LEFAN ZHANG

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EDUCATION

The University of Chicago, Chicago   *August 2017 - Present*
PhD Student   Advisor: Prof. Shan Lu
Department of Computer Science

Tsinghua University, Beijing   *September 2014 - September 2017*
Bachelor of Engineering   Overall Grade: 92, Rank: 5/190
Department of Electronic Engineering

Tsinghua University, Beijing   *September 2013 - September 2014*
First-year undergraduate student
Department of Physics

RESEARCH INTEREST

I'm currently working on applying formal methods to provide better end-user programming experience in smart home. More specifically, I'm interested in developing tools that could help users to debug, diagnose or synthesize trigger-action programs in their smart home.

PUBLICATIONS

L. Zhang, W. He, J. Martinez, N. Brackenbury, S. Lu and B. Ur, "AutoTap: Synthesizing and Repairing Trigger-Action Programs Using LTL Properties," to appear in *ICSE*, 2019

RESEARCH EXPERIENCE

Simulating non-volatile processors (NVP)   *November 2016 - June 2017*
Advisor: Prof. Yongpan Liu, Department of Electronic Engineering, Tsinghua University
Proposed and developed an energy-event-based software simulator for non-volatile processor.

Model checking distributed file system   *July 2016 - December 2016*
Advisor: Prof. Junfeng Yang, Department of Computer Science, Columbia University
Model-checked Gluster file system's request level behavior based on DrillMC.

Hand gesture recognition system on embedded device   *October 2014 - December 2015*
Advisor: Prof. Xiang Xie, Department of Microelectronics and Nanoelectronics, Tsinghua University
Optimized, implemented and tuned programs for image segmentation on embedded devices.

TEACHING

TA for CMSC 22001: Software Construction   *2018*
The University of Chicago

TA for MPCS 52011: Introduction to computer systems   *2017*
The University of Chicago