

# Renfeng Peng

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🎂 Sept. 30th, 1998, Changde, Hunan

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🌐 <http://jimmpeng1998.github.io/>

🔍 Renfeng Peng at 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

### Journal articles

- 1 Bin Gao, Renfeng Peng, and Ya-xiang Yuan. “Low-rank optimization on Tucker tensor varieties”. In: *Mathematical Programming* (2025), pp. 1–51. 🔗 DOI: 10.1007/s10107-024-02186-w.
- 2 Bin Gao, Renfeng Peng, and Ya-xiang Yuan. “Riemannian preconditioned algorithms for tensor completion via tensor ring decomposition”. In: *Computational Optimization and Applications* 88 (2024), pp. 443–468. 🔗 DOI: 10.1007/s10589-024-00559-7.
- 3 Ling-Xi Zhang, Ren-Feng Peng, and Jun-Feng Yin. “A second order numerical scheme for fractional option pricing models”. In: *East Asian J. Appl. Math* 11 (2021), pp. 326–348. 🔗 DOI: 10.4208/eajam.020820.121120.

### Preprints

- 1 Bin Gao, Renfeng Peng, and Ya-xiang Yuan. “First-order methods on bounded-rank tensors converging to stationary points”. In: *arXiv preprint arXiv:2503.04523* (2025).
- 2 Chengkai Zhu, Renfeng Peng, Bin Gao, and Xin Wang. “Riemannian optimization for Holevo capacity”. In: *arXiv preprint arXiv:2501.11576* (2025).
- 3 Bin Gao, Renfeng Peng, and Ya-xiang Yuan. “Desingularization of bounded-rank tensor sets”. In: *arXiv preprint arXiv:2411.14093* (2024).
- 4 Bin Gao, Renfeng Peng, and Ya-xiang Yuan. “Optimization on product manifolds under a preconditioned metric”. In: *arXiv preprint arXiv:2306.08873* (2023).

## 💡 Skills

- Languages     📖 Mandarin Chinese, English.
- Coding     📖 Matlab, C, C++,  $\text{\LaTeX}$ , ...


## 🏆 Awards and Achievements

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

## Presentations

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2024/11

 **The 7th PKU PhD Symposium for Applied Mathematics.** Beijing, China.