

IOWA STATE UNIVERSITY

Department of Electrical and Computer Engineering

Welcome to CPR E 308

Operating Systems: Principles & Practice

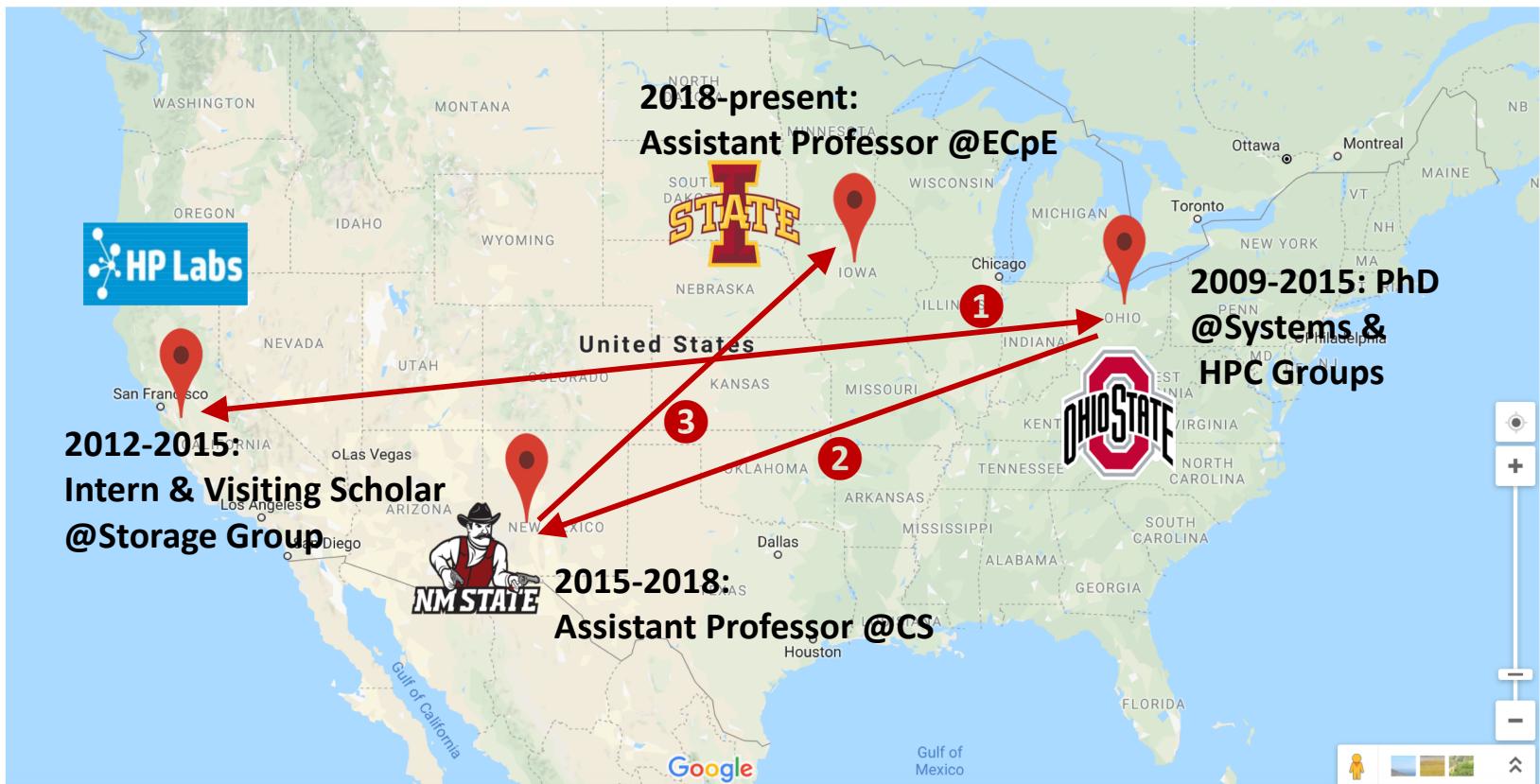


Agenda

- Course Introduction
- Warmup

Instructor

- Dr. Mai Zheng



Instructor

- Dr. Mai Zheng
 - Research:
 - Computer systems, especially data storage systems
 - Recent focus: system robustness
 - Published in top system venues
 - Funded by both NSF and industry
 - Contact:
 - Email: mai@iastate.edu
 - Office: 349 Durham
 - Office hours: 4:00 pm – 5:00 pm, Wednesdays
 - <http://www.ece.iastate.edu/~mai/>

