

# TIANYUAN LIU

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## EDUCATION

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### University of Illinois at Urbana-Champaign

Ph.D. student in Computer Science

Expected graduateing: May 2020

**Advisor:** Klara Narhstedt

- Research interest: Networking systems, network security
- Ongoing project: Cyber Resilient Energy Delivery Consortium (CREDC)

### Shanghai Jiao Tong University

Graduated: July 2015

B.S. in Computer Science, **IEEE Honor Class**<sup>1</sup>

- Major GPA: 90.7/100    3.85/4.0
- Overall GPA: 90.8/100    3.85/4.0
- Rank: 2/98 Overall

## INTERNSHIP

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### Software Engineering Intern at Google

*Google Communication Team*

*May 2016 - August 2016*

- Designed and implemented TLS Prober and TLS Auditor, an internal tool to analyze TLS connections for Google Telephony applications.

### Research & Development Intern at VMWare Shanghai

*VSAN Health Team*

*March 2015 - July 2015*

- Fixed bugs and implemented features of VSAN Health Check Plugin in Python, which checks all aspects of a Virtual SAN configuration.

## SKILLS

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### Computer Languages

Python, C++ (experienced),  
JAVA (desktop/Android), Matlab/Octave, L<sup>A</sup>T<sub>E</sub>X (proficient),  
Ruby, HTML, JavaScript, YANG (basic)

### Tools

Linux, LabVIEW, NS2, Mininet, Adobe Illustrator/Photoshop.

## PUBLICATIONS

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- Yiran Zhao, Yang Zhang, Tuo yu, **Tianyuan Liu**, Xinbing Wang, “*CityDrive: A Map-Generating and Speed-Optimizing Driving System*”, in Proc. of IEEE INFOCOM, 2014. (**Published**)
- **Tianyuan Liu**, Ruotian Luo, Yang Zhang, Feng Yang, Xiaoying Gan, Xiaohua Tian, Xinbing Wang, “*Intellectual Taxi Assignment System*”, CN103680128A, 2014.03.26 (**Patent Published**)
- Tuo yu, Liqin Zhang, **Tianyuan Liu**, Xiaoying Gan, Xiaohua Tian, Xinbing Wang, “*Crowdsourcing Based Taxi-sharing Solution*”, CN104077912A, 2014.10.01 (**Patent Published**)

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<sup>1</sup><http://english.seiee.sjtu.edu.cn/english/info/8338.htm>

## RESEARCH/PROJECT EXPERIENCE

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**Research: Resilient and Scalable data collection in Energy Distribution Networks**  
MONET, UIUC

*Advisor: Klara Nahrstedt*

*January 2016 -*

- Designed resilient data collection protocol in EDN.
- Optimized tree construction by Integer Linear Programming (ILP).
- Evaluated protocol on real world dataset.

**Course Project: Fast Data Processing Platform**

UIUC

*Advisor: Indranil Gupta*

*August 2015 - December 2015*

- Designed Crane, a Storm-like data processing platform.
- Implemented Crane components including membership protocol, file system and Crane core in C++ from scratch.
- Crane outperforms Storm by 13x.
- Got the best MP award from course.

**Course Project: Distributed Fully Homomorphic Encryption (FHE)**

UIUC

*Advisor: Manoj M. Prabhakaran*

*January 2016 - May 2016*

- Designed and implemented a distributed fully homomorphic encryption scheme.
- Evaluated the system, which achieves more than 2x execution time compared with normal FHE schemes.

## SELECTED HONORS AND AWARDS

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- National Scholarship (Top 4%), Shanghai Jiao Tong University, 2011-2012 & 2013-2014.
- Wilmar Scholarship (Top 4%), Shanghai Jiao Tong University, 2012-2013.
- **First Prize** in 2013 National College Student Mathematical Contest In Modeling.
- **Meritorious Winner** in 2014 Interdisciplinary Contest In Modeling.

## EXTRA-CURRICULAR ACTIVITIES

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- **Summer Exchange** in Intensive English Language Program at Yale university, 2013.
- **Chairman of Propaganda Dept.** for Student International Communication Association, 2012-2013.
- **Volunteer** for Shanghai International Marathon, 2011-2014.
- **Photographer** for Military Training at Shanghai Jiao Tong University, 2012.