

Zhao Tian

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Academic Background

- **Dartmouth College** Hanover, New Hampshire, United States
• *Ph.D. in Computer Science* Sept. 2014 – Sept. 2019
 - Working with Prof. Xia Zhou at DartNets (Dartmouth Networking and Ubiquitous Systems) Laboratory on visible light communication/sensing
- **Peking University** Beijing, China
• *Bachelor of Science in Computer Science* Sept. 2009 – Jul. 2013
 - Worked with Prof. Tao Wang and Prof. Guojie Luo at Center for Energy-Efficient Computing and Applications (CECA) of Peking University on reconfigurable computing, specifically FPGA architecture and tool chain
 - **Bachelor of Arts (minor) in Economics**
- **UCLA (University of California, Los Angeles)** Los Angeles, California, United States
• *Research-Exchange Student in Department of Computer Science* Sept. 2012 – Jan. 2013
 - Sponsored by the Joint Research Institute in Science and Engineering of Peking University and UCLA
 - Worked on reconfigurable computing with Prof. Jason Cong and Dr. Kalliopi Tsota at UCLA VLSI CAD Laboratory (now VLSI Architecture, Synthesis, and Technology (VAST) Laboratory)

Appointments

- **Google** Mountain View, California, United States
• *Software Engineer* Sept. 2019 – Present
 - Wireless networking, mobile systems, communications
- **Google** Kirkland, Washington, United States
• *PhD Software Engineering Intern* Jun. 2018 – Sept. 2018
 - Improved a networking algorithm for better connectivity of Android devices
- **Bell Labs, Nokia** Cambridge, United Kingdom
• *Research Intern* May 2017 – Aug. 2017
 - Worked with Dr. Fahim Kawsar on Wi-Fi sensing using channel state information (CSI)
 - Devised a multi-node CSI infrastructure/pipeline and engineered features for occupancy detection
- **University of Cambridge** Cambridge, United Kingdom
• *Visiting Researcher* Oct. 2016 – Dec. 2016
 - Designed and implemented an infrared badge to sense interpersonal interactions
 - The wearable device can sense the relative angles, in addition to distances, between users
 - Deployed the devices in user studies to investigate the social implication of non-verbal behavior

Publications

- **Augmenting Indoor Inertial Tracking with Polarized Light**
Z. Tian[†], Y.-L. Wei[†], W.-N. Chang, X. Xiong, C. Zheng, H.-M. Tsai, K. Lin, X. Zhou
MobiSys 2018 († co-primary authors)
- **Measuring Interaction Proxemics with Wearable Light Tags**
A. Montanari[†], Z. Tian[†], E. Francu, B. Lucas, B. Jones, X. Zhou, and C. Mascolo
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), vol. 2, no. 1, 2018 (to be presented at UbiComp 2018) († co-primary authors)
- **Position: Augmenting Inertial Tracking with Light**
Z. Tian[†], Y.-L. Wei[†], X. Xiong[†], W.-N. Chang, H.-M. Tsai, K. Lin, C. Zheng, X. Zhou
4th ACM Workshop on Visible Light Communication Systems (VLCS 2017) († co-primary authors)
- **The DarkLight Rises: Visible Light Communication in the Dark**
Z. Tian, K. Wright, and X. Zhou
MobiCom'16 **Best Video Award**

- **Lighting Up the Internet of Things with DarkVLC**
Z. Tian, K. Wright, and X. Zhou
Proceedings of 17th International Workshop on Mobile Computing Systems and Applications (HotMobile'16)
- **Human Sensing Using Visible Light Communication**
T. Li, C. An, Z. Tian, A. Campbell, and X. Zhou
MobiCom'15 **Best Video Award**
- **Visible Light Knows Who You Are**
C. An, T. Li, Z. Tian, A. Campbell, and X. Zhou
Proceedings of 2nd ACM Workshop on Visible Light Communication systems (VLCS'15)

Honors & Awards

- **MobiSys Travel Grant** *NSF, 2018*
- **HotMobile Travel Grant** *NSF, 2016*
- **Second Place in ACM Student Research Competition** *ACM MobiCom, 2015*
- **Neukom Travel Grant** *Neukom Institute, 2015*
- **International Scholarship for Outstanding Undergraduates** *China Scholarship Council, 2012*
 - Sponsored by Ministry of Education, China to do research overseas: stipend, travel expense, and insurance
 - The only winner from School of EECS; 13 from Peking University; 289 nationwide (all disciplines included)
- **May Fourth Scholarship** *Peking University, 2012*

Selected Press

- New technique sheds light on body language in job interviews, sales calls, team projects. Science Daily, Mar 30, 2018
<https://www.sciencedaily.com/releases/2018/03/180327141724.htm>
- How Light Bulbs Watch You Buy Groceries. The Atlantic, November 18, 2016
<https://www.theatlantic.com/technology/archive/2016/11/how-light-bulbs-watch-you-buy-groceries/508061/>
- Communicating invisibly with dimmed down visible light. EE Times, October 20, 2016
<http://www.eenewseurope.com/news/communicating-invisibly-dimmed-down-visible-light>

Teaching Assistant Experience

- **COSC50: Software Design and Implementation** *Winter and Spring 2015, Dartmouth*
 - Held office hours, led lab sessions, graded labs and course projects, and shepherded course projects
- **COSC 30: Discrete Mathematics in Computer Science** *Fall 2014, Dartmouth*
 - Held office hours, graded and wrote solutions for assignments and exams, and explained the exams

Technical Skills

- **Programming Language** **Proficient:** C/C++, Java, Python, MATLAB, Shell script;
- **Hardware Description Language** Verilog
- **System & Tools** GNU/Linux, Make, Vim, gprof, Git, L^AT_EX, gnuplot, GNU Radio
- **FPGA Platform** Xilinx Vivado, Xilinx Vivado HLS