Teaching Assistants (TAs)

- Kaihang Fu
 - <fkh2016@iastate.edu>
- Wenhao Chen
 - <wenhaoc@iastate.edu>
- TA Office Hours & Locations:
 - Mondays 11:00 - 12:00, Coover 3223, Wenhao
 - Tuesdays 11:00 - 12:00, Coover 3223, Wenhao
 - Wednesdays 11:00 - 12:00, Durham 314, Kaihang

Textbook

- Required
 - **Modern Operating Systems** by Andrew S. Tanenbaum, 4th Edition
- Two additional for reference:
 - **Operating Systems Concepts** by A. Silberschatz, P. Galvin, and G. Gagne, Addison-Wesley, 9th edition
 - **Operating Systems: Three Easy Pieces** by Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau
 - FREE at <http://pages.cs.wisc.edu/~remzi/OSTEP/>

Course Format

- Lectures by Instructor
 - Time: MWF, 09:00-09:50 am
 - Location: Marston 2300
- Lab sections by TAs

T	04:10 P	07:00 P	COOVER 2061
R	08:00 A	10:50 A	COOVER 2061
R	11:00 A	01:50 P	COOVER 2061
F	11:00 A	01:50 P	COOVER 2061

- Use Canvas
 - Slides, announcements, homework/lab/project assignment & submission, etc.

(Tentative) Tasks for Students

- Class Participation
- 9 lab assignments
- 2 programming projects
- 3 homework assignments
- 2 midterms
- 1 final exam

Grading Policy

- Class Participation (3%, bonus)
- 9 lab assignments (30%)
- 2 programming projects (15%)
- 3 homework assignments (15%)
- 2 midterms (20%)
- 1 final exam (20%)

Classroom Safety Info (Marston 2300)

- Exit classroom doors, proceed down north stairwell and out building doors on 1st floor
- Take Cover – Area between classroom doors and stairwell
- Evacuation – Proceed to the grassy area east of Marston Hall
- Fire extinguisher – 2nd floor, near both restrooms
- AED – 1st floor, outside family restroom
- Emergency call number
 - 515-294-4428 (mobile)
 - 911 (land line)
- More info: <http://www.ehs.iastate.edu/safety-at-isu>

Agenda

- Course Introduction
- Warmup

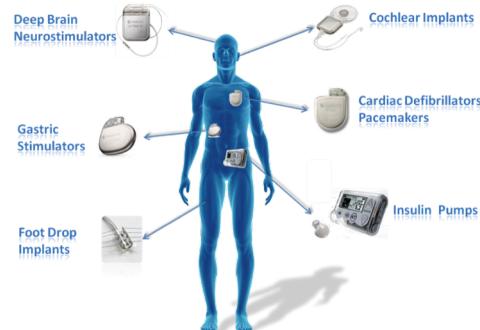
Why OS?

Why OS

- A fundamental piece of software in various computer systems
 - from tiny wearables to warehouse-scale machines
 - from consumer systems to mission-critical systems



