# Shuaiqi Wang

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## RESEARCH INTERESTS

Wireless networks, performance analysis, computer networking, social networks, network privacy.

## **EDUCATION**

## School of Electronic Information and Electrical Engineering, Shanghai Jiao Tong University

Major in Computer Science and Technology (GPA: 90.0/100, Rank: 14/151)

Sep.2016 - present

#### Zhiyuan College, Shanghai Jiao Tong University

Zhiyuan honors program of engineering (Top 5%)

Sep.2016 - present

## RESEARCH EXPERIENCE

#### Distributed Multicast Tree Construction in Wireless Sensor Networks with unreliable links

Independent Research guided by Prof. Luoyi Fu (CSD, SJTU), Prof. Xiaojun Lin (CSD, Purdue)

Sep.2018 - present

- Propose an algorithm to construct time & energy-efficient multicast trees in WSNs with unreliable links and an algorithm to recover the tree when some sensors or links fail with high time efficiency.
- Provide comprehensive quantitative analysis theoretically on the performance of the routing policy and the tree including time & message complexity, tree length, etc.

#### De-anonymization of Social Networks: The Power of Symmetry

Cooperative Research with Dr. Xinyu Wu (CSD, SJTU)

Aug.2018 - present

- Point out that the symmetry property of social networks determines de-anonymizability universally.
- Derive explicit parametric bounds for de-anonymizability in three classic network models, showing that such bounds correspond well to our conclusion about symmetry property.
- In preparation for *Transactions on Information Theory*.

#### Social Network De-anonymization with Overlapping Communities: Analysis, Algorithm and Experiments

Cooperative Research with Dr. Xinyu Wu (CSD, SJTU)

Jun.2018 - Sep.2018

- Derived the cost function of expected number of mismatched users for seedless anonymized networks with overlapping communities and proposed an approximate algorithm to minimize it after proving the function to be NP-hard.
- In preparation for Transactions on Networking.

## **Collective Influence Maximization in Random Networks**

Cooperative Research with Dr. Xudong Wu (CSD, SJTU)

Jun.2018 - Sep.2018

- Proposed an algorithm to select users with high collective influences to achieve influence maximization in networks.
- In preparation for SIGMETRICS 2019.

# HONORS & AWARDS

Zhiyuan College Honors Scholarship (Top 5%)

The Second Prize Scholarship (Top 10%)

2016&2017&2018

Second Prize in Mathematical Contest in Modeling

2017&2018

Second Prize in Chinese University Students Physics Contest

2017 2018

## SELECTED PROJECTS

**PPTCtrl** Sep.2018 - Jan.2019

#### **Course Project of Computer Network**

- Developed an application to control slides running on computer by mobile terminals with Android systems. The function of PPTCtrl including turning pages, highlighting or zooming in a certain part and painting in the slides.
- In preparation for Shanghai Undergraduate Computer Application Contest.

### COMPUTER SKILLS

**Programming**: C, C++, Python, Java, MATLAB, HTML, CSS **Technologies**: Linux, MySQL, Android Development, Git, LaTex