

# Tianyi Wang

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## Appointments

- Senior Software Engineer, Baidu Research, Big Data Lab *Jul., 2016 to present*
- Research Intern, Baidu Research, Big Data Lab *Aug. 2015 to Jul. 2016*
- Research Inter, IBM China Research Lab *Jul. 2011, Nov. 2011*

## Education

- **PhD** candidate in Department of Electronic Engineering, Tsinghua University *Sep., 2011 to Jul. 2016*
- Visiting scholar in UC Santa Barbara with Prof. Ben Y. Zhao and Haitao Zheng *Sep. 2013 to Aug. 2014*
- **B.E.** Student in Department of Electronic Engineering, Tsinghua University *Sep., 2007 to Jul., 2011*
- Exchange student in Hong Kong University of Science and Technology *Sep., 2009 to Dec., 2009*

## Research Interests

My research interests include Measuring and modeling of large scale data, *e.g.*, Online Social Networks (OSNs), crowdsourcing platforms and web queries. Most of my works are data-driven and modeling based. The goal is to make use of the data (of all kinds), and obtain intrivial and underground knowledge from the data.

## Publications

1. Unbiased Sampling in Directed Social Graph. **Tianyi Wang**, Yang Chen, Zengbin Zhang, Peng Sun, Beixing Deng, Xing Li. In Proc. of ACM SIGCOMM Computer Communication Review, 2010, 40(4):401-402.
2. Understanding Graph Sampling Algorithms for Social Network Analysis. **Tianyi Wang**, Yang Chen, Zengbin Zhang, Tianyin Xu, Long Jin, Pan Hui, Beixing Deng, Xing Li. In Proc. of Simplex 2011.
3. Albatross Sampling: Robust and Effective Hybrid Vertex Sampling for Social Graphs. Long Jin, Yang Chen, Pan Hui, Cong Ding, **Tianyi Wang**, Athanasios Vasilakos, Beixing Deng, Xing Li. In Proc. of HotPlanet 2011.
4. Understanding User Behavior in Online Social Networks: A Survey. Long Jin, Yang Chen, **Tianyi Wang**, Pan Hui, Athanasios Vasilakos. In IEEE Communications Magazine, 2013, 51(9):144-150.
5. Characterizing and Detecting Malicious Crowdsourcing. **Tianyi Wang**, Gang Wang, Xing Li, Haitao Zheng, Ben Y. Zhao. In ACM SIGCOMM Computer Communication Review, 2013, 43(4): 537-538.
6. Man vs. Machine: Practical Adversarial Detection of Malicious Crowdsourcing Workers. Gang Wang, **Tianyi Wang**, Haitao Zheng, Ben Y. Zhao. In Proc. of Usenix Security 2014.
7. Whispers in the Dark: Analysis of an Anonymous Social Network. Gang Wang, Bolun Wang, **Tianyi Wang**, Ana Nika, Haitao Zheng, Ben Y. Zhao. In Proc. of IMC 2014.
8. Crowds on Wall Street: Extracting Value from Collaborative Investing Platforms. Gang Wang, **Tianyi Wang**, Bolun Wang, Divya Sambasivan, Zengbin Zhang, Haitao Zheng, Ben Y. Zhao. In Proc. of CSCW 2015.
9. The Power of Comments: Fostering Social Interactions in Microblog Networks. **Tianyi Wang**, Yang Chen, Yi Wang, Bolun Wang, Gang Wang, Xing Li, Haitao Zheng, Ben Y. Zhao. In Frontiers of Computer Science, 2016, 10(5): 889-907.
10. Defending against Sybil Devices in Crowdsourced Mapping Services. Gang Wang, Bolun Wang, **Tianyi Wang**, Ana Nika, Haitao Zheng, Ben Y. Zhao. In Proc. of MobiSys 2016.
11. Demand Driven Store Placement via Multiple Spatial-temporal Data. Mengwen Xu, **Tianyi Wang**, Zhengwei Wu, Jingbo Zhou, Jian Li, Haishan Wu. To appear in Sig Spatial 2016.

## Research Projects

- **Mining large scale temporal-spatial data (@Baidu)**  
with *Dr. Haishan Wu* *Apr., 2015 to present*
  - Site optimization for offline stores, *e.g.*, Starbucks
  - Audience extension and customer recommendations
- **Wisdom of crowdsourced stock platform SeekingAlpha**  
with *Prof. Ben Zhao and Haitao Zheng* *Sep., 2013 to Jan. 2016*
  - sentiment analysis on Seeking Alpha articles and StockTwits messages
  - practical investment strategy based on crowdsourced articles
  - understanding and detecting stock manipulation
- **Measuring anonymous OSN Whisper**  
with *Prof. Ben Zhao and Haitao Zheng* *Feb., 2014 to May, 2014*
  - topic modeling for abusive contents in Whisper
  - modeling and prediction of user engagement and stickness
- **Detecting malicious crowdsourced workers**  
with *Prof. Ben Zhao and Haitao Zheng* *Apr., 2013 to Feb., 2014*
  - modeling malicious crowdsourced worker behavior
  - detection with supervised machine learning methods
  - study the robustness in adversary scenarios
- **Measurement of Sina Weibo**  
with *Prof. Ben Zhao and Haitao Zheng* *Jul., 2012 to Aug., 2013*
  - measure the unique function of *comments*
  - reveal how function impacts the user behavior
- **Graph sampling in online social networks**  
with *Dr. Yang Chen* *Mar., 2010 to Jul., 2011*
  - propose algorithms of unbiased sampling in directed graphs
  - evaluation beyond degree distribution

## Honors and Awards

- National scholarship *Sep., 2008 and Dec., 2012*
- Excellent Graduate student in Tsinghua University *Jul., 2011*
- First place of the undergraduate division in ACM Student Research Competition *Sep., 2010*
- First place in the college entrance exam of Jiangsu Province *Jun., 2007*