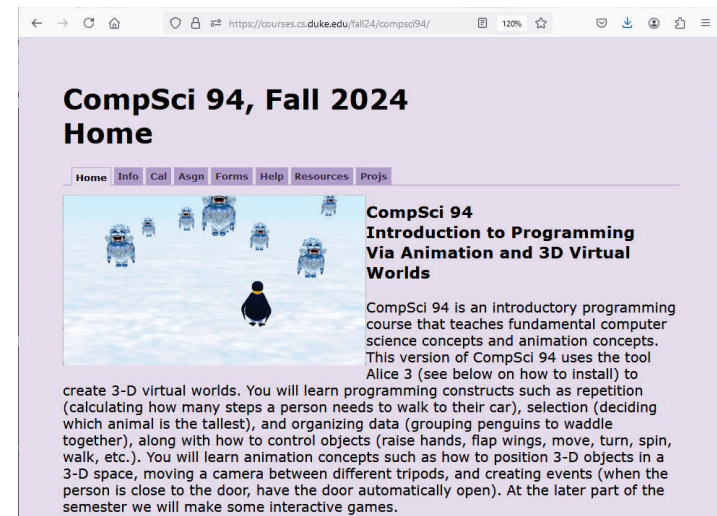
## TA/UTA introductions

- Graduate TA: Jiasheng Wang
- Undergraduate TAs:
  - Caroline Dolan Gilman
  - Linnea Kuruvilla
  - Abby Melton
  - Charley Nasiedlak



## Course Web page

[www.cs.duke.edu/courses/fall24/compsci94](http://www.cs.duke.edu/courses/fall24/compsci94)



# 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

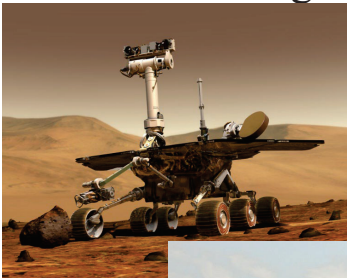


1962

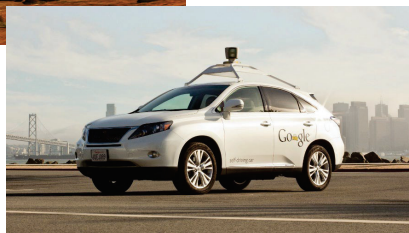
**Samuel D. Conte**  
Professor emeritus of computer science and mathematics was the founding department head of the nation's first computer science program. October 1962.

# What is Computer Science?

- Artificial Intelligence



Spirit,  
Mars Rover



Self-driving car



Roomba



Personal Robot

# What is Computer Science?

- Medicine, Genomics



# What is Computer Science?

- Animation



# What is Computer Science?

- The Organization of Data, Sharing, and Searching

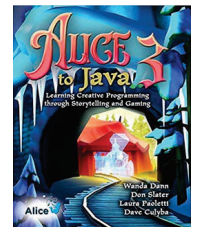


## Computer Science and Programming

- 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 lecture
  - laptop/computer
  - **optional** Textbook
  - Instead: Free videos
- **THIS IS A CLASS WITH PARTICIPATION**
- You will write a program everyday!

