

Junbo Zhang

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EDUCATION

Carnegie Mellon University

PhD Student in Electrical and Computer Engineering (ECE)

- Advisor: Swarun Kumar

Pittsburgh, PA, US

Aug 2019 – Present

Tsinghua University

Bachelor's Degree in Electronic Engineering (EE)

Beijing, China

Aug 2015 – Jul 2019

EXPERIENCE

Nokia Bell Labs

Research Intern in Data & Device Group

- Project: large-scale backscatter networks. Manager: Michael Eggleston.

Murray Hill, NJ, US

Jun 2022 – Aug 2022

Carnegie Mellon University

Teaching Assistant: 18-441/741 Computer Networks

- Spring: teaching assistant with 2 guest lectures. Fall: course project design and implementation.

Pittsburgh, PA, US

Feb 2021 – Dec 2021

Carnegie Mellon University

Summer Research Intern at WiTech Lab

- Projects: PushID (NSDI '19) and IntuWition (MobiCom '19). Advisor: Swarun Kumar.

Pittsburgh, PA, US

Jul 2018 – Sep 2018

Tsinghua University

Undergraduate Research Intern

- Graduation Project: machine learning based IoT device classification. Advisor: Yong Li.
- Undergraduate Research: Wi-Fi based human gesture and pose recognition. Advisor: Zheng Yang.

Beijing, China

Mar 2018 – Jun 2019

PUBLICATION

NFCapsule: An Ingestible Sensor Pill for Eosinophilic Esophagitis Detection Based on Near-field Coupling

Junbo Zhang, Gaurav Balakrishnan, Sruti Srinidhi, Arnav Bhat, Swarun Kumar, and Chris Bettinger

In the 20th ACM Conference on Embedded Networked Sensor Systems (SenSys '22)

PLatter: On the Feasibility of Building-scale Power Line Backscatter

Junbo Zhang, Elahe Soltanaghahi, Artur Balanuta, Reese Grimsley, Swarun Kumar, and Anthony Rowe

In the 19th USENIX Symposium on Networked Systems Design and Implementation (NSDI '22)

Locating Everyday Objects using NFC Textiles

Jingxian Wang[†], *Junbo Zhang*[†], Ke Li, Chengfeng Pan, Carmel Majidi, and Swarun Kumar

In the 20th International Conference on Information Processing in Sensor Networks (IPSN '21)

- Best Presentation Award & Best Paper Award

Joltik: Enabling Energy-Efficient "Future-Proof" Analytics on Low-Power Wide-Area Networks

Mingran Yang, *Junbo Zhang*, Akshay Gadre, Zaoxing Liu, Swarun Kumar, and Vyas Sekar

In the 26th Annual International Conference on Mobile Computing and Networking (MobiCom '20)

Poster: NoFaceContact – Stop Touching Your Face with NFC

Junbo Zhang and Swarun Kumar

In the 18th International Conference on Mobile Systems, Applications, and Services (MobiSys '20)

On the Feasibility of Wi-Fi Based Material Sensing

Diana Zhang, Jingxian Wang, Junsu Jang, *Junbo Zhang*, and Swarun Kumar

In the 25th Annual International Conference on Mobile Computing and Networking (MobiCom '19)

Pushing the Range Limits of Commercial Passive RFIDs

Jingxian Wang, *Junbo Zhang*, Rajarshi Saha, Haojian Jin, and Swarun Kumar

In the 16th USENIX Symposium on Networked Systems Design and Implementation (NSDI '19)

[†] Co-primary Authors

SKILL

- Programming: C/C++, MATLAB, Python, and L^AT_EX; know about Java, Verilog, and HTML.
- Language: English – Fluent (TOEFL iBT 113/120 with Speaking 28/30); Mandarin – Native Speaker.

AWARD

- Phillips and Huang Family Fellowship in Energy (2022)
- Wei Shen and Xuehong Zhang Presidential Fellowship (2023)