WIRELESS IMPLANTABLE MEDICAL DEVICES

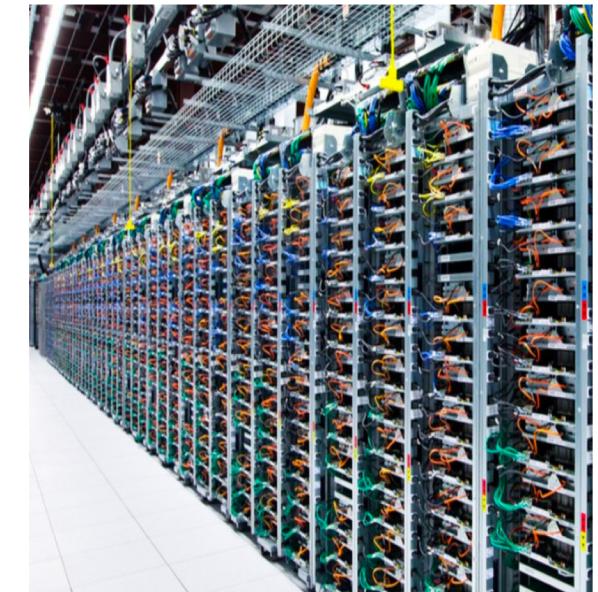


What's OS

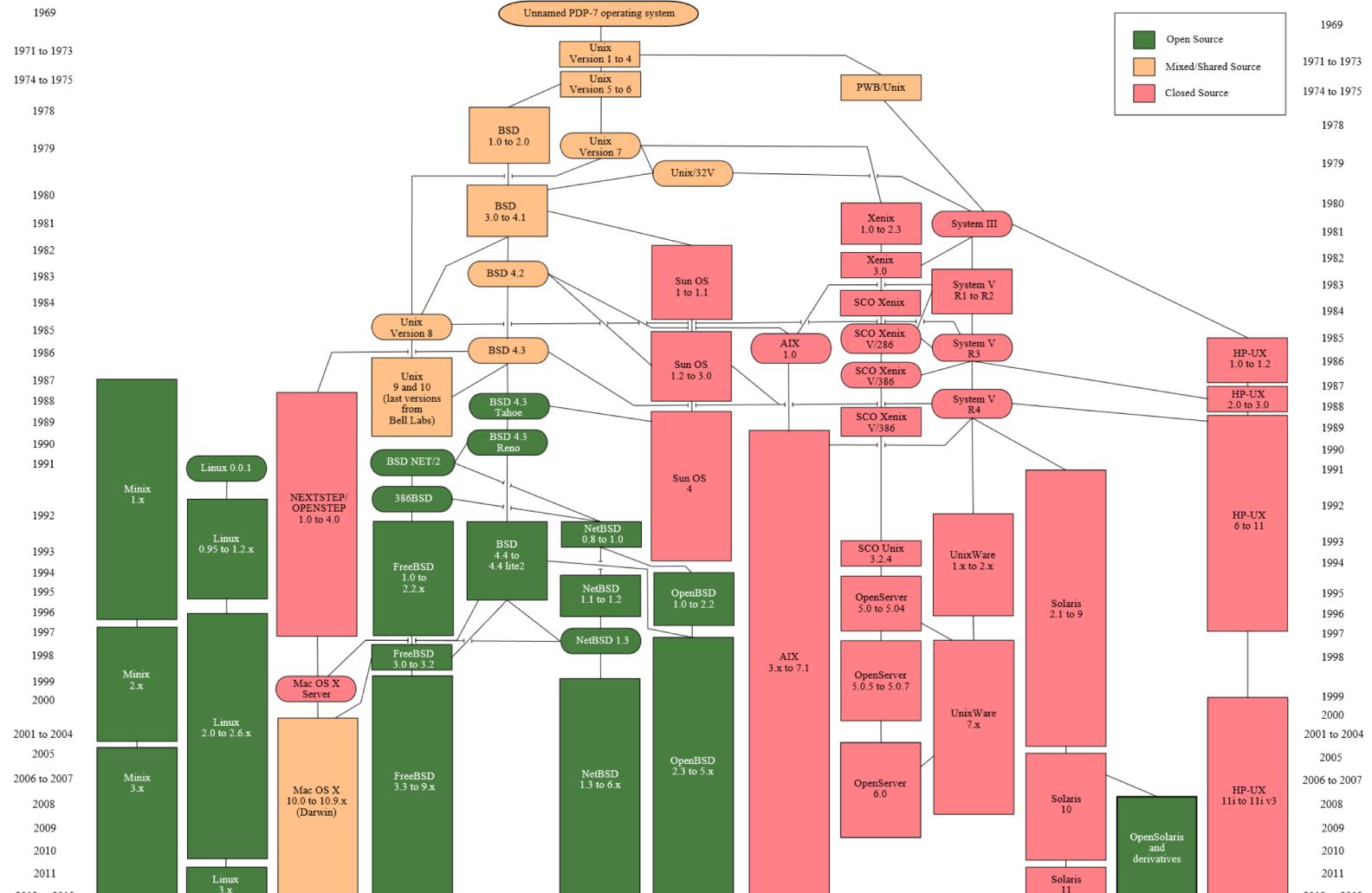
- OS is a **resource manager**
 - Manages all resources
 - Decides b/w conflicting requests for efficient and fair resource use
- OS is a **control program**
 - Controls execution of programs to prevent errors and improper use of the computer
 - Presents virtualized, easy to use abstractions
 - Hides the messy details which must be performed

What's OS

- Enabling various applications/services



Decades of Evolution



- <https://en.wikipedia.org/wiki/Unix>

Agenda

- Course Introduction
- Warmup

Questions?

