

葛存菁

南京大学人工智能学院

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工作经历

博士后

2021.12 – 至今

南京大学人工智能学院

入选 2021 年度南京大学“毓秀青年学者计划”

博士后

2019.09 – 2021.09

奥地利林茨大学（合作导师: Armin Biere 教授）

教育背景

中国科学院, 北京

2013.09 – 2019.6

博士, 软件研究所, 计算机科学国家重点实验室

导师: 张健 研究员

研究方向: 自动推理与约束求解

博士论文: SMT 约束的计数方法研究

中国科学技术大学, 合肥

2009.09 – 2013.06

学士, 少年班学院, 华罗庚班（数学专业）

项目基金

主持 国家自然科学基金青年基金项目

2023.01 - 2025.12

“约束的解计数方法研究” (NSFC 62202218)

主持 CCF-华为胡杨林基金形式化专项

2023.10 - 2024.09

“SMT(LA)约束的解计数方法研究与工具实现” (CCF-HuaweiFM202309)

参与 江苏省前沿引领技术基础研究重大项目

2024.01 - 2026.12

“面向数据知识双驱动的人工智能理论与方法” (BK20232003)

参与 科技创新 2030—新一代人工智能重大项目

2023.03—2027.2

“复杂黑箱场景下演化计算理论与方法及其在深时生命演化研究中的应用”
(2022ZD0116600)

参与 国家重点基础研究发展计划(973 计划)

已结题

“安全攸关软件系统的构造与质量保障方法研究” (2014CB340701)

荣誉奖励

- 江苏省青年科技人才托举工程资助, 2024 年 (已通过江苏省青少年科技教育协会评选并已公示, 目前待省科协审核)
- 博士研究生国家奖学金, 2018 年

文章发表

- [1] Cunjing Ge. Approximate Integer Solution Counts over Linear Arithmetic Constraints. In Proceedings of the 38th AAAI Conference on Artificial Intelligence (**AAAI'24**), 2024, Vancouver, Canada, page. 8022-8029, **CCF-A 类会议**.
- [2] Cunjing Ge, Feifei Ma: Refining Solution Spaces of SMT(LA) Formulas by Merging Polytopes. Submitted to SCIENCE CHINA Information sciences, 2024, **CCF-A 类期刊**.
- [3] Cunjing Ge: sharpSMT: A Scalable Toolkit for Measuring Solution Spaces of SMT(LA) Formulas. Submitted to Frontiers of Computer Science, 2024, **CCF-B 类期刊**.
- [4] Cunjing Ge, Armin Biere: Improved Bounds of Integer Solution Counts via Volume and Extending to Mixed-Integer Linear Constraints. Submitted to the 30th International Conference on Principles and Practice of Constraint Programming (**CP'24**), 2024, **CCF-B 类会议, 约束求解领域顶级会议**.
- [5] Cunjing Ge, Armin Biere. Decomposition Strategies to Count Integer Solutions over Linear Constraints. In Proceedings of the 30th International Joint Conference on Artificial Intelligence (**IJCAI'21**), 2021, Montreal, Canada, page. 1389-1395, **CCF-A 类会议**.
- [6] Cunjing Ge, Feifei Ma, Xutong Ma, Fan Zhang, Pei Huang, Jian Zhang: Approximating Integer Solution Counting via Space Quantification for Linear Constraints. In Proceedings of the 28th International Joint Conference on Artificial Intelligence (**IJCAI'19**), 2019, Macao, China, page. 1697-1703, **CCF-A 类会议**.
- [7] Cunjing Ge, Feifei Ma, Tian Liu, Jian Zhang, Xutong Ma: A New Probabilistic Algorithm for Approximate Model Counting. In Proceedings of Automated Reasoning - 9th International Joint Conference (**IJCAR'18**), Held as Part of the Federated Logic Conference, FloC 2018, Oxford, UK, page. 312-328, **CCF-B 类、CORE-A*会议, 自动推理领域顶级会议**.
- [8] Cunjing Ge, Feifei Ma, Peng Zhang, Jian Zhang: Computing and estimating the volume of the solution space of SMT(LA) constraints. Theoretical Computer Science, 2018, vol.

- 743, page. 110-129, **CCF-B** 类期刊, 理论计算机科学领域权威期刊.
- [9] Cunjing Ge, Jiwei Yan, Jun Yan, Jian Zhang: Checking Activity Transition Systems with Back Transitions Against Assertions. In Proceedings of the 20th International Conference on Formal Engineering Methods (**ICFEM'18**), 2018, Gold Coast, QLD, Australia, page. 388-403.
- [10] Cunjing Ge, Feifei Ma: A Fast and Practical Method to Estimate Volumes of Convex Polytopes. In Proceedings of Frontiers in Algorithmics - 9th International Workshop (**FAW'15**), 2015, Guilin, China, page. 52-65.
- [11] Cunjing Ge, Feifei Ma, Jeff Huang, Jian Zhang: SMT Solving for the Theory of Ordering Constraints. In Proceedings of Languages and Compilers for Parallel Computing - 28th International Workshop (**LCPC'15**), 2015, Raleigh, NC, USA, page. 287-302.
- [12] Jiwei Jin, Yiqi Lv, Cunjing Ge, Feifei Ma and Jian Zhang: Investigating the Existence of Costas Latin Squares via Satisfiability Testing. In Proceedings of Theory and Applications of Satisfiability Testing (**SAT'21**), 2021, Barcelona, Spain, page. 270-279, **CCF-B** 类会议, 约束求解领域顶级会议.
- [13] Pei Huang, Feifei Ma, Cunjing Ge, Jian Zhang, Hantao Zhang: Investigating the Existence of Large Sets of Idempotent Quasigroups via Satisfiability Testing. In Proceedings of Automated Reasoning - 9th International Joint Conference (**IJCAR'18**), Held as Part of the Federated Logic Conference, FloC 2018, Oxford, UK, page. 312-328, **CCF-B** 类、**CORE-A***会议, 自动推理领域顶级会议.
- [14] Pei Huang, Minghao Liu, Cunjing Ge, Feifei Ma, Jian Zhang: Investigating the Existence of Orthogonal Golf Designs via Satisfiability Testing. In Proceedings of the 2019 on International Symposium on Symbolic and Algebraic Computation (**ISSAC'19**), 2019, Beijing, China, page. 203-210, **CORE-A***会议.
- [15] Martin Aleksandrov, Cunjing Ge, Toby Walsh: Fair Division Minimizing Inequality. In Proceedings of the 19th EPIA Conference on Artificial Intelligence (**EPIA'19**), 2019, Vila Real, Portugal, page. 593-605.