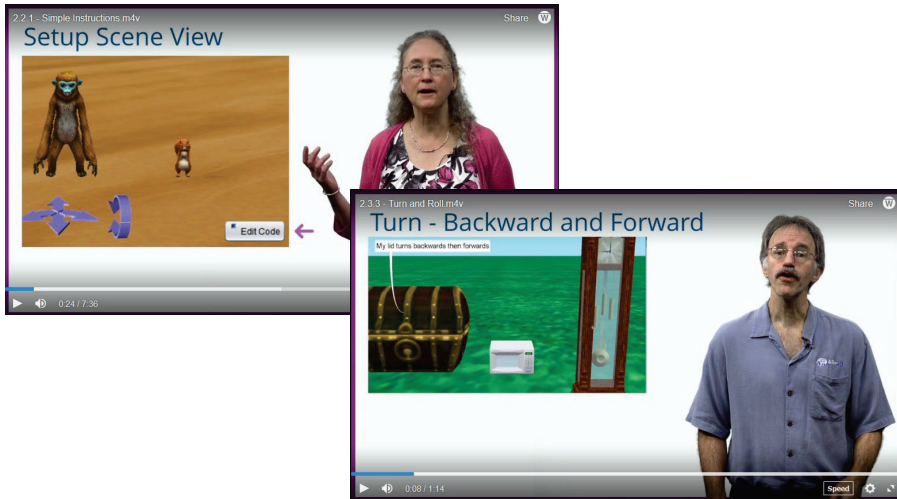


Optional



# Videos – Watch and take online quiz (on Sakai) before class

Prof. Susan Rodger/Prof. Steve Cooper

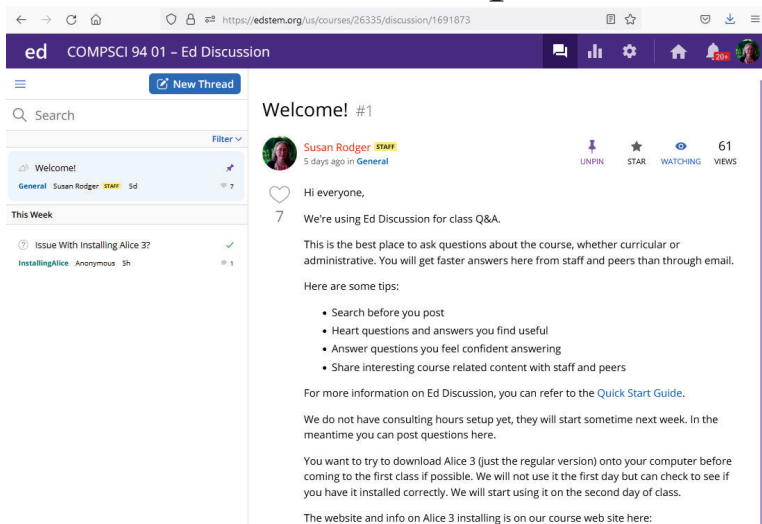


# How CompSci 94 Will Work

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

CompSci 94 Fall 2024 16

# Don't Send email, use Ed Discussion to ask questions!



CompSci 94 Fall 2024 17

# 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)

CompSci 94 Fall 2024 18

## 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 3.11
  - Note: Alice 3 is quite a bit different from Alice version 2

## Who are you?

<https://bit.ly/cps94f24-01>

## 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

## Alice Demo

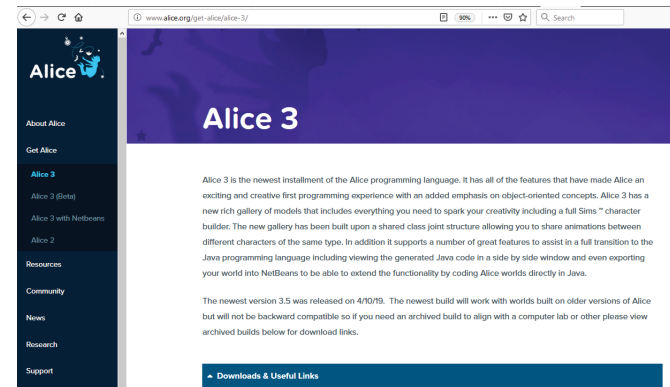


# Code



CompSci 94 Fall 2024 27

Download Alice 3 from [alice.org](http://alice.org),  
instructions CompSci 94 webpage,  
NOT Alice 2! NOT netbeans, NOT Beta!



CompSci 94 Fall 2024 28

## For Thursday!

- No Alice classwork today but usually you would finish it
- We can check your Alice 3 install!!!
- Download Alice 3 if you haven't yet
- Assignment 1 out – Due Sept 5
  - This assignment does not use Alice
- Watch videos BEFORE coming to class.
- Take Quiz on Sakai BEFORE class starts

CompSci 94 Fall 2024 29