Shuai Li (李帅)

Gender: Female
Mail Address: Room 1406-2, No.1 Software Engineering Building, Dongchuan Road 800, Shanghai, China
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Position

Shanghai Jiao Tong University
Assistant Professor Sep 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)

Awards

2021 Outstanding Reviewer for NeurIPS-2021 (8%)
2020 Shanghai Sailing Program
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)

Research Interests

Interests: Online Learning, Multi-armed Bandit Algorithms, Reinforcement Learning Algorithms
My research interest lies at online learning and multi-armed bandits and focuses on the algorithm design and the regret analysis. My current major research topics include online learning to rank with click models, online influence maximization, online matching markets and bandits with graph feedback. I am also interested in general theoretical learning problems and the applications for these algorithms in recommender systems.

Publications

*Equal contribution #Corresponding author

1. Fang Kong, Junming Yin, **Shuai Li**[#], *Thompson Sampling for Bandit Learning in Matching Markets*, IJCAI, 2022.
2. Junda Wu*, Zhihui Xie*, Tong Yu, Handong Zhao, Ruiyi Zhang and **Shuai Li**[#], *Doubly-Adaptive Reinforcement Learning for Cross-Domain Interactive Recommendation*, SIGIR, 2022.
3. Kun Wang, Jing Dong, Baoxiang Wang, **Shuai Li**, Shuo Shao, *Cascading Bandit under Differential Privacy*, IEEE ICASSP, 2022.
4. Anirban Santara, Gaurav Aggarwal, **Shuai Li**, Claudio Gentile, *Learning to Plan Variable Length Sequences of Actions with a Cascading Bandit Click Model of User Feedback*, AISTATS, 2022.
5. Canzhe Zhao, Tong Yu, Zhihui Xie, **Shuai Li**[#], *Knowledge-aware Conversational Preference Elicitation with Bandit Feedback*, the Web Conference (WWW), 2022.
6. Cheng Chen, Canzhe Zhao, **Shuai Li**[#], *Simultaneously Learning Stochastic and Adversarial Bandits under the Position-based Model*, The 36th AAAI Conference on Artificial Intelligence (AAAI), 2022.
7. Jing Dong, Ke Li, **Shuai Li**, Baoxiang Wang#, *Combinatorial Bandits under Strategic Manipulations*, The 15th ACM International Conference on Web Search and Data Mining (WSDM), 2022.
8. Fang Kong, Yueran Yang, Wei Chen, **Shuai Li**[#], *The Hardness Analysis of Thompson Sampling for Combinatorial Semi-bandits with Greedy Oracle*, Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS), 2021.
9. Houshuang Chen, Zengfeng Huang, **Shuai Li**, Chihao Zhang# (alphabetical order), *Understanding Bandits with Graph Feedback*, Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS), 2021.
10. Fang Kong, Yueran Yang, Wei Chen, **Shuai Li**[#], *Combinatorial online learning based on optimizing feedbacks* (in Chinese), Big Data Research, 2021.
11. Yueran Yang*, Yu Zhang*, **Shuai Li**[#], Xubin Zheng, Man Hon Wong, Kwong-Sak Leung, Lixin Cheng, *A robust and generalizable immune-related signature for sepsis diagnostics*, IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB), 2021.
12. Junda Wu*, Canzhe Zhao*, Tong Yu, Jingyang Li, **Shuai Li**[#], *Clustering of Conversational Bandits for Coarse-to-Fine Grained Preference Elicitation*, Proceedings of the 30th ACM International Conference on Information & Knowledge Management (CIKM), 2021.
13. Junda Wu, Tong Yu, **Shuai Li**[#], *Deconfounded and Explainable Interactive Vision-Language Retrieval of Complex Scenes*, Proceedings of the 29th ACM International Conference on Multimedia (MM), 2021.
14. Zhihui Xie, Tong Yu, Canzhe Zhao, **Shuai Li**[#], *Comparison-based Conversational Recommender System with Relative Bandit Feedback*, The 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2021.
15. Jianghao Lin, Weiwen Liu, Xinyi Dai, Weinan Zhang, **Shuai Li**, Ruiming Tang, Xiuqiang He, Jianye Hao and Yong Yu, *A Graph-Enhanced Click Model for Web Search*, The 44th International ACM SIGIR Conference on Research and

Development in Information Retrieval (SIGIR), 2021.

