

Zhuoshu Li

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Research interests

My broad research interests are in the areas of multiagent systems, computational economics, and machine learning, with a focus on the design and analysis of mechanisms and information structures through the “computational lens”. Besides, I also work on a wide range of topics from reinforcement learning.

Education

- **Washington University in St. Louis** **St. Louis, MO, USA**
Ph.D. in Computer Science 08/2013 - Expected 10/2018
- **Beihang University** **Beijing, China**
B.E. in Automation Science 09/2009 - 07/2013

Work Experience

- **Facebook Inc.**
New York, NY, 09/05/2017 - 11/17/2017 (Manager: Fei Huang)
 - *Software Engineer Intern*: Worked on machine learning and reinforcement learning for Instagram feed ranking. Designed online algorithms for Instagram feed ranking to achieve a more balanced and fairer system.
- **City University of Hong Kong**
Hong Kong, 09/03/2016 - 02/17/2017 (Hosts: Zhitang Chen, Yanhui Geng and Hong Xu)
 - *Research Intern and visiting student*: Explored new machine learning and reinforcement learning algorithms. Developed a faster and more comprehensive reinforcement learning algorithm and our paper of the new algorithm has been accepted by AAMAS 2018.
- **Washington University in St. Louis**
St. Louis, MO, 08/26/2013 - current (Advisor: Sanmay Das)
 - *Research Assistant*: Led multiple research projects in artificial intelligence, multi-agent systems and computational economics.
 - *Teaching Assistant*: Head TA of CSE 516A: Multi-Agent Systems, Spring 2016. Conducted various recitation sessions. Held regular office hours and graded homeworks.
- **USC Information Sciences Institute**
Los Angeles, CA, 08/01/2012 - 12/10/2012 (Hosts: Yu-Han Chang and Rajiv Maheswaran)
 - *Research Intern*: Built agent-based platforms and designed algorithms to analyze the networked economy and resource allocation using game theory. Our paper was published at SBP 2013.

Publications

7. **Equilibrium Behavior in Competing Dynamic Matching Markets.**
Zhuoshu Li, Neal Gupta, Sanmay Das and John P. Dickerson.
International Joint Conference on Artificial Intelligence (IJCAI), 2018. (To appear).
6. **Faster Policy Adaptation in Environments with Exogeneity: A State Augmentation Approach.**
Zhuoshu Li, Zhitang Chen, Pascal Poupart, Sanmay Das, and Yanhui Geng.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2018. (To appear).
5. **On the Design of Revenue-Enhancing Signal Structures in Common- and Interdependent-Value Second Price Auctions.**
Zhuoshu Li and Sanmay Das.
IJCAI Algorithmic Game Theory Workshop, 2017.
4. **An Agent-Based Model of Competition Between Financial Exchanges: Can Frequent Call Mechanisms Drive Trade Away from CDAs?**
Zhuoshu Li and Sanmay Das.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2016.
3. **Competing Dynamic Matching Markets.**
Sanmay Das, John P. Dickerson, **Zhuoshu Li** *, and Tuomas Sandholm.
(* indicates author lists alphabetical.)
Conference on Auctions, Market Mechanisms and Their Applications (AMMA), 2015.
2. **The Role of Common and Private Signals in Two-Sided Matching with Interviews.**
Sanmay Das and **Zhuoshu Li** *.
(* indicates author lists alphabetical.)
Conference on Web and Internet Economics (WINE), 2014.
1. **Graph Formation Effects on Social Welfare and Inequality in a Networked Resource Game.**
Zhuoshu Li, Yu-Han Chang, and Rajiv Maheswaran.
Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction (SBP), 2013.

Technical Skills

- **Programming Languages:** Python, Java, C++, Matlab, Lua
- **Large-scale Data Analysis:** Hadoop MapReduce, Pig, Hive, Impala
- **Other Professional Skills/Tools:** Mercurial, SVN, Git, Linux/Unix
- **Languages:** Chinese(native), English(fluent)

Awards

- Travel grants: AMMA 2015, AAMAS 2016, AAMAS 2018 ongoing
- Scholarships for Academic Performance (Top 5%), Beihang University 2010-2012
- National Scholarship (Top 1%), China Ministry of Education 2010