

Xiaoxuan LU

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RESEARCH INTERESTS	Core: Mobile and Ubiquitous Computing, Cyber-Physical Systems Applications: IoT, HCI, Security and Privacy	
EDUCATION	University of Oxford, UK PhD student in computer science, 2015 ~ present <ul style="list-style-type: none">- Google-DeepMind PhD Fellowship- Advisor: Prof. NiKi Trigoni- Co-Advisor: Dr. Andrew Markham- Citations 305, h-index 7 Nanyang Technological University (NTU), Singapore M.Eng in Electrical and Electronic Engineering, 2013 ~ 2015 <ul style="list-style-type: none">- 1st in the same-year group- Thesis: <i>Development of Data-driven Localization Algorithms for a WiFi Based Indoor Positioning System</i>- Advisor: Prof. Lihua Xie (IEEE Fellow) Nanjing University of Aeronautics and Astronautics (NUAA), P.R. China B.Eng. in Automation Engineering, 2009 ~ 2013 <ul style="list-style-type: none">- Ranked top 1% (2nd out of 203)- Outstanding Graduate Award	
FELLOWSHIPS AND AWARDS	Google-Deepmind PhD Fellowship	2015
	Oxford-Keble Association Study Awards ×3	2016, 2017, 2018
	Master of Engineering Award of NTU ×3	2013 ~ 2015
	Outstanding Graduate Award of NUAA	2013
	NUAA Chancellor Fellowship in Academic Work (1/16000 students)	2012
	CASC Scholarship (2/16000 students)	2012
	CATIC Scholarship (7/4000 students)	2011
	National Scholarship of China (Top 1%)	2010
	Grand Prize of National Electrical Control and Design Contest	2012
	Excellent Student Cadre of Jiangsu Province	2012
	First-class Honour Scholarship (Top 2%) ×3	2010-2013
TRAVEL GRANTS	Faith Ivens-Franklin Travel Grant	2018
	Student Travel Grant @ Ubicomp	2018
	Student Travel Grant @ SenSys	2017
	Student Travel Grant @ WiMob	2016

PUBLICATIONS **Journal Articles:**

5. **Xiaoxuan Lu**, Han Zou, Hongming Zhou, Lihua Xie, Guangbin Huang. "Robust Extreme Learning Machine with Its Application to Indoor Positioning.", IEEE Transactions on Cybernetics, 2015. (**impact factor: 7.384**)
4. Changhao Chen, **Xiaoxuan Lu**, Johan Wahlstrom, Andrew Markham and Niki Trigoni. "Deep Inertial Navigation: a Deep Learning Approach for Inertial Navigation Using Low-cost IMUs.", submitted to IEEE Transactions on Mobile Computing, 2018. (**impact factor: 3.882**)
3. Han Zou, Baoqi Huang, **Xiaoxuan Lu**, Hao Jiang and Lihua Xie. "A Robust Indoor Positioning System based on the Procrustes Analysis and Weighted Extreme Learning Machine.", IEEE Transactions on Wireless Communications, 2014. (**impact factor: 4.951**)
2. Hongkai Wen, Ronald Clark, Sen Wang, **Xiaoxuan Lu**, Bowen Du, Wen Hu and Niki Trigoni. "Efficient Indoor Positioning with Visual Experiences via Lifelong Learning.", IEEE Transactions on Mobile Computing, 2018. (**impact factor: 3.822**)
1. Stefano Rosa, Andrea Patanè, **Xiaoxuan Lu**, Niki Trigoni, "Semantic Place Understanding for Human-Robot Cooperation - Towards Intelligent Workplaces", IEEE Transactions on Human-Machine Systems, 2018. (**impact factor: 2.493**)

Conference Full Papers:

12. **Xiaoxuan Lu**, Yang Li, Peijun Zhao, Changhao Chen, Linhai Xie, Hongkai Wen, Rui Tan and Niki Trigoni. "Simultaneous Localization and Mapping with Power Network Electromagnetic Field." In *ACM International Conference on Mobile Computing and Networking (MobiCom'2018)*. Core Rank: A*
11. **Xiaoxuan Lu**, Bowen Du, Hongkai Wen, Sen Wang, Andrew Markham, Ivan Marinovic, Yiran Shen and Niki Trigoni. "Snoopy: Sniffing Your Smartwatch Passwords via Deep Sequence Learning." In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp'2018)*. Core Rank: A*
10. **Xiaoxuan Lu**, Bowen Du, Peijun Zhao, Hongkai Wen, Yiran Shen and Niki Trigoni. "DeepAuth: In-situ Authentication for Smartwatches via Deeply Learned Behavioural Biometrics." In *International Symposium on Wearable Computers (ISWC'2018)*. Core Rank: A*
9. **Xiaoxuan Lu**, Hongkai Wen, Sen Wang, Andrew Markham and Niki Trigoni. "SCAN: Learning Speaker Identity From Noisy Sets of Sensor Data" In *International Conference on Information Processing in Sensor Networks (IPSN'2017)*, Core Rank: A*
8. Changhao Chen, Yishu Miao, **Xiaoxuan Lu**, Linhai Xie, Andrew Markham and Niki Trigoni. "MotionTransformer: Transferring Physical Motion Between Domains For Neural Inertial Tracking." In *AAAI Conference on Artificial Intelligence (AAAI'2019)*. Core Rank: A*
7. Changhao Chen, **Xiaoxuan Lu**, Andrew Markham and Niki Trigoni. "IONet: Learning to Cure the Curse of Drift in Inertial Odometry." In *AAAI Conference on Artificial Intelligence (AAAI'2018)*. Core Rank: A*
6. **Xiaoxuan Lu**, Chenpu Yu, Han Zou, Hao Jiang, Lihua Xie. "Extreme Learning Machine with Dead Zone and its Application to WiFi Based Indoor Positioning." In *13th International Conference on Control, Automation, Robotics and Vision (ICARCV'2014)*. Core Rank: A

