# Kenuo **Xu**

Ph.D. Student · Peking University

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## Education

**Peking University** — *Beijing, China*

Ph.D. in Computer Science — *Sep. 2020 - Present*

- In the Software-hardware Orchestrated ARchitecture (SOAR) group; advisor: Prof. Chenren Xu
- Design a visible light backscatter communication system that supports concurrent transmission for low latency purpose.
- Design a visible light communication system with spike cameras as receivers to achieve high data rate and dynamic range.
- See publications for more research.

**Peking University** — *Beijing, China*

B.Sc. in Computer Science — *Sep. 2016 - Jun. 2020*

- Graduated with Excellent Graduate Award

## Employment

**Microsoft Research Asia** — *Shanghai, China*

Research Intern — *Dec. 2022 - Sep. 2023*

- In the Shanghai Wireless Group; mentor: Prof. Lili Qiu
- Worked on large language models plus computer networking.

## Publications

**When Visible Light (Backscatter) Communication Meets Neuromorphic Cameras in V2X** — *ACM HotMobile*

**Kenuo Xu**, Kexing Zhou, Chengxuan Zhu, Shanghang Zhang, Boxin Shi, Xiaoqiang Li, Tiejun Huang, Chenren Xu — *2023*

- When VLC meets neuromorphic cameras: a spike cameras as VLC receiver achieves 4.8 kbps data rate and different mobile scenarios.

**Low-Latency Visible Light Backscatter Networking with RetroMUMIMO** — *ACM SenSys*

**Kenuo Xu**, Chen Gong, Bo Liang, Yue Wu, Boya Di, Lingyang Song, Chenren Xu — *2022*

- Enables 8 concurrent VLBC links and reduces networking latency by 92.0%.

**RetroV2X: A New V2X Paradigm with Visible Light Backscatter Networking** — *Fundamental Research*

Chenren Xu, **Kenuo Xu**, Lilei Feng, Bo Liang — *Accepted*

- A practical vehicle-to-everything communication system with visible light.

**VLID: Visible Light Backscatter System for Battery-free Internet-of-Things** — *IEEE/ACM Transactions on Networking*

Chenren Xu, Purui Wang, Tuochao Chen, Yue Wu, **Kenuo Xu**, Xieyang Xu, Yang Shen, Junrui Yang, Guojun Chen, Guobin Shen — *Accepted*

- An end-to-end VLBC solution for battery-free IoT networking.

**Renovating road signs for infrastructure-to-vehicle networking: a visible light backscatter communication and networking approach** — *ACM MobiCom*

Purui Wang, Lilei Feng, Guojun Chen, Chenren Xu, Yue Wu, **Kenuo Xu**, Guobin Shen, Kuntai Du, Gang Huang, Xuanzhe Liu — *2020*

- Enhance the reliability of autonomous driving with reflective roadsigns that conveys dynamic additional information.

**Turboboosting Visible Light Backscatter Communication** — *ACM SIGCOMM*

Yue Wu, Purui Wang, **Kenuo Xu**, Lilei Feng, Chenren Xu — *2020*

- Improve the data rate of VLBC by 8x (prototype) and 32x (simulation) with advanced modulation schemes.

## Honors & Awards

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|---|---|---|
| 2022 | **Merit Student**, Peking University | *Beijing, China* |
| 2021 | **First Prize**, Competition of Future Network Technology Innovation | *Nanjing, China* |
| 2020 | **Excellent Graduate**, Peking University | *Beijing, China* |
| 2019 | **Houston BAA Scholarship**, Peking University | *Beijing, China* |
| 2019 | **Merit Student**, Peking University | *Beijing, China* |

# Activities

### Teaching Assistant

*Peking University*

Computer Networks (Honor Track) *Fall 2019, 2020, 2021(Light), 2022(Light)*

- Organizing the course and answering questions.
- Giving assignments, tutorials, and grading of labs.
- Designing quizzes and grading students' responses.
- Mentoring course research projects (light).

### Journal Reviewer

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) *2021*