

- Work Experience**
- Researcher 2023/01 – now
Renmin University of China
 - Associate researcher 2022/10 – 2022/12
Institute of Computing Technology (ICT), Chinese Academy of Sciences (CAS)
 - Assistant researcher 2021/02 – 2022/09
ICT, CAS
 - Postdoctor 2019/07 – 2021/01
Shenzhen University
- Education**
- *Ph.D.* in Computer Science 2015/09 – 2019/07
ICT, CAS
Advisor: Prof. Xiaoming Sun
 - *M.S.* in Computer Science 2010/09 – 2014/01
ICT, CAS
 - *B.E.* in Computer Science 2006/09 – 2010/07
Wuhan University
- Research Interests**
- Theory of computing, with an emphasis on probabilistic methods and sampling
- Honors and Awards**
- New Hundred Stars of ICT, CSA, 2021
 - Outstanding Doctoral Dissertation Award of CCF, 2020
 - Special award for President of CAS, 2019
 - National Scholarship, China, 2018
- Research Articles**
- Improved Bounds for Sampling Solutions of Random CNF Formulas
Kun He, Kewen Wu, and Kuan Yang
SODA'23, Accepted.
 - Deterministic counting Lovász local lemma beyond linear programming
Kun He, Chunyang Wang and Yitong Yin
SODA'23, Accepted.
 - Moser-Tardos Algorithm: beyond Shearer's Bound
Kun He, Qian Li and Xiaoming Sun
SODA'23, Accepted.
 - Sampling Lovász Local Lemma For General Constraint Satisfaction Solutions
In Near-Linear Time
Kun He, Chunyang Wang and Yitong Yin
FOCS'22, Accepted.
 - Sampling Constraint Satisfaction Solutions in the Local Lemma Regime
Weiming Feng, Kun He and Yitong Yin
STOC'21, pp. 1565-1578.
 - Dynamic Inference in Probabilistic Graphical Models
Weiming Feng, Kun He, Xiaoming Sun and Yitong Yin
ITCS'21, pp. 25:1–25:20.

- New Versions of Lovász Local Lemma and Their Applications (in Chinese)
Kun He and Xiaoming Sun
SCIENCE CHINA Information Sciences, pp. 50:1680–1696, 2020.
- Tight Bounds for Popping Algorithms
Heng Guo and Kun He
Random Struct. Algorithms, pp. 371-392, 2020.
One of the top 10 downloaded papers published between 01/01/2019-12/31/2020
- Quantum Lovász Local Lemma: Shearer’s Bound Is Tight
Kun He, Qian Li, Xiaoming Sun and Jiapeng Zhang
STOC’19, pp. 461-472.
- Variable-Version Lovász Local Lemma: Beyond Shearer’s Bound
Kun He, Liang Li, Xingwu Liu, Yuyi Wang and Mingji Xia
FOCS’17, pp. 451-462.
- A Tighter Relation Between Sensitivity Complexity and Certificate Complexity
Kun He, Qian Li and Xiaoming Sun
Theor. Comput. Sci., 762, 1-12, 2019
Preliminary version: COCOON’17, pp. 262-274.

Preprints

- Perfect Sampling for (Atomic) Lovász Local Lemma
Kun He, Xiaoming Sun and Kewen Wu
Submitted.