

XI XIONG

Address: 6211 Sudioff Lab, Dartmouth College, NH 03755 Country of origin: China • Country of residence: the U.S.

EDUCATION

Dartmouth College, 09/2015 - 07/2020(expected)

- PhD student in Department of Computer Science

Tsinghua University, Beijing, P.R.China 09/2012 - 07/2015

- Master of Engineering in Computer Software, School of Software
- Tsinghua-Berkeley Global Technology Entrepreneurship Program, School of Economics and Management

Tsinghua University, Beijing, P.R.China 09/2008 - 07/2012

- Bachelor of Engineering in Computer Software, School of Software
- Second Bachelor of Arts in Digital Entertainment Design, Academy of Arts and Design

HONORS AND AWARDS

- **1st Prize** - Jiangxi Province Chapter of Chinese Physics Olympiad, 2007
- **1st Female** - Jiangxi Province Chapter of Chinese Physics Olympiad, 2007
- **2nd Prize** - Jiangxi Province Chapter of Chinese Mathematical Olympiad, 2007
- **2nd Prize** - National College Physics Contest, 2009
- **3rd Prize** - Challenge Cup of Tsinghua University, 2010
- **Stars of Tomorrow** - awarded for excellent participation in MSR Asia Internship Program, 2014
- **1st Prize** - Scholarship of Tsinghua-Guanglianda, 2014

PUBLICATIONS

- Xi Xiong, Justin Chan, Ethan Yu, Nisha Kumari, Ardalan Amiri Sani, Changxi Zheng, Xia Zhou. Customizing Indoor Wireless Coverage via 3D-Fabricated Reflectors. In Proceedings of the 4th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys '17).
- Tianxing Li (co-primary), Xi Xiong (co-primary), Yifei Xie, George Hito, Xing-Dong Yang, and Xia Zhou. Reconstructing Hand Poses Using Visible Light. In Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp '17).
- Zhao Tian, Yulin Wei, Xi Xiong, Weinin Chang, Hsinmu Tsai, Kate Chingju Lin, Changxi Zheng, and Xia Zhou. Position: Augmenting Inertial Tracking with Light. 4th ACM Workshop on Visible Light Communication Systems (VLCS '17).
- Ethan Yu, Xi Xiong, Xia Zhou. Automating 3D wireless measurements with drones. In Proceedings of the Tenth ACM International Workshop on Wireless Network Testbeds, Experimental Evaluation, and Characterization (WiNTECH '16). ACM, 2016: 65-72.
- Xi Xiong, Zheng Yang, Longfei Shangguan, Yun Fei, Milos Stojmenovic, and Yunhao Liu. SmartGuide: Towards Single-image Building Localization with Smartphone. In Proceedings of the 16th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc '15). ACM, 2015: 117-126.
- Xi Xiong, Haining Fan. $GF(2^n)$ bit-parallel squarer using generalised polynomial basis for new class of irreducible pentanomials. Electronics Letters. vol.50, no.9, 2014: 655-657.
- Yongjia Wang, Xi Xiong, Haining Fan. $GF(2^n)$ redundant representation using matrix embedding for irreducible trinomials. International Journal of Foundations of Computer Science, 2015.

WORKING EXPERIENCE

StyleAI: Fashion Artificial Intelligence 12/2014 - 05/2015

Software Engineer - Malong Technologies (startup)

Advised by *Matthew Scott*

- Built web crawlers to acquire a massive high-quality fashion image database.
- Devised a way combining crowdsourcing and image processing to get rid of watermarks to improve image matching accuracy.

iNav: Crowdsourcing Semantic Indoor Navigation Maps (Android) 11/2013 - 05/2014
Research Software Development Engineer Intern - Innovation Engineering Group, Microsoft Research Asia
Advised by *Matthew Scott*

- Cooperated with software engineers from Innovation Engineering Group, UI designers from Human Computer Interaction Group and researchers from Mobile and Sensing System Group, devoted to generate crowdsourcing semantic maps via rich mobile contextual information.
- Developed the iNav application on Android, including the application UI and mobile localization.
- Improved crowdsourcing semantic map generation algorithm, which includes oormap structure recognition, conditional random field model construction, Viterbi algorithm implementation.

Mobile Game Market Analysis 03/2013 - 11/2013
Investment Analyst Intern - Netease Capital

- Comprehensive evaluation of mobile games by international startup companies vs. available top 10 mobile games. Some mobile games I evaluated as excellent went on to ranking top 20 list in China, such as "The End of School".
- Developed mobile game database website using JSP.

RESEARCH EXPERIENCE

Fast Single-image-based Building Localization with Smartphone (Android) 04/2014 - 07/2014
Research Assistant - Inst. of Trustworthy Network and Systems, Tsinghua University
Advised by *Prof. Yunhao Liu and Dr. Zheng Yang*

- Studied the existing methods of distant object localization based on images.
- Implemented a light-weight and fast approach to localize a distant unknown building using only one photo of the targeted building without intricate 3D reconstruction and any initial database construction.

Space and Time Complexities of $GF(2^n)$ Bit-Parallel Squarers 06/2010 - 06/2012
Research Assistant - Tsinghua National Lab for Information Sci. & Tech., Tsinghua University
Advised by *Prof. Haining Fan*

- Studied explicit formulae and complexities of bit-parallel $GF(2^n)$ squarers for different irreducible polynomials based on different bases.
- Presented explicit formulae and complexities of bit-parallel $GF(2^n)$ squarers for a new class of irreducible pentanomials based on the generalized polynomial basis (GPB), which saved 1/3 XOR gates of previous best results without adding gate delays.

Tsinghua Students Personality Analysis with Smartphone (Android) 03/2012 - 07/2012
Research Assistant - Academy of Arts and Design, Tsinghua University
Advised by *Prof. Danqing Shi*

- Built the model of personality classification based on users' historical location information and behavior pattern by cooperating with students from different majors.
- Developed personality analysis and visualization demonstration KnowThyself on Android platform.

SKILLS

- **Programming:** Android, Java, Python, C/C++, C#, Cuda, Assembly language, XML, SQL Server.
- **Web:** JavaScript/JQuery, HTML, CSS, AJAX.
- **Tools & Systems:** Matlab, \LaTeX , IDEA, Eclipse, Visual Studio, Windows, Linux, Maya.