Jingao Xu | Ph.D. Candidate

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Research Interests

📱 Mobile Computing   ☁ Internet of Things   ➤ Wireless Localization   📷 Visual SLAM

Education

Aug. 2017 – Present	🔖 **Tsinghua University**, School of Software. Ph.D. in Software Engineering (expected 2022) Thesis(TBD): *Multi-modal SLAM in AIoT: Algorithm, Implementation, and Platform.* Supervisor: Prof. Yunhao Liu & Prof. Zheng Yang
Aug. 2013 – July 2017	🔖 **Tsinghua University**, School of Software. B.E. in Software Engineering with **Excellent Thesis & Graduation Award** Thesis: *Wireless Indoor Localization via Multi-modal Fusion.* Supervisor: Prof. Yunhao Liu & Prof. Zheng Yang

Academic & Industry Experience

Oct. 2016 – Feb. 2017	🔖 **Microsoft Research Asia**, Cloud & Mobile Group. Research Intern Mentor: Dr. Yuanchao Shu

Research Publications

📄 Conference Papers

[C1] **Jingao Xu***, Guoxuan Chi*, Zheng Yang, Danyang Li, Qian Zhang, Qiang Ma, Xin Miao, "*FollowUpAR: Enabling Follow-up Effects in Mobile Applications*", ACM International Conference on Mobile Systems, Applications, and Services (**ACM MobiSys**), 2021, to appear.

[C2] Danyang Li*, **Jingao Xu***, Zheng Yang, Yumeng Lu, Qian Zhang, Xinglin Zhang, "*Train Once, Locate Anytime for Anyone: Adversarial Learning Based Wireless Localization*", IEEE Conference on Computer Communications (**IEEE INFOCOM**), Virtual Online, 10-13 May, 2021.

[C3] Erqun Dong, Jianzhe Liang, Zeyu Wang, **Jingao Xu**, Longfei Shangguan, Qiang Ma, Zheng Yang, "*Improving the Applicability of Visual Peer-to-Peer Navigation with Crowdsourcing*", IEEE International Conference on Parallel and Distributed Systems (**IEEE ICPADS**), Hong Kong, China (Virtual Online), 2-4 December, 2020.

[C4] **Jingao Xu**, Hao Cao, Danyang Li, Kehong Huang, Chen Qian, Longfei Shangguan, Zheng Yang, "*Edge Assisted Mobile Semantic Visual SLAM*", IEEE Conference on Computer Communications (**IEEE INFOCOM**), Beijing, China (Virtual Online), 5-8 July, 2020 (**Best-in-session Presentation Award**).

[C5] Liang Dong, **Jingao Xu**, Guoxuan Chi, Danyang Li, Xinglin Zhang, Jianbo Li, Qiang Ma, Zheng Yang, "*Enabling Surveillance Cameras to Navigate*", International Conference on Computer Communications and Networks (**IEEE ICCCN**), Singapore (Virtual Online), 3-6 Auguest, 2020.

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[1]*indicates co-primary authors, [†] indicates corresponding author.

[**C6**] Erqun Dong*, **Jingao Xu***, Chenshu Wu, Yunhao Liu, Zheng Yang, "*Pair-Navi: Peer-to-Peer Indoor Navigation with Mobile Visual SLAM*", IEEE Conference on Computer Communications (IEEE INFOCOM), Paris, France, 29 April-2 May, 2019 (**Best-in-session Presentation Award**).

[**C7**] **Jingao Xu**, Zheng Yang, Hengjie Chen, Yunhao Liu, Xiancun Zhou, Jianbo Li, Nicholas Lane, "*Embracing Spatial Awareness For Reliable WiFi-based Indoor Location Systems*", IEEE International Conference on Mobile Ad-hoc and Sensor Systems (**IEEE MASS**), Chengdu, China, Oct 8 - Oct 11, 2018.

[**C8**] Hengjie Chen, **Jingao Xu**†, Erqun Dong, Zheng Yang, "*Push the Limit of Multi-module Localization with Enhanced Particle Filter*", China Conference on Internet of Things (**CWSN**), Dunhuang, China, Sep 18 - Sep 21, 2020.

📄 Journal Articles

[**J1**] Guoxuan Chi, **Jingao Xu**, Jialin Zhang, Qian Zhang, Qiang Ma, Zheng Yang, "*Locate, Tell, and Guide: Enabling Public Cameras to Navigate the Public*", IEEE Transactions on Mobile Computing (**IEEE TMC**), to appear.

[**J2**] **Jingao Xu**, Erqun Dong, Qiang Ma, Chenshu Wu, Zheng Yang, "*Smartphone-based Indoor Visual Navigation with Leader-Follower Mode*", ACM/IEEE Transactions on Sensor Network (**ACM TOSN**), 2021.

[**J3**] Liang Dong, **Jingao Xu**, Guoxuan Chi, Danyang Li, Xinglin Zhang, Jianbo Li, Qiang Ma, Zheng Yang, "*Enabling Surveillance Cameras to Navigate*", ACM/IEEE Transactions on Sensor Network (**ACM TOSN**), 2021.

[**J4**] **Jingao Xu**, Hengjie Chen, Kun Qian, Erqun Dong, Min Sun, Chenshu Wu, Li Zhang, Zheng Yang, "*iVR: Integrated Vision and Radio Localization with Zero Human Effort*", Proceedings of ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**ACM IMWUT/UbiComp**), London, UK, Sep 11 - Sep 13, 2019.

[**J5**] Chenshu Wu, **Jingao Xu**, Zheng Yang, Nicholas D. Lane, Zuwei Yin, "*Gain Without Pain: Accurate WiFi-based Localization with Fingerprint Spatial Gradient*", Proceedings of ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**ACM IMWUT/UbiComp**), 2017, Maui, USA, Sep 11 - Sep 15, 2017.

Honors & Awards

2020	🔖	**HUAWEI Scholarship**, Tsinghua University
2019, 2020	🔖	**Best-in-session Presentation Award**, IEEE INFOCOM
2017	🔖	**Excellent Bachelor Thesis & Excellent Graduate** of Tsinghua University **Excellent Graduate** of Beijing
2016	🔖	**National Scholarship** **First-class Science and Technology Innovation Scholarship**, Tsinghua University
2014 – 2019	🔖	**First-class Overall Excellence Scholarship**, Tsinghua University.

Professional Experience

Reviewer

🔖 **ACM IMWUT/Ubicomp** 2019, 2020, 2021

🔖 **IEEE TMC** 2020

🔖 **IEEE IOTJ** 2020, 2021

🚩 **TURC** 2019, 2020

Teaching

🚩 **Teaching Assist:** The Frontiers of Computer Networking (Graduate Course)

Spring 2020, Spring 2021, Tsinghua University

🚩 **Teaching Assist:** Software Engineering (Undergraduate Course)

Fall 2016, kernel course for undergraduates in School of Software, Tsinghua University

🚩 **Counsellor of 85 undergraduates of class 2017** in School of Software, Tsinghua University

Our class won 10+ collective Awards including **Tsinghua Advanced Class Collective** & **Beijing Advanced Class Collective**.

I was honored by **129 Counsellor Award** (Top awards for counsellors in Tsinghua University).