Mingyuan Rong

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Current Position

2026–present **Postdoctoral Researcher**, *Senior Researcher, Institute for Basic Science (IBS)*, Daejeon, Republic of Korea.
Extremal Combinatorics and Probability Group; working with Prof. Hong Liu

Education

2021–2026 **Ph.D. in Mathematics**, *University of Science and Technology of China (USTC)*, Hefei, Anhui, China.
Advisor: Prof. Jie Ma

2025–2026 **Visiting Student Researcher**, *University of Warwick*, Coventry, UK.
Host and Research Mentor: Prof. Oleg Pikhurko
Supported by USTC's Excellent Ph.D. Students Overseas Study Fellowship (First-tier).

2017–2021 **B.Sc. in Mathematics**, *University of Science and Technology of China (USTC)*, Hefei, Anhui, China.

Research Interests

Extremal Set Theory, Extremal Graph Theory

Publications

Journal Articles

- Jie Ma and **Mingyuan Rong**. The codegree Turán density of tight cycles. *Journal of the London Mathematical Society* **114**(3) (2026), e70711.
- Mingze Li, Jie Ma, and **Mingyuan Rong**. Exact results on traces of sets. *Combinatorica* **46** (2026), Article 18.
- Xinqi Huang, Hong Liu, **Mingyuan Rong**, and Zixiang Xu. Interpolating chromatic and homomorphism thresholds. *Journal of Combinatorial Theory, Series B* **182** (2027), 286–324.
- Xinbu Cheng, Xinqi Huang, **Mingyuan Rong**, and Zixiang Xu. Sublinear hitting sets for some geometric graphs. *Frontiers in Combinatorics and Number Theory* **2** (2026), 23–42.
- Guorong Gao, Jie Ma, **Mingyuan Rong**, and Tuan Tran. Variants of VC dimension and their applications to dynamics. *Pure and Applied Mathematics Quarterly* **21**(6) (2025), 2425–2449.
- Jun Gao, Oleg Pikhurko, **Mingyuan Rong**, and Shumin Sun. Rational codegree Turán density of hypergraphs. *Bulletin of the London Mathematical Society*, Accepted.

Preprints

- Xinqi Huang, **Mingyuan Rong**, and Chong Shangguan. Exact homomorphism thresholds beyond cliques. arXiv:2607.28241 [math.CO] (2026).
- Xinqi Huang, Hong Liu, and **Mingyuan Rong**. On the spectrum and structure of blowup thresholds. arXiv:2607.03035 [math.CO] (2026).
- Levente Bodnár, Jun Gao, Oleg Pikhurko, **Mingyuan Rong**, and Shumin Sun. Strong non-principality of positive codegree Turán density. arXiv:2606.20494 [math.CO] (2026).
- Wenchong Chen, **Mingyuan Rong**, and Zixiang Xu. Optimal stability results on color-biased Hamilton cycles. arXiv:2507.17739 [math.CO] (2025).
- Xinqi Huang, Yuzhen Qi, **Mingyuan Rong**, and Zixiang Xu. Largest dyadic dual VC-dimension of non-piercing families. arXiv:2506.13606 [math.CO] (2025).

Survey Papers

- Mingze Li, Jie Ma, and **Mingyuan Rong**. Recent advances in arrow relations and traces of sets. In G. O. H. Katona, B. Patkós, and C. Tompkins (eds.), *Sum(m)it280*, Bolyai Society Mathematical Studies **32**, Springer (2026), pp. 327–354.