

# Shuai Li (李帅)

**Gender:** Female

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## Position

**Shanghai Jiao Tong University**

Assistant Professor

Aug 2019 - Present

John Hopcroft Center

## Education

- 2019 The Chinese University of Hong Kong (PhD in Computer Science & Engineering)  
Supervisor: Prof. Kwong-Sak Leung
- 2015 University of Chinese Academy of Sciences (Master's Degree in Math)  
Institute of Mathematics, Supervisor: Prof. Liming Ge
- 2011 Zhejiang University (Bachelor's Degree in Math)  
Chu Kochen Honors College (GPA: 3.92/4.00)

## Research Interests

Interests: Online Learning, Multi-armed Bandits, Reinforcement Learning

My research interest lies at online learning and multi-armed bandits and focuses on online learning algorithms and the regret analysis. My current major research topic is online learning to rank with click models. I am also interested in general online learning problems, applying bandit algorithms in online recommendations and applying bandit algorithms in Monte-Carlo tree search.

## Publications

1. Baoxiang Wang, **Shuai Li**, Jiajin Li, Siu On Chan, *The Gambler's Problem and Beyond*, the International Conference on Learning Representations (ICLR), 2020.
2. **Shuai Li**, Wei Chen, Zheng Wen, Kwong-Sak Leung, *Stochastic Online Learning with Probabilistic Feedback Graph*, the 34th AAAI Conference on Artificial Intelligence (AAAI), 2020.
3. Pengfei Liu, Hongjian Li, **Shuai Li**, Kwong-Sak Leung, *Improving Prediction of Phenotypic Drug Response on Cancer Cell Lines Using Deep Convolutional Network*, BMC Bioinformatics, 2019.
4. **Shuai Li**, Wei Chen, S Li, Kwong-Sak Leung, *Improved Algorithm on Clustering of Bandits*, the 28th International Joint Conference on Artificial Intelligence (IJCAI), 2019.
5. **Shuai Li**, Tor Lattimore, Csaba Szepesvari, *Online Learning to Rank with Features*, the 36th International Conference on Machine Learning (ICML), 2019.
6. Tor Lattimore, Branislav Kveton, **Shuai Li**, Csaba Szepesvai, *TopRank: A Practical*

- Algorithm for Online Stochastic Ranking*, the 32nd Conference on Neural Information Processing Systems (NeurIPS), 2018.
7. Ran Wang, **Shuai Li**, Man-Hon Wong, and Kwong-Sak Leung, *Drug-Protein-Disease Association Prediction and Drug Repositioning Based on Tensor Decomposition*, IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2018.
  8. **Shuai Li**, Yasin Abbasi-Yadkori, Branislav Kveton, S. Muthukrishnan, Vishwa Vinay and Zheng Wen, *Offline Evaluation of Ranking Policies with Click Models*, the 24th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (KDD Research Track), 2018.
  9. Weiwen Liu, **Shuai Li**, Shengyu Zhang, *Contextual Dependent Click Bandit Algorithm for Web Recommendation*, International Computing and Combinatorics Conference (COCOON), pp. 39-50, Springer, Cham, 2018.
  10. **Shuai Li**, Shengyu Zhang, *Online Clustering of Contextual Cascading Bandits*, the 32nd AAAI Conference on Artificial Intelligence (AAAI), 2018.
  11. **Shuai Li**, Baoxiang Wang, Shengyu Zhang, Wei Chen, *Contextual combinatorial cascading bandits*, the 33rd International Conference on Machine Learning (ICML), pp. 1245-1253. 2016.
  12. Pengfei Liu, **Shuai Li**, Weiying Yi, Kwong-Sak Leung, *A Hybrid Distributed Framework for SNP Selections*, the 22nd International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA), 2016.
  13. **Shuai Li**, Xiaoqian Xu, Guojin Wang, *Design for triangular rational Bézier harmonic and biharmonic surfaces*, Journal of Zhejiang University (Science Edition), 2012(2):152-158.

### **Under Submissions**

- S Li, **Shuai Li**, Kwong-Sak Leung, *Generalized Clustering Bandits*.
- **Shuai Li**, Tong Yu, Ole Mengshoel, Kwong-Sak Leung, *Online Semi-Supervised Learning with Large Margin Separation*.
- Xiaojin Zhang, **Shuai Li**, Weiwen Liu, *Contextual Combinatorial Conservative Bandits*.
- Pengfei Liu, **Shuai Li**, Kwong-Sak Leung, *The Recovery of Stochastic Differential Equations with Genetic Programming and Kullback-Leibler Divergence*.

