# Chang Li

## Education

Sep.2016–Present **Ph.D. student**, *Informatics Institute, University of Amsterdam*.
Supervisor: Prof. Dr. Maarten de Rijke
Research topic:
- Online learning to rank
- Multi-armed bandits
- Sparse Bayesian learning

Sep.2013–Jun.2016 **Master of Engineering**, *School of Computer Science, University of Science and Technology of China*.
Supervisor: Prof. Dr. Huanhuan ChenThesis: *Sparse Bayesian Feature Selection*

Sep.2009–Jul.2013 **Bachelor of Engineering**, *School of Computer Science, Tianjin University*.
Supervisor: Dr. Xin Wang
Graduation project: *Semantic Web Based Chinese Knowledge Summarization*

## Publications and Preprints

[1] **Chang Li**, Ilya Markov, Maarten de Rijke, and Masrour Zoghi. MergeDTS: A method for effective large-scale online ranker evaluation. *ACM Transactions on Information Systems (TOIS). Accepted subject to major revisions. arXiv preprint arXiv:1812.04412*, 2019.

[2] **Chang Li**, Branislav Kveton, Tor Lattimore, Ilya Markov, Maarten de Rijke, Csaba Szepesvari, and Masrour Zoghi. BubbleRank: Safe online learning to rerank. *Submitted to UAI, arXiv preprint arXiv:1806.05819*, 2019.

[3] **Chang Li** and Maarten de Rijke. Cascading non-stationary bandits: Learning to rank in the non-stationary cascade model. *Submitted to IJCAI*, 2019.

[4] Bingbing Jiang, **Chang Li**, Maarten de Rijke, Xin Yao, and Huanhuan Chen. Probabilistic feature selection and classification vector machine. *ACM Transactions on Knowledge Discovery from Data*, 13(2):Article 21, April 2019.

[5] **Chang Li**, Artem Grotov, Ilya Markov, and Maarten de Rijke. Online learning to rank with list-level feedback for image filtering. *arXiv preprint arXiv:1812.04910*, 2018.

[6] **Chang Li** and Maarten de Rijke. Incremental sparse Bayesian ordinal regression. *Neural Networks*, 106:294–302, 2018.

[7] **Chang Li** and Huanhuan Chen. Sparse Bayesian approach for feature selection. In *Proceedings of IEEE Symposium on Computational Intelligence in Big Data (CIBD), Orlando, FL, USA, December 9-12*, pages 7–13, 2014.

## Selected Research Topics

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*https://www.linkedin.com/in/chang-li-88bb4183/*

2017–present ***Bandits and ranking***.
*Keywords:* Dueling bandits, click models, upper confidence bound and Thompson sampling.
Bandits algorithms are widely used in sequential decision making and online learning. I proposed two types of bandit algorithms: one is about the large-scale dueling bandits, called MergeDTS; the other is about the safe online learning to (re-)rank via click feedback, called BubbleRank.

2013–2017 ***Sparse Bayesian learning***.
*Keywords*: Bayesian inference, Laplacian approximation, EM algorithm and ordinal regression.
Sparse Bayesian learning is a widely used learning framework. By incorporating different types of likelihoods, I proposed an ordinal regression algorithm, called ISBOR and a joint feature selection and classification algorithm, called PFCVM.

## Teaching and Supervision

### Teaching assistant

Spring 2018 Information Retrieval I (52041INR6Y), Dr. Evangelos Kanoulas, UvA.

Spring 2017 Statistical Reasoning (5062STRE6Y), Dr. Rein van den Boomgaard, UvA.

### Student supervision

2018 Rick Bruins, MSc Data Science, UvA, master thesis, topic: *ICD-10 classification*.

2018 Ilse Lankhorst, MSc Data Science, UvA, master thesis, topic: *Predicting hospital cost from a machine learning perspective*.

## Professional Service

Reviewer Foundations and Trends in Information Retrieval
IEEE Transactions on Neural Networks and Learning Systems
IEEE Transactions on Industrial Informatics

## Miscellaneous

Programming languages Python (PyTorch), Matlab

Languages Chinese (native), English (working proficiency)

Hobbies Sports, travel, movies

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