5. **Xiaoxuan Lu**, Bowen Du, Xuan Kan, Kai Wu, Man Luo, Jianfeng Hou, Kai Li, Salil Kanhere, Yiran Shen, Hongkai Wen. "HydraDoctor: Real-time Liquids Intake Monitoring by Collaborative Sensing." In *International Conference on Distributed Computing and Networking (ICDCN'2018)*.
4. **Xiaoxuan Lu**, Hongkai Wen, Han Zou, Hao Jiang, Lihua Xie and Niki Trigoni. "Robust Occupancy Inference with Commodity WiFi." In *International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'2016)*.
3. Han Zou, Baoqi Huang, **Xiaoxuan Lu**, Hao Jiang and Lihua Xie. "Standardizing Location Fingerprints Across Heterogeneous Mobile Devices for Indoor Localization." In *14th Wireless Communications and Networking Conference (WCNC'2016)*.
2. Han Zou, Yiwen Luo, **Xiaoxuan Lu**, Hao Jiang and Lihua Xie. "A Mutual Information based Online Access Point Selection Strategy for WiFi Indoor Localization." In *11th International Conference on Automation Science and Engineering (CASE'2015)*.
1. Han Zou, Hao Jiang, **Xiaoxuan Lu**, and Lihua Xie. "An Online Sequential Extreme Learning Machine Approach to WiFi Based Indoor Positioning". In *1st World Forum on the Internet of Thing (WF-IoT'14)*.

Demos & Posters:

4. **Xiaoxuan Lu**, Peijun Zhao, Bowen Du, Hongkai Wen, Andrew Markham, Stefano Rosa and Niki Trigoni "Demo: Automatic Face Recognition Adaptation via Ambient Wireless Identifiers" In *International Conference on Embedded Networked Sensor Systems (SenSys'18)*, ACM, 2018.
3. **Xiaoxuan Lu**, Xuan Kan, Stefano Rosa, Bowen Du, Hongkai Wen, Andrew Markham and Niki Trigoni "Poster: Towards Self-supervised Face Labeling via Cross-modality Association." In *International Conference on Embedded Networked Sensor Systems (SenSys'17)*, ACM, 2017.
2. Stefano Rosa, **Xiaoxuan Lu**, Hongkai Wen and Niki Trigoni. "Poster: Leveraging User Activities and Mobile Robots for Semantic Mapping and User Localization." In *International Conference on Human Robot Interaction (HRI'17)*, ACM/IEEE, 2017.
1. Han Zou, Hao Jiang, **Xiaoxuan Lu** and et al. "Demo: An Accurate and Reliable WiFi-based Indoor Localization and Navigation System." In *the 13th International Conference on Information Processing in Sensor Network (IPSN'15)*, ACM/IEEE, 2015.

Workshop Papers:

3. **Xiaoxuan Lu**, Bowen Du, Xuan Kan, Hongkai Wen, Andrew Markham and Niki Trigoni. "VeriNet: User Verification on Smartwatches via Behavior Biometrics." In *1st Workshop on Mobile Crowdsensing Systems and Applications (CrowdSense@SenSys)*, ACM, 2017.
2. Stefano Rosa, **Xiaoxuan Lu**, Niki Trigoni. "CommonSense: Collaborative learning of scene semantics by robots and humans." In *1st International Workshop on Internet of People, Assistive Robots and ThingS (IoPARTS@MobiSys)*, ACM, 2018.
1. Changhao Chen, Yishu Miao, **Xiaoxuan Lu**, Andrew Markham and Niki Trigoni. "Transferring Physical Motion Between Domains for Neural Inertial Tracking." In *International Workshop on Modeling the Physical World: Perception, Learning, and Control. (Physics@NIPS)*, 2018

SERVICE

TPC: Demo/Poster EWSN'18, ICC'18

Session Chair: ACM DATA@SenSys18

Conference Reviewer: UbiComp, CHI

Journal Reviewer: IEEE Transactions on Mobile Computing, IEEE Internet of Things Journal, IEEE Computational Intelligence Magazine, IEEE Transactions on Cybernetics

INVITED TALKS

Title: Robustly Inferring Identity across Digital and Physical Worlds
7th East Lake International Forum for Outstanding Overseas Young Scholars @Huazhong University of Science and Technology (December 2018)

Title: Autonomous Identity Inference across Cyber and Physical Worlds
Department Seminar Talk @University of Cambridge (November 2018)

REFERENCES

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Prof. Lihua Xie (Fellow of IEEE)

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