BO LIANG

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EDUCATION

Peking University GPA: 3.60 | September, 2017 - July, 2022
BSc. Physics and Dual BSc. Computer Science
Peking University Prospective Ph.D. | September, 2022 -
Ph.D. candidate Computer System and Architecture

INTERN EXPERIENCE

ALIBABA DAMO ACADEMY | C++ Software Development Intern Remote | July 2021 – June 2022

- Support the basic supply/logistic chain and access management of Alibaba by designing and implementing RFID-based inventory and localization system.
- Present and illustrate the new progress from DAMO academy XG lab in APSARA Conference.

CORNELL UNIVERSITY | Summer Research Intern Remote | June 2020 - March 2021

- Design and implement acoustic sensing device containing Tx, Rx, modulation, demodulation, passive array process and machine learning based classifier.

PEKING UNIVERSITY | Research Intern Beijing | June 2019 - Now

- Develop test bed and conduct experiments for visible light communication and RFID localization.
- Design algorithms for different kinds of localization/communication/sensing systems.
- Paper review and presentation from communities including MobiCom, MobiSys, SenSys, Ubicomp and so on.

PROJECTS

RF-CHORD RF Design, FPGA, Localization, Trakcing

Design a new 200 MHz universal software radio peripheral (USRP), called RF-Chord, and push the robustness of indoor radio frequency Identification (RFID) localization to 99.9% in warehouse scenes. Under the guidance of Pengyu Zhang at Alibaba DAMO Academy.

EARIO PCB Design, 3D Model Design, Acoustic Sensing

A low-power acoustic sensing earable for continuously tracking detailed facial movements. Under the guidance of Prof. Cheng Zhang at Cornell University.

RETROMUMIMO Communication Protocol Design, Demodulation algorithm

Design the PHY and MAC layer for Low-latency Visible Light Backscatter Networking based on the pulse features of LCD and LED. Under the guidance of Prof. Chenren Xu at Peking University.

SKILLS

Languages: C++, JAVA, Python, MATLAB, Verilog
Algorithm Development: Localization/Tracking Algorithm, Demodulation, Communication Protocol Design
Rapid Prototyping Manufacturing: PCB Design, FPGA Development, Antenna Design, 3D printing/Framework Design
Math: Statistics, Group theory, Graph Theory, Set theory, Differential equations, Convex optimization, Information theory
Physics: Numeral Calculations, Advanced optics, Electrodynamics, Quantum mechanics, Theoretical mechanics, Astronomy

AWARDS

Peking University Admission Scholarship 2017, Top 5%
Outstanding Student Leader of Peking University 2018 and 2020, Top 2%
Weiming Physics Student Scholarship 2020, Top 10%
Peking University Outstanding graduates 2022, Top 10%

PUBLICATIONS

EarIO IMWUT'22 (minor revision, top 1%-2%).
RetroMUMIMO *Accepted* by SenSys'22.
RF-Chord *Accepted* by NSDI'23, as the world's first undergraduate first author.