### **Patents**

- **Shuai Li**, Zheng Wen, Yasin Abbasi-Yadkori, Vishwa, Vinay, Branislav Kveton, *Training and Utilizing Item-level Importance Sampling Models for Offline Evaluation and Execution of Digital Content Selection Policies*, US Patent 20190303995A1.

### **Internships & Research Experiences**

- 2018.9-2019.2 Research Intern of Prof. Tong Zhang and Lei Han at Tencent AI Lab, Shenzhen, China.
- 2018.4.30-8.31 Research Intern of Prof. Csaba Szepesvari and Tor Lattimore on

the topic of contextual online learning to rank at DeepMind, London, UK.

- 2017.6.5-11.10 Data Science Research Intern of Dr. Branislav Kveton on the topic of offline evaluation for ranking policies with click models at Adobe, San Jose, CA, US.
- 2017.1.16-5.6 Visiting student in the program of Foundation of Machine Learning, Simons institute, University of California Berkeley, CA, US.
- 2016.10-2018.5 Research collaborations with Prof. Bogdan Cautis of Noah's Ark Lab of Huawei, Prof. Shengyu Zhang and Weiwen Liu of CUHK, on contextual bandits.
- 2016.8.22-26 Attended the Algorithms and Uncertainty Boot Camp of Simons Institute, University of California, Berkeley, US.
- 2016.6.27-2016.8.21 Research assistant with Prof. Csaba Szepesvari of University of Alberta, Canada, on the generalized linear bandits.
- 2015.4-6 Visited Dr. Wei Chen of Microsoft Research Asia, Beijing, on the multi-armed bandit problem.
- 2014.11-2015.4 Research Assistant with Prof. Shengyu Zhang in the Chinese University of Hong Kong on the multi-armed bandit problem.
- 2013.8-2014.5 Teaching Assistant with Prof. Liming Ge in the University of New Hampshire, US.

## **Talks & Posters**

- AAAI 2018 (spotlight & poster)
- ICML 2016 (oral & poster), 2018 (poster)
- KDD 2018 (oral & poster)
- NeurIPS 2016
- WIML 2016 (poster)
- The International Doctoral Forum (oral), Hong Kong, 2016.10.28-30.

## **Awards**

2018	Google PhD Fellowship. Reaching out award, Hong Kong SAR Government Scholarship. Student travel award in AAAI 2018, KDD 2018.
2017	Recipient of Overseas Research Attachment Program, CUHK.
2016	Student travel award in ICML 2016, NIPS 2016, WIML 2016.
2012	Outstanding Student, University of Chinese Academy of Sciences.
2011	Certificate of Excellence Chu Kochen Honors Program, Zhejiang University (30/5500)

## **Professional Services**

2019	Conference reviewer for ICML-2019, UAI-2019, NeurIPS-2019, ISAAC-2019, AAAI-2020, AISTATS-2020 Conference sub-reviewer for ISAAC-2019
2018	Conference reviewer for NeurIPS-2018 Conference sub-reviewer for IJCAI-2018, ICML-2018, UAI-2018, AAAI-2019,

BIBM-2018  
Journal reviewer for PALADYN, JSDT  
Journal sub-reviewer for IEEE SIPN  
2017 Conference reviewer for AAAI-2018  
Conference sub-reviewer for AISTATS-2018  
Journal reviewer for TCS

## **Teaching Experience**

At SJTU

2019 VE445 Introduction to Machine Learning (undergraduate)

At CUHK

2019 Probability and Statistics for Engineers  
(undergraduate-level, TA, Prof. Andrej Bogdanov)  
2018 Fundamentals of Artificial Intelligence  
(undergraduate-level, TA, Prof. Kwong-Sak Leung)  
Compiler Construction (undergraduate-level, TA, Dr. YUAN Cheng Jiun)  
2016 Probability and Statistics for Engineers  
(undergraduate-level, TA, Prof. Shengyu Zhang)  
Randomness and Computation (graduate-level, TA, Prof. Shengyu Zhang)  
2015 Analysis of Boolean Functions (graduate-level, TA, Prof. Shengyu Zhang)  
Topics in Theoretical Computer Science  
(graduate-level, TA, Prof. Shengyu Zhang)  
2014 Calculus II (undergraduate-level, TA, Prof. Donald W Hadwin)  
2013 Calculus I (undergraduate-level, TA, Prof. Liming Ge)