

Renfeng Peng

✉ pengrenfeng a.t. lsec.cc.ac.cn

🎂 Sept. 30th, 1998, Changde, Hunan

📍 Room 101, Lanbai Building, No.55, East Zhongguancun Road, Beijing 100190, China

🌐 <http://jimmpeng1998.github.io/>

🔍 Google scholar



🎓 Education

- 2021.09 – current 📖 **Ph.D. student in computational mathematics.**
Academy of Mathematics and System Science, Chinese Academy of Sciences; and
University of Chinese Academy of Sciences
- 2017.09 – 2021.07 📖 **Bachelor in mathematics and applied mathematics**
School of Mathematical Sciences, Tongji University.

📄 Publications

- 1 B. Gao, R. Peng, and Y.-x. Yuan, “Low-rank optimization on Tucker tensor varieties,” *Mathematical Programming*, pp. 1–51, 2025. 🔗 DOI: 10.1007/s10107-024-02186-w.
- 2 C. Zhu, R. Peng, B. Gao, and X. Wang, “Riemannian optimization for Holevo capacity,” *arXiv preprint arXiv:2501.11576*, 2025.
- 3 B. Gao, R. Peng, and Y.-x. Yuan, “Desingularization of bounded-rank tensor sets,” *arXiv preprint arXiv:2411.14093*, 2024.
- 4 B. Gao, R. Peng, and Y.-x. Yuan, “Riemannian preconditioned algorithms for tensor completion via tensor ring decomposition,” *Computational Optimization and Applications*, vol. 88, pp. 443–468, 2024. 🔗 DOI: 10.1007/s10589-024-00559-7.
- 5 B. Gao, R. Peng, and Y.-x. Yuan, “Optimization on product manifolds under a preconditioned metric,” *arXiv preprint arXiv:2306.08873*, 2023.
- 6 L.-X. Zhang, R.-F. Peng, and J.-F. Yin, “A second order numerical scheme for fractional option pricing models,” *East Asian J. Appl. Math*, vol. 11, pp. 326–348, 2021. 🔗 DOI: 10.4208/eajam.020820.121120.

💡 Skills

- Languages 📖 Mandarin Chinese, English.
- Coding 📖 Matlab, C, C++, \LaTeX , ...

🏆 Awards and Achievements

- 2024/09 📖 **Loo-Keng Hua Scholarship.**
- 2021/09 📖 **Loo-Keng Hua Scholarship.**

💻 Presentations

- 2024/11 📖 **The 7th PKU PhD Symposium for Applied Mathematics.** Beijing, China.