Computer Networks
@CS.NCTU

0: Syllabus

Instructor: Kate Ching-Ju Lin (林靖茹)

2023.09.12 (Tue)

Instructor

- Kate Lin (林靖茹)
- Office: EC-538
- E-mail: katelin@nycu.edu.tw

- Research:
  - Software defined networking for deep learning (service chaining, network function virtualization, SDN infrastructure design for DL training and testing)
  - Wireless systems (MIMO systems, full-duplex communications, mmWave Systems, WLANs)

General Information

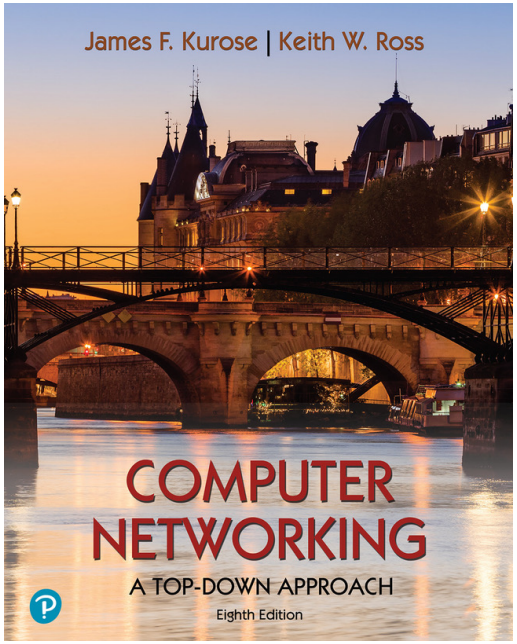
- Schedule
  - T56-ED117
- Instructor
  - Kate Ching-Ju Lin (林靖茹), EC-538
  - Office hours: By appointment
- TA
  - 張祐誠 / 蘇名偉 / 翁瑞澤
  - nycu-nc2023@googlegroups.com
  - Office hours: M67-EC635

張祐誠

蘇名偉

Course Details

- Textbook
  - James F. Kurose and Keith W. Ross, "Computer Networking: A Top-Down Approach," 8th edition, Pearson 2021
  - Online version?
- Prerequisite
  - Heavy internet users
- What should you self-learn?
  - Python
  - Basic Linux commands



Jim Kurose (黒瀬)

English Teaching

- May use Chinese to emphasize the key concepts
- Welcome to ask questions in Chinese
- Homework/quiz should be written in Eng
- Exam can be written in Eng/Ch

What Will be Covered?

- Overview and Introduction (Ch1)
- Network Application (Ch2)
  - HTTP, SMTP, DNS, DASH, P2P file sharing, etc.
- Transport services (Ch3)
  - TCP, UDP
- Network layer (Ch4-5)
  - IP, switching, routing, ICMP, SDN
- Link layer and wireless access (CH6)
  - LANs, error detection/correction, WLAN (WiFi)

Grading Policy

- Four Labs (30%)
  - Lab 0: git/python practic
  - Lab 1: Mininet and Wireshark
  - Lab 2: NS3
- Weekly QA (20%)
- Mid-term (25%)
- Final exam (25%)

Grading Policy

- Late policy for homework assignments
  - (Your score) * 0.8^{D}, where D is the number of days overdue
- Plagiarism
  - Academic integrity
  - Exams must be your own
  - Homework must be your own – cheaters share the score
  - Both the cheaters and the students who aided the cheater will be held responsible for the cheating

Schedule

week	Date	Lecture
1-2	9/12, 9/19	Introduction
3-4	9/26, 10/3	Network applications
6-8	10/17, 10/24, 10/31	Transport services ← Lab1
?		**Mid-term (2020/11/1-6)**
9-11	11/7, 11/14, 11/21	Network layer (Data Plane)
12-13	11/28, 12/5	Network layer (Control Plane)
15-16	12/12, 12/19	Link layer and wireless ← Lab 2
16	12/26	**Final exam (2021/12/26)**

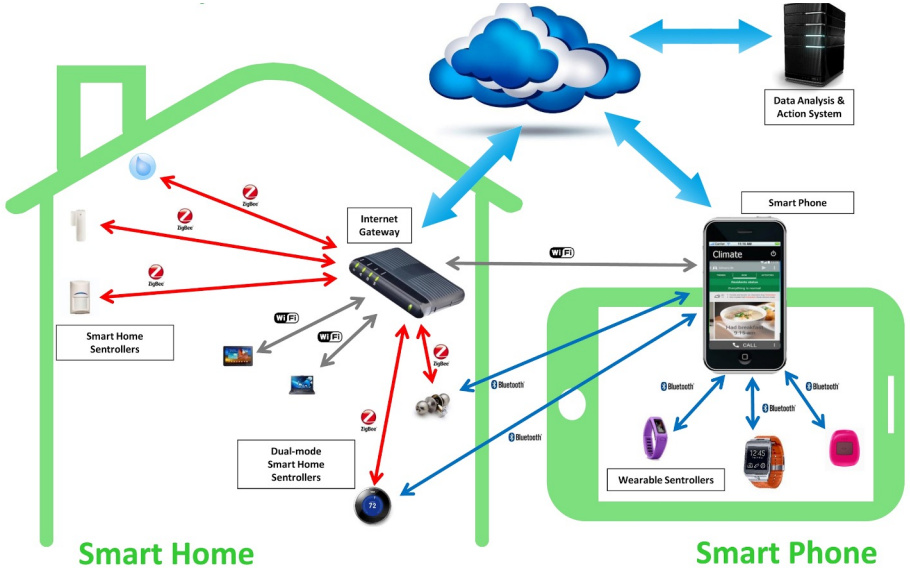
Schedule

- Tue.
  - Lecture in-person@ED117

- Thu.
  - QA in Podcast
    - Apple Podcast
    - Google Podcast
    - Firstory
  - Discuss questions given in the previous week

What is Networking?

- Devices connected by communication channels for
  - Information sharing: WWW, Facebook, Youtube
  - Resource sharing: Cloud computing (Amazon, Dropbox)



Permission Policy for Waiting List

1. International students
2. CS students, from senior to freshman
3. Cross-discipline students, from senior to freshman
4. Students who have ever took any programming class in CS, from senior to freshman

In each class: rank by random process

TODO

- Join Teams
  - Join link
  - Online lecture will be recorded
  - Slides will be uploaded to the “file” tab
- Lab0: due 9/18 23:59

Notes!

- Try to solve your problems by yourselves before asking the TAs
  - Google
  - chatGPT
  - Discuss with classmates
- Ask your questions in Teams channels
  - Don't contact with TAs through their personal emails or other ways
- Make an appointment before asking questions
  - Even when you wanna ask during the office hours

Notes!

- How to ask questions?
  - Please don't say something like ~~*"I did A, and it failed! What's wrong?"*~~
  - Specifically describe what you have tried
  - Explain what are potential guesses of your problems
  - **BE POLITE!**
    - Write a formal email (post)
    - Introduce who you are
    - Explain your problems properly
    - Describe what assistence you expect to have
    - And, finally, be respectful and grateful!

Sorry, if you really have difficulty completing Lab0, please consider dropping the course