

Peiqing Chen (Wilhelm)

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EDUCATION BACKGROUND

PEKING UNIVERSITY

School of Electrical Engineering and Computer Science

Expected Date of Graduate: 2021.7, Overall GPA 3.67/4.00 (Top15%), TOEFL 117

University of British Columbia

Exchange Program in School of Computer Science

2017.9-Present

Beijing, China

2019.9-2019.12 Vancouver, BC, Canada

PUBLICATIONS

1. **Peiqing Chen**, Dong Chen, Lingxiao Zheng, Jizhou Li and Tong Yang, *Out of Many We are One: Measuring Item Batch with Clock-sketch*, **accepted by ACM SIGMOD 2021**

- Generalize a data stream pattern Item Batch, which means a batch of items with same ID in a data stream
- Measure data stream by item batches is useful in cache prefetching, burst detection and APT analysis
- Design Clock-sketch algorithm to measure activeness, cardinality, time span and size of item batches

PROJECTS & RESEARCH

Sketch: What-if analysis

Research intern at Uchicago, Advisor: Prof. Junchen Jiang(UChi), Dr. Zaoxing Liu(BU) 2020.7-Present|Remote

- Study a wide range of network emulators and find that their prediction accuracy can be improved by a more accurate L-4 network telemetry system
- Deploy CM-sketch on programmable switches to measure network data stream
- Propose a tighter error bound of CM-sketch using real-time traffic pattern and give a more accurate telemetry

Sliding Hardware Estimator: A Generic Framework for Measurements over Sliding Windows

Research assistant at Peking University, Advisor: Prof. Tong Yang

2019.2-2019.7|PKU

- Introduce a sliding window measurement framework to perform data stream telemetry in network
- Implement our sliding window algorithm on programmable switches to conduct real network measurement

Generic and Space-Efficient Network Measurements from the Perspective of Distributed Storage (CAHeap)

Research assistant at Peking University, Advisor: Prof. Tong Yang

2019.7-2020.1|PKU

- Address the memory redundancy induced by duplicate records on switch nodes in network wide measurements
- Introduce RS encoding to realize distributed storage of flow ID in separate switches in a data center
- Implement CAHeap on programmable switches to conduct real network measurement

Pkuranking.com

Develop a website, Advisor: Kaigui Bian(PKU)

- Build a ranking website <http://pkuranking.com/>, which collects info of CS faculties in PKU
- Rank all faculties based on publications and citations, which aims to establish a platform for students to find their most matching undergraduate research advisor

EXPERIENCE

Deloitte Digital Difference Camp

2019.8 | *Beijing, China*

- Develop a platform for commercial banks to judge the solvency of enterprises using JavaScript and PHP
 - ✧ Obtain financial data of listed enterprises through web crawler and establish enterprise portrait database
 - ✧ Design web page and background with script language and deploy them on the server
- Ranked top 10 among 513 teams in the Global Final

Bytecamp at Bytedance

2020.9 | *Beijing, China*

- Develop a video editing software for iOS:
 - ✧ Support video cutting, fragments recombination, filtering, sticker and caption adding
 - ✧ Use AVFoundation and UIKit framework for video editing.
- Rewarded the second prize among 50 teams

Teaching Assistant at PKU

2020.3 | *Beijing, China*

- Host weekly discussion of 17 students in the undergraduate course *Algorithm Design and Analysis*
- Offer guidance on homework and exams

EXTRACURRICULAR ACTIVITY

Students' International Communication Association

2018-2019 | *Beijing, San Francisco*

- Invite AIIB president Dr. Liqun Jin and host a talk on 'The wisdom of AIIB and its worldwide influence'. Selected distinguished student delegates from top universities in China and USA
- Host an online meeting during the COVID-19 pandemic and organized discussion on topics 'Sino-US relationship in the background of de-globalization', 'Media and misinformation'

SKILLS AND HOBBIES

- Languages Mandarin (Native), English Fluent (TOEFL 117; GRE 324+4)
- Computer C/C++, Python, Origin, Julia, MATLAB, MySQL, PHP