

# XUEHAN YE

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## EDUCATION

<b>University of Waterloo</b> <i>Master of Applied Science (MASC) in Electronic and Computer Engineer (ECE)</i> <i>Supervisor: Weihua Zhuang</i> <i>GPA - 92.25/100</i> <i>Huawei Graduate Entrance Award in ECE</i> <i>Jon W. Mark Graduate Scholarship</i>	<i>Sep 2019 - May 2022</i>    <i>Sep 2019 - Jul 2020</i> <i>Sep 2020 - Jul 2021</i>
<b>Renmin University of China</b> <i>Master of Applied Science (MASC) in Computer Software and Theory</i> <i>Supervisor: Yongcai Wang, Deying Li</i> <i>GPA - 3.80/4.0</i> <i>Excellent Graduate Student</i> <i>Chinese National Scholarship</i> <i>Chinese National Scholarship</i>	<i>Sep 2016 - Jul 2019</i>    <i>Jul 2019</i> <i>Sep 2018 - Jul 2019</i> <i>Sep 2017 - Jul 2018</i>
<b>Beijing Forestry University</b> <i>Bachelor in Computer Science and Technology</i> <i>GPA - 91.20/100</i> <i>Excellent Graduation Thesis</i>	<i>Sep 2012 - Jul 2016</i>     <i>Jul 2016</i>

## EXPERIENCES

<b>Broadband Communications Research (BBCR) Laboratory, University of Waterloo</b> <i>Graduate Research Assistant, Supervisor: Weihua Zhuang</i> <ul style="list-style-type: none"><li>- Researched an object-wise task partition and differentiated sensing data selection mechanism for the perception task of an autonomous vehicle to optimize data efficiency</li><li>- Designed an accuracy prediction model for object classification subtasks by deep neural network (DNN)</li><li>- Employed a genetic algorithm to jointly determine sensing data selection, subtask placement and resource allocation in edge-assisted vehicular network</li><li>- Conducted simulations for the designed accuracy model and mechanism by Autonomous Driving Toolbox, Deep learning Toolbox and Computer Vision Toolbox of MATLAB</li></ul>	<i>Sep 2019 - May 2022</i>
<b>Intelligent Network and Optimization Laboratory, Renmin University of China</b> <i>Graduate Research Assistant, Supervisor: Yongcai Wang, Deying Li</i> <ul style="list-style-type: none"><li>- Researched supervised localization by learning a sequence-type WiFi radio-map to improve localization robustness</li><li>- Employed a sub-sequence dynamic time warping (SDTW) algorithm to tolerate the gap for sequence matching</li><li>- Programmed a sequence-type WiFi radio-map based localization prototype by Android</li><li>- <i>Open Source:</i> <a href="https://github.com/coldsnowleaf/warpmappmob">https://github.com/coldsnowleaf/warpmappmob</a> (Android code)</li><li>- Researched unsupervised localization by learning a transition model (TM) from crowd-sourced synchronous WiFi and IMU trajectories along indoor paths</li><li>- Programmed a procedure to synchronously collect WiFi and inertial measurement unit (IMU) trajectories by Android</li><li>- <i>Open Source:</i> <a href="https://github.com/coldsnowleaf/TM">https://github.com/coldsnowleaf/TM</a> (MATLAB code and dataset)</li><li>- Researched unsupervised localization by learning an trajectory to graph (T2G) model from crowd-sourced synchronous WiFi and IMU trajectories along indoor paths<sup>1</sup></li><li>- <i>Open Source:</i> <a href="https://github.com/coldsnowleaf/t2g">https://github.com/coldsnowleaf/t2g</a> (MATLAB code and dataset)</li><li>- Researched a filter of ultrasonic and inertial signals for a virtual reality system</li><li>- <i>Competition:</i> Honorable Mention of Global Innovation Exchange (GIX) Innovation Competition 2016 (Final round)</li></ul>	<i>Sep 2016 - Jul 2019</i>

<sup>1</sup> A publication in progress.

## PUBLICATIONS

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### **Cooperative Sensing and Computation for Environment Perception in Autonomous Driving with Vehicular Edge Computing<sup>2</sup>**

*MASc Thesis, University of Waterloo*

**Xuehan Ye**, Shuo Huang, Yongcai Wang, Wenping Chen, Deying Li

### **Unsupervised Localization by Learning Transition Model**

*Proc. ACM IMWUT/UbiComp'19*

**Xuehan Ye**, Shuo Huang, Yongcai Wang, Wenping Chen, Deying Li

### **Accurate and Efficient Indoor Location by Dynamic Warping in Sequence-Type Radio-map**

*Proc. ACM IMWUT/UbiComp'18*

**Xuehan Ye**, Yongcai Wang, Yuhe Guo, Wei Hu, Deying Li

### **Efficient Online Model Adaptation by Incremental Simplex Tableau**

*Proc. AAAI'17*

Zhixian Lei, **Xuehan Ye**, Yongcai Wang, Deying Li, Jia Xu

### **WarpMap: Accurate and Efficient Indoor Location by Dynamic Warping in Sequence-Type Radio Map**

*Proc. IEEE SECON'16*

**Xuehan Ye**, Yongcai Wang, Wei Hu, Lei Song, Zhaoquan Gu, Deying Li

### **Robust Passive Location in Zero-Calibrated Environment Using Smoothed Ordinal Constraints**

*Proc. IEEE ISPAN-FCST-ISCC'17*

**Xuehan Ye**, Zhixian Lei, Yongcai Wang, Deying Li, Tianyuan Sun, Wenping Chen

## SKILLS

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<b>Computer languages</b>	Python, Java, C/C++, HTML5, Android, MATLAB
<b>Knowledges</b>	Machine learning, Vehicular edge computing, Software defined network
<b>Languages</b>	Chinese (Native), English (Fluent, TOEFL 100)

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<sup>2</sup>A publication and a patent in progress.