

Zifei SHAN

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Education

- **Technion—Israel Institute of Technology** Haifa, Israel
Visiting Student on Research Exchange Program Sept. 2012 - Feb. 2013
- **Peking University** Beijing, China
Undergraduate in School of Electronics Engineering and Computer Science Sept. 2009 - Present

Research Experience

- **Computer Networks and Distributed Systems Lab, Peking University** Beijing, China
Advised by Prof. Yafei Dai Jun. 2011 - Present
 - Researched on Sybil Attacks in Online Social Networks (OSNs), supervised by Jing Jiang, in collaboration with Renren.com, the largest OSN in China.
 - Designed validation and measurements for Sybil Groups, and handled experiments on Renren.
 - Participated in community analysis of Renren's latent interaction network.
 - Conducted independent research in Cloning Attacks in OSNs, improving the attack pattern and providing a defending system.
 - Conducted independent research in ranking and analyzing baseball networks, raised and evaluated a ranking algorithm for networks with multiple interplaying indicators
- **DSL4HCI Research Group, Technion** Haifa, Israel
Advised by Prof. Daniel A. Freedman Feb. 2012 - Present
 - One of the two co-leaders of the research group, doing research on Domain Specific Language for Human Computer Interactions.
 - We aim to create a language to describe universal UI applications, and write a transpiler to convert a single piece of code to UI applications on multiple media channels like Web, desktop, mobile, command line, etc.

Publications

- **Detecting and Validating Sybil Groups in the Wild**, Jing Jiang, **Zifei Shan**, Wenpeng Sha, Xiao Wang, Yafei Dai, in the proceedings of 32nd International Conference on Distributed Computing Systems Workshops (ICDCSW '12).
- **Detecting, Validating and Measuring Sybil Groups in the Wild**, Jing Jiang, **Zifei Shan**, Xiao Wang, Yafei Dai, submitted to ACM Transactions on Knowledge Discovery from Data (TKDD).
- **GameRank: Ranking and Analyzing Baseball Network**, **Zifei Shan**, Shiyongxue Li, Yafei Dai, submitted to 2012 ASE International Conference on Social Informatics.
- **Enhancing and Identifying Cloning Attacks in Online Social Networks**, **Zifei Shan**, Haowen Cao, Jason Lv, Cong Yan, Annie Liu, submitted to ACM International Conference on Ubiquitous Information Management and Communication (ICUIMC '13).
- Participate in **Understanding Latent Interactions in Online Social Networks**, Jing Jiang, Christo Wilson, Xiao Wang, Wenpeng Sha, Peng Huang, Yafei Dai, Ben Y. Zhao, submitted to ACM Transactions on the Web (TWEB), Revise & Resubmit. My work includes the measurement of the communities of latent, visible and social graphs in Renren.

Honors & Awards

- **National Scholarship (Rank: 1/35)**, achieved twice 2011 and 2012
- **Kwang-Hua Scholarship (Rank: 3/36)**, *Kwang-Hua Education Foundation* Dec. 2010
- **Meritorious Winner of Interdisciplinary Contest in Modeling (ICM)** Feb. 2012
- **Excellent Student in Academy, Moral and Health**, *Peking University* 2010, 2011 and 2012
- **Honor Track of Computer Science Completion**, *Peking University* Apr. 2012
 - Practice for Compiler Design, ranked as Top 5%; Data Structure and Algorithms(A), ranked as Top 10%; Practice of Programming in C&C++, ranked as Top 10%; Introduction to Computing(A).

Projects

- **MLB illustrator: visualize and rank baseball networks** <http://mlbillustrator.com/>
Course project of SI 508, given by Prof. Qiaozhu Mei from UMich Aug. 2012 - Sept. 2012
 - Visualized the MLB game data as a heterogeneous network, provided statistics, and ranked the batting and pitching ability of players.
 - Conducted independent research based on the project, and raised GameRank—a ranking algorithm for networks with multiple interplaying indicators.
- **Beijing 3-Day Startup Website** <http://www.beijing3ds.org/>
Website back-end designer Aug. 2012 - Oct. 2012
 - Built NGINX server and application form handler for Beijing3DS event.
- **Minijava compiler for Android** Sept. 2011 - Dec. 2011
Major contributor to the optimization part.
- **Question answering system on Chinese Wikipedia** Oct. 2011 - Dec. 2011
Team leader; major contributor to Chinese NLP and QA algorithm
- **WordNet viewer featuring force-driven graph of words** May. 2011 - Jun. 2011
Designer of the dynamic relationship graph with a force-driven layout algorithm
- **Kademlia network distributed simulation** Oct. 2010 - Jan. 2011
Team leader
- **AI for game “Blokus” generated by Genetic Algorithm** May. 2010 - Jun. 2010
Team leader
- **2D Shooting Game programmed with Haaf’s Game Engine** Jan. 2010 - Mar. 2010
Sole Developer

Skills

- **Programming Language:** C/C++, Java, JavaScript, Python, PHP, HTML, SQL
- **Paper Writing Skills:** L^AT_EX, Matplotlib, gnuplot, Inkscape
- **Unix Tools:** Bash scripting, MakeFile, Git, NGINX
- **Network Theory:** Attended course “SI 508 - Networks: Theory and Application”, have knowledge of network metrics, modeling, ranking, classification, evolution, information diffusion and visualization.
- **Other Skills:** Hadoop, OpenMP, MPICH2, D3.js, Gephi, ANTLR, StringTemplate, C++ Boost, ICTCLAS
- **English:** TOEFL 104 (R26, L26, S23, W29); GRE V400, Q800, AW3.5.
- **GPA:** 3.63/4, ranking 25/150 in CS department.

Extracurricular Activities

- **Captain of EECS Baseball Team**, *Peking University* 2010 - 2012
- **Class monitor**, *Peking University* 2009 - Present