Weiming Feng

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⌂ https://fwm94.github.io/

Education

Ph.D. Candidate in Computer Science (2016 – now)   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. Weiming Feng, Kun He and Yitong Yin. Sampling constraint satisfaction solutions in the local lemma regime. To appear in *Proceedings of the 53rd ACM Symposium on Theory of Computing* (**STOC**), 2021.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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

9. Weiming Feng, Nisheeth K. Vishnoi and Yitong Yin. Dynamic sampling from graphical models. Accepted by *SIAM Journal on Computing* (**SICOMP**).

10. Weiming Feng, Yuxin Sun and Yitong Yin. What can be sampled locally? *Distributed Computing* (**DC**), 2018.

Talks and Posters

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   SEPT. 2018 -- JAN. 2019
Visiting student, advised by Chihao Zhang

Service

External reviewer for: STOC.
Organizer (with Xiaoming Sun, Jialin Zhang and Zhijie Zhang) of CCF TCS PhD Forum 2020.