

Weiming Feng

SCHOOL OF INFORMATICS
UNIVERSITY OF EDINBURGH

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CURRENT POSITIONS

Research Associate in School of Informatics (2021 – now)

UNIVERSITY OF EDINBURGH

EDUCATION

Ph.D. in Computer Science (2016 – 2021)

NANJING UNIVERSITY

Field: Theoretical Computer Science

Advisor: Professor Yitong Yin

B.Eng. in Network Engineering (2012 – 2016)

UNIVERSITY OF ELECTRONIC SCIENCE AND TECHNOLOGY OF CHINA

RESEARCH INTERESTS

Theoretical Computer Science:

- sampling & counting algorithms;
- distributed graph algorithms.

HONORS

National Scholarship (2019)

MOE OF PRC

Microsoft Research Asia Fellowship (2018)

MSRA

Tung OOCL Scholarship (2017)

NANJING UNIVERSITY

Gold Medals in ACM-ICPC Asia Regional Contests (2014-2015)

ACM

PUBLICATIONS

CONFERENCE PUBLICATIONS

1. Xiaoyu Chen, Weiming Feng, Yitong Yin, Xinyuan Zhang. Rapid mixing of Glauber dynamics via spectral independence for all degrees. In *Proceedings of the 62nd IEEE Symposium on Foundations of Computer Science (FOCS)*, 2021.
2. Weiming Feng, Kun He and Yitong Yin. Sampling constraint satisfaction solutions in the local lemma regime. In *Proceedings of the 53rd ACM Symposium on Theory of Computing (STOC)*, 2021.
3. Weiming Feng, Heng Guo, Yitong Yin and Chihao Zhang. Rapid mixing from spectral independence beyond the Boolean domain. In *Proceedings of the 32nd ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2021.
4. Weiming Feng, Thomas P. Hayes and Yitong Yin. Distributed Metropolis sampler with optimal parallelism. In *Proceedings of the 32nd ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2021.
5. Weiming Feng, Kun He, Xiaoming Sun and Yitong Yin. Dynamic inference in probabilistic graphical models. In *Proceedings of the 12th Innovations in Theoretical Computer Science (ITCS)*, 2021.
6. Weiming Feng, Heng Guo, Yitong Yin and Chihao Zhang. Fast sampling and counting k -SAT solutions in the local lemma regime. In *Proceedings of the 52nd ACM Symposium on Theory of Computing (STOC)*, 2020.
7. Weiming Feng, Nisheeth K. Vishnoi and Yitong Yin. Dynamic sampling from graphical models. In *Proceedings of the 51st ACM Symposium on Theory of Computing (STOC)*, 2019.

8. Weiming Feng and Yitong Yin. On local distributed sampling and counting. In *Proceedings of the 37th ACM Symposium on Principles of Distributed Computing (PODC)*, 2018.
9. Weiming Feng, Yuxin Sun and Yitong Yin. What can be sampled locally? In *Proceedings of the 36th ACM Symposium on Principles of Distributed Computing (PODC)*, 2017.

JOURNAL PUBLICATIONS

10. Weiming Feng, Heng Guo, Yitong Yin and Chihao Zhang. Fast sampling and counting k -SAT solutions in the local lemma regime. *Journal of the ACM (JACM)* 68 (6), 1-42.
11. Weiming Feng, Nisheeth K. Vishnoi and Yitong Yin. Dynamic sampling from graphical models. *SIAM Journal on Computing (SICOMP)*, 50(2), 350–381. 2021.
12. Weiming Feng, Yuxin Sun and Yitong Yin. What can be sampled locally? *Distributed Computing (DC)*, 33, 227–253. 2020.

TALKS AND POSTERS

Rapid mixing of Glauber dynamics via spectral independence for all degrees.

Chengdu Algorithm & Logic Seminar, UESTC, Chengdu, China, 2021

Rapid mixing from spectral independence beyond the Boolean domain.

SODA, online, 2021

Distributed Metropolis sampler with optimal parallelism.

SODA, online, 2021

Fast sampling and counting k -SAT solutions in the local lemma regime.

SIGMA Seminar, Institute of Computing Technology, Chinese Academy of Sciences, online, 2020

STOC, online, 2020

IJTCS, Peking University, online, 2020

Dynamic sampling from graphical models

Nanjing Theory Day, Nanjing University, Nanjing, China, 2019

STOC, Phoenix, Arizona, US, 2019

NCTCS, Lanzhou University, Lanzhou, China, 2019

Microsoft PhD Summit, Microsoft Research Redmond, Redmond, Washington, US, 2019

Local distributed sampling

Microsoft Research Asia, Beijing, China, 2018

TEACHING ASSISTANTSHIPS

Advanced Algorithms (Fall 2019)

NANJING UNIVERSITY

Instructor: Yitong Yin

Advanced Algorithms (Fall 2018)

NANJING UNIVERSITY

Instructor: Yitong Yin

RESEARCH VISITS

University of Edinburgh, Edinburgh, UK

SEPT. 2019 -- DEC. 2019

Visiting student, advised by Heng Guo

Shanghai Jiao Tong University, Shanghai, China
Visiting student, advised by Chihao Zhang

SEPT. 2018 -- JAN. 2019

SERVICE

External reviewer for: STOC'21, SICOMP.

Organizer (with Xiaoming Sun, Jialin Zhang and Zhijie Zhang) of CCF TCS PhD Forum 2020.