

Tzu-Bin Yan

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RESEARCH INTERESTS

Network measurement and network security

EDUCATION

08/2019 – Present

University of Illinois at Urbana-Champaign | Urbana, IL, USA

- Ph.D. Candidate: Department of Computer Science
- Research area: Security and Privacy
- Advisor: Kirill Levchenko
- GPA (on a scale of 0 – 4.0): Average – 3.97
- Relevant coursework: Communication Networks; Applied Cryptography; Advanced Computer Security; ML for Sys, Netwrks & Security; Sec. & Privacy for Home IOT; Program Verification; Embedded System Verification

09/2015 – 06/2019

National Taiwan University | Taipei, Taiwan

- B.S.: Department of Computer Science & Information Engineering
- GPA (on a scale of 0 – 4.3): Average – 4.22 | Major – 4.24
- Relevant coursework: Computer Networks; Advanced Computer Networks; Introduction to Wireless and Mobile Networking; Network Administration and System Administration; Cryptography and Network Security
- Overall academic performance ranking 1st among 169 students

PAST EXPERIENCE

01/2023 – 05/2023, 08/2023 – Present

Teaching Assistant, University of Illinois at Urbana-Champaign, Urbana, IL, USA

- For ECE 422 / CS 461 – Introduction to Computer Security
- Lead TA for the network security part of the course
- Works include holding office hours, leading discussion sections, running and grading the network security homework, and designing final exam questions

05/2023 – 08/2023

Applied Scientist Intern, Amazon, Seattle, WA, USA

- Team: NAE (Network Availability Engineering) science
- Works include designing network telemetry primitives for sustainable network monitoring, creation of path latency profiles for latency reasoning, writing proposal, and LLM latency reasoning support integration

08/2019 – 12/2022

Research Assistant, University of Illinois at Urbana-Champaign, Urbana, IL, USA

- Lead Ph.D. of the research project “PacketLab: A Universal Measurement Endpoint Interface”, funded by NSF grant #1764055/1903612

- Works included protocol design and documentation, software package development, project website maintenance, and collaboration with other students on project functionality extensions
- Project website: `pktlab.github.io`

09/2017 – 06/2019

Research Assistant, National Taiwan University, Taipei, Taiwan

- Participated in the research project “OmniEyes – Next Generation Mobile Video Platform (OmniEyes - 次世代行動影像平台)”, funded by Ministry of Science and Technology, Taiwan
- Works included literature review, platform application development (Android and Linux), establishment of video relay system, and offline application development

02/2019 – 06/2019

Teaching Assistant, National Taiwan University, Taipei, Taiwan

- For CSIE 1310 - Network Administration and System Administration Laboratory
- In charge of the firewall/VPN segment lab content, as well as homework/midterm question design and grading

09/2017 – 06/2019

Network Administrator, National Taiwan University, Taipei, Taiwan

- Leader of the firewall division
- Works included maintenance of the firewall, VPN, and NAS server of the department, provision of network services to faculties and students, as well as training of new recruits

PUBLICATION

- **PacketLab - Tools Alpha Release and Demo** (Extended Abstract)
At the 2022 Internet Measurement Conference (IMC 2022), Nice, France *in Oct, 2022*

TALKS

- **A Brief Intro on PKTLAB: A Universal Measurement Endpoint Interface**
At Workshop on Active Internet Measurements (AIMS 2023), La Jolla, CA, USA *in May, 2023*
- **PacketLab - Tools Alpha Release and Demo** (Poster)
At the 2022 Internet Measurement Conference (IMC 2022), Nice, France *in Oct, 2022*
- **PacketLab: A Universal Measurement Endpoint Interface – Now with Demo!**
At Workshop on Active Internet Measurements: Knowledge of Internet Structure: Measurement, Epistemology, and Technology (AIMS-KISMET 2020), La Jolla, CA, USA *in Feb, 2020*

SELECTED AWARDS & SCHOLARSHIPS

- **Honorary member of the Phi Tau Phi Scholastic Honor Society of R.O.C.**
(top 1% of students in the college of electrical engineering and computer science, NTU)
From the Phi Tau Phi Scholastic Honor Society *in 2019 spring*
- **Presidential Award** (top 5% of students in class)
From National Taiwan University *in 2015 fall, 2016 spring, 2017 spring, 2019 spring*
- **Excellent Teaching Assistant**
From National Taiwan University *in 2019 spring*
- **Government Scholarship for Overseas Study**

(a total of 4 recipients nationwide in the area of Electrical Engineering & Computer Science)

From Ministry of Education, Taiwan

in 2018 fall

- **Scholarship from the Memorial Scholarship Foundation to Mr. Lin Hsiung Chen**

(with a total of 50 recipients out of 2808 competitors nationwide this year based on college academic performance and the convention of at most one recipient per department)

From the Memorial Scholarship Foundation to Mr. Lin Hsiung Chen

in 2018 fall

- **Pan Wen Yuan Culture and Education Foundation Scholarship**

(with a total of 3 undergraduates from NTU based on college academic performance)

From Pan Wen Yuan Culture and Education Foundation

in 2017 fall

ADDITIONAL SKILLS

- Languages: Mandarin Chinese (native speaker); English (fluent)
- Software and Programming Competencies: C/C++; Python; Go; Rust; SQL; MATLAB; OpenSSL; GNU make; GNU Autotools; POSIX-compatible operating systems (including system programming and shell scripting); Git; GitHub; Jekyll; Windows operating systems; General use of Microsoft Office Suite
- Data Collection and Analysis: Python; MATLAB; SAS; R; Microsoft Excel