

Xiaoxuan LU

CONTACT	Department of Computer Science University of Oxford UK OX1 3QD	Email: xiaoxuan.lu@cs.ox.ac.uk Tel: +44 (0) 7421 8 78460 Web: https://christopherlu.github.io/
RESEARCH INTERESTS	Core: Mobile and Ubiquitous Computing, Cyber-Physical Systems Applications: IoT, HCI, Security and Privacy, Robotics	
EDUCATION	University of Oxford, UK PhD in Computer Science, 2015 ~ 2019 <ul style="list-style-type: none">– Google-DeepMind PhD Fellowship– Thesis: <i>Robustly Inferring Identity across Digital and Physical Spaces</i>– PhD Committee: Prof. Niki Trigoni (advisor), Dr. Andrew Markham (co-advisor), Dr. Thomas Ploetz and Dr. Nic Lane– Citation: 375, h-index: 9 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	Chinese Government Award for Outstanding Students Abroad	2019
	Graduate Study Award	2019
	Google-Deepmind PhD Fellowship	2015 ~ 2018
	Oxford-Keble Association Study Awards ×3	2016 ~ 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

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:

15. **Xiaoxuan Lu**, Xuan Kan, Bowen Du, Changhao Chen, Hongkai Wen, Andrew Markham, Niki Trigoni and John Stankovic. "Autonomous Learning for Face Recognition in the Wild via Ambient Wireless Cues" In *ACM International World Wide Web Conference (WWW'2019)*. Core Rank: A*
14. **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*
13. **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*
12. **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*
11. **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*
10. Changhao Chen, Stefano Rosa, Yishu Miao, **Xiaoxuan Lu**, Wei Wu, Andrew Markham and Niki Trigoni. "Selective Sensor Fusion for Neural Visual Inertial Odometry." In *Conference on Computer Vision and Pattern Recognition (CVPR'2019)*. Core Rank: A*
9. 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*

8. 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*
7. **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
6. **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)*.
5. Peijun Zhao, **Xiaoxuan Lu**, Jianan Wang, Changhao Chen, Wei Wang, Niki Trigoni and Andrew Markham. "mID: Tracking and Identifying People with Millimeter Wave Radar." In *International Conference on Distributed Computing in Sensor Systems (DCOSS'2019)*.
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:

2. **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.
1. **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.

SERVICE

TPC: EWSN'2018 (Demo/Poster), ICC'2019, PhD Forum@MobiSys'2019

Session Chair: ACM DATA@SenSys'2018

External Reviewer: IJCAI'2019, CHI'2019, UbiComp'2019

Journal Reviewer: ACM IMWUT, IEEE Transactions on Mobile Computing (TMC), ACM Transactions on Sensor Networks (TOSN), IEEE Internet of Things Journal (J-IoT), IEEE Computational Intelligence Magazine, IEEE Transactions on Cybernetics, Autonomous Robots

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)

TEACHING
EXPERIENCE

Embedded Software and Systems
Graduate course, University of Oxford, Department of Computer Science, 2019

Sensor and Actuator Networks
Graduate/Undergraduate course, University of Oxford, Department of Engineering, 2019

Internet of Things
Graduate course, University of Oxford, Department of Computer Science, 2018

Mobile and Sensor Networks
Graduate course, University of Oxford, Department of Computer Science, 2017

Introduction to Programming (Python)
Undergraduate course, Nanyang Technology University, School of Electrical and
Electronic Engineering, 2014

REFERENCES

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Prof. John A. Stankovic (Fellow of ACM&IEEE)

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