16. Xinyi Dai, Jianghao Lin, Weinan Zhang, **Shuai Li**, Weiwen Liu, Ruiming Tang, Xiuqiang He, Jianye Hao, Jun Wang and Yong Yu, *A Generative Adversarial Click Model for Information Retrieval*, The Web Conference (WWW), 2021.
17. **Shuai Li**, Fang Kong, Kejie Tang, Qizhi Li, Wei Chen, *Online influence maximization under linear threshold model*, Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS), 2020.
18. Fang Kong, Qizhi Li, **Shuai Li**[#], *A Survey on Online Influence Maximization* (in Chinese), Computer Science, 2020.
19. Baoxiang Wang, **Shuai Li**, Jiajin Li, Siu On Chan, *The Gambler's Problem and Beyond*, the International Conference on Learning Representations (ICLR), 2020.
20. **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.
21. Ran Wang, **Shuai Li**, Lixin Cheng, Man-Hon Wong, and Kwong-Sak Leung, *Predicting Associations among Drugs, Targets and Diseases by Tensor Decomposition for Drug Repositioning*, BMC Bioinformatics, 2019.
22. 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.
23. **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.
24. **Shuai Li**, Tor Lattimore, Csaba Szepesvari, *Online Learning to Rank with Features*, the 36th International Conference on Machine Learning (ICML), 2019.
25. 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.
26. 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.
27. **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.
28. 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.
29. **Shuai Li**, Shengyu Zhang, *Online Clustering of Contextual Cascading Bandits*, the 32nd AAAI Conference on Artificial Intelligence (AAAI), 2018.
30. **Shuai Li**, Baoxiang Wang, Shengyu Zhang, Wei Chen, *Contextual Combinatorial Cascading Bandits*, the 33rd International Conference on Machine Learning (ICML), pp. 1245-1253. 2016.

31. 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.
32. **Shuai Li**, Xiaoqian Xu, Guojin Wang, *Design for Triangular Rational Bézier Harmonic and Biharmonic Surfaces* (in Chinese), Journal of Zhejiang University (Science Edition), 2012(2):152-158.

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 Dr. 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.

Professional Services

Conference reviewer:

International Conference on Machine Learning (ICML) 2022-2019
International Conference on Learning Representations (ICLR) 2022-2021
Conference on Neural Information Processing Systems (NeurIPS) 2022-2018
AAAI Conference on Artificial Intelligence (AAAI) 2021-2020, 2018
Conference on Uncertainty in Artificial Intelligence (UAI) 2022-2019

International Conference on Artificial Intelligence and Statistics (AISTATS) 2022, 2020

International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2022-2021

Journal reviewer:

IEEE Transactions on Neural Networks and Learning Systems (TNNLS) 2021

IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI) 2020

IEEE Journal on Selected Areas in Information Theory (JSAIT) 2020

Machine Learning

Journal of Global Optimization

Manufacturing and Service Operations Management

Production and Operations Management (POM) 2021

Conference subreviewer:

SODA 2021, ICALP 2020

Other reviews:

Reinforcement Learning for Real Life Workshop (at ICML 2021)

Machine Learning Special Issue on Reinforcement Learning for Real Life 2020

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

International Conference on Neural Computation Theory and Applications (NCTA) 2019

Ubicomp Workshop on Continual and Multimodal Learning for Internet of Things (CML-IoT 2019)

Journal reviewer for TCS 2017, PALADYN 2018, JSDT 2018

Journal sub-reviewer for IEEE SIPN 2018

Teaching Experience

At SJTU

2021 CS410 Artificial Intelligence (undergraduate)
CS445 Combinatorics (undergraduate)

2020 CS410 Artificial Intelligence (undergraduate)
CS445 Combinatorics (undergraduate)

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 Jun)

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)

At UNH

2014 Calculus II (undergraduate-level, TA, Prof. Donald W Hadwin)

2013 Calculus I (undergraduate-level, TA, Prof. Liming Ge)