

# Kenuo Xu

PH.D. STUDENT · PEKING UNIVERSITY

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## Education

### Peking University

PH.D. IN COMPUTER SCIENCE

Beijing, China

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

B.Sc. IN COMPUTER SCIENCE

Beijing, China

Sep. 2016 - Jun. 2020

- Graduated with Excellent Graduate Award

## 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 road signs 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

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

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## Teaching Assistant

COMPUTER NETWORKS (HONOR TRACK)

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

*Peking University*

*Fall 2019, 2020, 2021(Light), 2022(Light)*

## Journal Reviewer

PROCEEDINGS OF THE ACM ON INTERACTIVE, MOBILE, WEARABLE AND UBIQUITOUS TECHNOLOGIES (IMWUT)

*2021*