

# JONNY (ZHAONING) KONG

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## RESEARCH INTEREST

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Networked & Mobile Systems, Systems for Machine Learning, Edge-assisted AR/VR, 5G.

## EDUCATION

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<b>Purdue University</b> Ph.D. in Computer Engineering	West Lafayette, IN, U.S. Aug 2020 - Present
<b>University of California, Los Angeles</b> M.S. in Computer Science	Los Angeles, CA, U.S. Sep 2018 - June 2020
<b>Beihang University</b> B.S. in Automation	Beijing, China Sep 2014 - June 2018

## PROFESSIONAL AND RESEARCH EXPERIENCE

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<b>Purdue University</b> Research Assistant Advisor: Prof. <a href="#">Y. Charlie Hu</a>	West Lafayette, IN, U.S. Aug 2020 - Present
<ul style="list-style-type: none"><li>– Designed machine-learning-as-a-service (MLaaS) frameworks that maximizes the capacity of a GPU server in serving edge-assisted AR mobile apps</li><li>– Designed MLaaS frameworks that optimizes the overall accuracy of an AR mobile app that offloads multiple tasks to an edge GPU server <a href="#">[1]</a></li><li>– Profiled and analyzed the performance of next-generation wireless networks, e.g. 5G mmWave <a href="#">[5]</a> and 802.11ad <a href="#">[3]</a></li><li>– Analyzed and designed systems for next-generation mobile apps via edge computing <a href="#">[7]</a> <a href="#">[6]</a>, and analyzed their performance on 5G networks <a href="#">[2]</a></li></ul>	
<b>University of California, Los Angeles</b> Research Assistant Advisor: Prof. <a href="#">Lixia Zhang</a>	Los Angeles, CA, U.S. Oct 2018 - Jun 2020
<ul style="list-style-type: none"><li>– Performed extensive experiments and designed the protocols for data synchronization <a href="#">[4]</a> <a href="#">[9]</a>, a transport-layer protocol for Named Data Networking (NDN)</li></ul>	
<b>NetEase Inc.</b> Software Engineering Intern	Beijing, China Mar 2018 - Jun 2018
<ul style="list-style-type: none"><li>– Used NLP models to suggest related short phrases at each page footer in the <a href="#">NetEase News</a> app, which leads users to click on and jump to the search page</li></ul>	

## PUBLICATIONS

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### Conference Papers

- [1] **Jonny Kong\***, Qiang Xu\*, Jiayi Meng, Y. Charlie Hu. “*AccuMO: Accuracy-Centric Multitask Offloading in Edge-Assisted Mobile Augmented Reality*”. In **ACM MobiCom 2023**. (\*co-primary)
- [2] Moinak Ghoshal, Pranab Dash, **Jonny Kong**, Qiang Xu, Y. Charlie Hu, Dimitrios Koutsonikolas, Yuanjie Li. “*Can 5G mmWave Support Multi-User AR Apps?*”. In **PAM 2022**. [\[pdf\]](#)

- [3] Shivang Aggarwal, **Jonny Kong**, Moinak Ghoshal, Y. Charlie Hu, Dimitrios Koutsonikolas. “Throughput Prediction on 60 GHz Mobile Devices for High-Bandwidth, Latency-Sensitive Applications”. In **PAM 2021 (Best Dataset Award)**. [\[pdf\]](#)
- [4] Tianxiang Li, **Jonny Kong**, Spyridon Mastorakis, Lixia Zhang. “Distributed Dataset Synchronization in Disruptive Networks”. In **IEEE MASS 2019**. [\[pdf\]](#)

## Workshop Papers & Posters

- [5] Moinak Ghoshal\*, **Jonny Kong\***, Qiang Xu\*, Zixiao Lu, Shivang Aggarwal, Imran Khan, Yuanjie Li, Y. Charlie Hu, and Dimitrios Koutsonikolas. “An In-Depth Study of Uplink Performance of 5G mmWave Networks”. In **ACM SIGCOMM 5G-MeMU Workshop ’22**. (\* co-primary) [\[pdf\]](#)
- [6] Jiayi Meng, **Jonny Kong**, Y. Charlie Hu, Mun Gi Choi, Dhananjay Lal. “Do We Need Sophisticated System Design for Edge-assisted Augmented Reality?”. In **ACM EdgeSys 2022 (Best Paper Award)**. [\[pdf\]](#)
- [7] Jiayi Meng\*, **Jonny Kong\***, Qiang Xu, Y. Charlie Hu. “Do Larger (More Accurate) Deep Neural Network Models Help in Edge-assisted Augmented Reality?”. In **ACM SIGCOMM NAI Workshop ’21**. (\*co-primary) [\[pdf\]](#)
- [8] Lana Ramjit, **Jonny Kong**, Ravi Netravali, Eugene Wu. “Physical Visualization Design (demo)”. In **ACM SIGMOD 2020**. [\[pdf\]](#)
- [9] Tianxiang Li, **Jonny Kong**, Lixia Zhang. “Supporting Delay Tolerant Networking: A Comparative Study of Epidemic Routing and NDN”. In **IEEE ICC ’20 ICN-SRA workshop**. [\[pdf\]](#)

## SELECTED HONORS AND AWARDS

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### Research Awards

- Best Paper Award, EdgeSys ’22
- Best Dataset Award, PAM ’21

### Student Awards

- National Scholarship of China, 2017 (Top 0.2% nationwide)
- Annual Outstanding Student, Beihang Univ., 2017 (Top 5%)

## TALKS AND PRESENTATIONS

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- **GitSync: Distributed Git over Named Data Networking (NDN)**: NDN Community Meeting 2019
- **Edge-assisted AR**: SIGCOMM NAI ’21

## PROFESSIONAL SKILLS

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Python, C++, Java, PyTorch, Android, CUDA, Docker

## TEACHING ASSISTANT

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**ECE 26400 Advanced C Programming**, Fall ’20, Spring ’21, Summer ’21, Purdue University  
**CS 151B Computer Systems Architecture**, Winter ’20, UCLA  
**CS 217A Internet Architecture and Protocols**, Fall ’19, UCLA