

# Zuo Ye

## Curriculum Vitae

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### Working Experience

- 04/2025–present **Associate Professor** (a six-year position), *Institute of Mathematics and Interdisciplinary Sciences*, Xidian University, Xi'an, Shaanxi, China.
- 03/2022–03/2025 **Pos-Doc Fellow**, *School of Electrical and Computer Engineering*, Ben-Gurion University of the Negev, Beer Sheva, Israel.  
Advisor: Ohad Elishco

### Education

- 09/2018–11/2021 **Ph.D**, *School of Mathematical Sciences*, University of Science and Technology of China, Hefei, Anhui, China.  
Advisor: Professor Xiande Zhang and Professor Gennian Ge
- 09/2016–06/2018 **Master of Science**, *School of Mathematical Sciences*, University of Science and Technology of China, Hefei, Anhui, China.  
Advisor: Professor Xiande Zhang
- 09/2012–06/2016 **Bachelor of Science**, *School of Mathematical Sciences*, Tongji University, Shanghai, China.

### Honors and Awards

- 2025 Xiaomi Young Scholar
- 2021 First-class Scholarship for doctoral students
- 2020 Second-class Scholarship for doctoral students
- 2019 First-class Scholarship for doctoral students
- 2015 China National Scholarship for undergraduate students
- 2015 First-class Scholarship for undergraduate students
- 2015 Third Prize, National English Competition for College Students (NECCS) (Class C)
- 2014 Third Prize, the sixth Shanghai Undergraduate Mathematics Competition (Mathematics Major Group)

### Research Interests

Applications of combinatorics and algebra in coding theory, coding for DNA-based data storage

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## Grants

2026.01– National Natural Science Foundation of China (Grant No. 12501466)  
2028.12

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## Preprints

1. **Zuo Ye** and Gennian Ge, "Deletion-Correcting Codes for the  $\ell$ -Symbol Read Channel", *submitted*, <https://arxiv.org/abs/2606.26434>.
2. **Zuo Ye**, Yuling Li, Zhaojun Lan and Gennian Ge, "Bounds and Constructions of Codes for Ordered Composite DNA Sequences", *submitted*, <https://arxiv.org/abs/2602.16406>.
3. **Zuo Ye** and Gennian Ge, "On the Maximum Size of Codes under the Damerau-Levenshtein Metric", *in preparation*, <https://arxiv.org/abs/2507.04806>.

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## Publications

1. **Zuo Ye**, Yubo Sun, and Gennian Ge, "Correcting Bursty/Localized Deletions: A New Error-Position-Estimation Code", *IEEE Transactions on Information Theory*, vol. 72, no. 3, pp. 1667–1682, 2026, doi: 10.1109/TIT.2026.3655098.
2. **Zuo Ye**, Yubo Sun, Wenjun Yu, Gennian Ge and Ohad Elishco, "Codes Correcting Two Bursts of Exactly  $b$  Deletions", *IEEE Transactions on Information Theory*, vol. 72, no. 4, pp. 1–1, 2026, doi: 10.1109/TIT.2025.3607876.
3. **Zuo Ye**, Omer Sabary, Ryan Gabrys, Eitan Yaakobi and Ohad Elishco, "More on Codes for Combinatorial Composite DNA", *Designs, Codes and Cryptography*, vol. 93, no. 5, pp. 3437–3462, 2025, doi: 10.1007/s10623-025-01634-8.
4. Wenjun Yu, **Zuo Ye** and Moshe Schwartz, "On the Asymptotic Rate of Optimal Codes that Correct Tandem Duplications for Nanopore Sequencing", *IEEE Transactions on Information Theory*, vol. 71, no. 5, pp. 3569–3581, 2025, doi: 10.1109/TIT.2025.3544875.
5. **Zuo Ye**, Wenjun Yu and Ohad Elishco, "Codes Over Absorption Channels", *IEEE Transactions on Information Theory*, vol. 70, no. 6, pp. 3981–4001, 2024, doi: 10.1109/TIT.2023.3346882.
6. **Zuo Ye** and Ohad Elishco, "Reconstruction of a Single String from a Part of its Composition Multiset", *IEEE Transactions on Information Theory*, vol. 70, no. 6, pp. 3922–3940, 2024, doi: 10.1109/TIT.2023.3315784.
7. **Zuo Ye**, Xin Liu, Xiande Zhang, and Gennian Ge, "Reconstruction of Sequences Distorted by Two Insertions", *IEEE Transactions on Information Theory*, vol. 69, no. 8, pp. 4977–4992, 2023, doi: 10.1109/TIT.2023.3260872.
8. **Zuo Ye**, Tao Zhang, Xiande Zhang and Gennian Ge, "Some New Results on Splitter Sets," *IEEE Transactions on Information Theory*, vol. 66, no. 5, pp. 2765–2776, May 2020, doi: 10.1109/TIT.2019.2952370.

9. Yu Ning, **Zuo Ye**, Gennian Ge, Fuyou Miao, Yan Xiong, and Xiande Zhang, "New Results on Self-Dual Generalized Reed-Solomon Codes", *IEEE Transactions on Information Theory*, vol. 67, no. 11, pp. 7240–7252, Nov. 2021, doi: 10.1109/TIT.2021.3096934.
10. Fei Shi, **Zuo Ye**, Lin Chen, and Xiande Zhang "Strong quantum nonlocality in any N-partite system", *Physical Review A*, vol. 105 no. 2, Feb. 2022, doi: 10.1103/PhysRevA.105.022209

## Talks

1. "Constructions of Codes Correcting Burst-Deletions and Localized Deletions", [The 12th Korea-Sino/Sino-Korea International Conference on Coding Theory and Related Topics](#), Kangwon National University in Chuncheon, Korea, July 19–23, 2026, **an invited online talk, 40 minutes**
2. "Correcting Deletions for Ordered Composite DNA Sequences", Workshop on Combinatorics and Coding Theory, Kunming, China, July 5–11, 2026
3. "Codes Correcting Two Bursts of Exactly  $b$  Deletions", [The Ninth Symposium on Coding Theory, Cryptography and Combinatorics](#), Qingdao, China, May 8–12, 2025.
4. "Polymer-Based Storage and Reconstruction of Strings from Their Prefix-Suffix Compositions", Youth Forum on Extremal Combinatorics and Information Related Problems, Soochow University, China, October 22, 2022, **an invited online talk, 50 minutes**
5. "Some New Results on Splitter Sets", [The 10th International Symposium on Finite Fields and Their Applications](#), Luoyang, China, May 20–24, 2021.

## Teaching Experience

1. *Combinatorics*, Teaching Assistant, University of Science and Technology of China, 2017 Fall.
2. *Algebraic Number Theory*, Co-instructor, Capital Normal University, 2021 Fall.
3. *Linear Algebra*, Teaching Assistant, Xidian University, 2025 Fall.
4. *Mathematical Statistics*, Xidian University, 2026 Fall.
5. *Mathematics in Information*, Xidian University, 2026 Fall.

## Journal/Conference paper Referee

1. IEEE Transactions on Information Theory
2. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications
3. Designs, Codes and Cryptography
4. IEEE Journal on Selected Areas in Information Theory

5. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences
6. IEEE International Symposium on Information Theory (ISIT): 2024, 2025
7. 2024 IEEE Information Theory Workshop (ITW)