

## Education

2023 – now **International Curriculum Center (ICC), The High School Affiliated to Renmin University of China**, Beijing, China  
**High School Student**

## Publications

- 4 **Runbo Li.** On the largest prime factor of integers in short interval. *Cambridge Journal for Junior Scientists*. Online First: <https://doi.org/10.4310/CJJS.260205233711>.
- 3 **Runbo Li.** A remark on the distribution of  $\sqrt{p}$  modulo one involving primes of special type. *Hiroshima Mathematical Journal*. (to appear).
- 2 **Runbo Li.** On Chen's theorem, Goldbach's conjecture and almost prime twins II. *Mathematical Reports*. 28(1–2), 2026.
- 1 **Runbo Li.** A remark on the distribution of  $\sqrt{p}$  modulo one involving primes of special type II. *European Journal of Mathematics*. 11:85, 2025. <https://doi.org/10.1007/s40879-025-00877-y>.

## Preprints

- 33 **Runbo Li.** Primes in arithmetic progressions to large moduli and refinements of Harman's sieve. *arXiv*. [arXiv:2602.20917v2](https://arxiv.org/abs/2602.20917v2).
- 32 **Runbo Li.** On the largest prime factor of integers in short intervals III. *arXiv*. [arXiv:2601.00910v1](https://arxiv.org/abs/2601.00910v1).
- 31 **Runbo Li.** Sums of two squares of primes in short intervals. *Cambridge Open Engage*. [10.33774/coe-2025-15m3h](https://openengage.cambridge.org/doi/10.33774/coe-2025-15m3h).
- 30 **Runbo Li.** Bombieri–Vinogradov Theorem in shorter intervals. *Preprints*. [preprints202511.0089.v1](https://arxiv.org/abs/202511.0089.v1).
- 29 **Runbo Li.** Primes in almost all short intervals II. *Cambridge Open Engage*. [10.33774/coe-2025-jrnjl](https://openengage.cambridge.org/doi/10.33774/coe-2025-jrnjl).
- 28 **Runbo Li.** On Chen's theorem, Goldbach's conjecture and almost prime twins III. *Cambridge Open Engage*. [10.33774/coe-2025-5kl50](https://openengage.cambridge.org/doi/10.33774/coe-2025-5kl50).

- 27 **Runbo Li.** An average Brun–Titchmarsh theorem and shifted primes with a large prime factor. *arXiv.* [\*arXiv:2508.18285v3\*](#).
- 26 **Runbo Li.** On the weighted AM-GM inequality and refined inequalities between arithmetic functions. *Preprints.* [\*preprints202511.0246.v1\*](#).
- 25 **Runbo Li.** On the exceptional set in the  $abc$  conjecture. *arXiv.* [\*arXiv:2507.02885v1\*](#).
- 24 **Runbo Li.** On the largest prime factor of integers in short intervals II. *Cambridge Open Engage.* [\*10.33774/coe-2025-xnbjq-v2\*](#).
- 23 **Runbo Li.** On Chen's theorem, Goldbach's conjecture and almost prime twins II. *arXiv.* [\*arXiv:2405.05727v4\*](#).
- 22 **Runbo Li.** On the largest prime factor of quadratic polynomials. *arXiv.* [\*arXiv:2406.07575v2\*](#).
- 21 **Runbo Li.** A remark on the distribution of  $\sqrt{p}$  modulo one involving primes of special type II. *arXiv.* [\*arXiv:2401.01351v3\*](#).
- 20 **Runbo Li.** Largest square divisors of shifted primes. *arXiv.* [\*arXiv:2505.23779v2\*](#).
- 19 **Runbo Li.** On the generalized Dirichlet divisor problem. *Preprints.* [\*preprints202505.1432.v3\*](#).
- 18 **Runbo Li.** On almost primes in Piatetski–Shapiro sequences. *arXiv.* [\*arXiv:2505.09634v1\*](#).
- 17 **Runbo Li.** Primes in arithmetic progressions to smooth moduli: A minorant version. *arXiv.* [\*arXiv:2505.09629v3\*](#).
- 16 **Runbo Li.** On prime-producing sieves and distribution of  $\alpha p - \beta \bmod 1$ . *arXiv.* [\*arXiv:2504.13195v3\*](#).
- 15 **Runbo Li.** A note on variants of Buchstab's identity. *arXiv.* [\*arXiv:2504.07974v1\*](#).
- 14 **Runbo Li.** The number of primes in short intervals and numerical calculations for Harman's sieve. *arXiv.* [\*arXiv:2308.04458v8\*](#).
- 13 **Runbo Li.** On the Piatetski–Shapiro prime number theorem II. *Preprints.* [\*preprints202504.1165.v2\*](#).
- 12 **Runbo Li.** On the Piatetski–Shapiro prime number theorem. *Preprints.* [\*preprints202504.1190.v1\*](#).

- 11 **Runbo Li.** On the largest prime factor of integers in short interval. *Preprints.* [preprints202504.1212.v2](#).
- 10 **Runbo Li.** Primes in almost all short intervals. *arXiv.* [arXiv:2407.05651v6](#).
- 9 **Runbo Li.** On the primitive divisors of quadratic polynomials. *arXiv.* [arXiv:2406.07575v1](#).
- 8 **Runbo Li.** On Chen's theorem, Goldbach's conjecture and almost prime twins. *arXiv.* [arXiv:2405.05727v3](#).
- 7 **Runbo Li.** On a conjecture involving twin practical numbers. *Preprints.* [preprints202504.1211.v2](#).
- 6 **Runbo Li.** A remark on large even integer of the form  $p + P_3$ . *arXiv.* [arXiv:2403.09691v1](#).
- 5 **Runbo Li.** Hybrid estimation of exponential sums, exceptional characters and primes in short intervals. *arXiv.* [arXiv:2401.11139v3](#).
- 4 **Runbo Li.** Remarks on additive representations of natural numbers. *arXiv.* [arXiv:2309.03218v7](#).
- 3 **Runbo Li.** A remark on the distribution of  $\sqrt{p}$  modulo one involving primes of special type. *arXiv.* [arXiv:2401.01351v1](#).
- 2 **Runbo Li.** On the upper and lower bound orders of almost prime triples. *arXiv.* [arXiv:2401.01348v1](#).
- 1 **Runbo Li.** On some problems of primes with the floor function. *arXiv.* [arXiv:2308.16301v1](#).

## Manuscripts

- 1 **Runbo Li.** Primes in almost all short intervals III. *preprint.*

## Talks

- 5 Primes in short intervals. *Nankai University Additive Number Theory Seminar.* Online. 4 December 2025.
- 4 On Bertrand's Postulate. *Tianjin Nankai High School: Student Research Experience Sharing and Shiing-Shen Chern Class Research Group Launch Meeting.* Online. 21 November 2025.

- 3 Primes in short intervals. *Online Meeting Invited Speaker*. Online. 21 July 2025.
- 2 On the Goldbach's conjecture. *2025 'Haidian  $\pi$  Mathematics Festival' Closing Ceremony Research Presentation*. The High School Affiliated to Beijing Institute of Technology. 4 July 2025.
- 1 On Chen's theorem, Goldbach's conjecture and applications of sieve methods. *S.-T. Yau High School Science Award (Mathematics) Global Final Research Report*. Tsinghua University. 7 December 2024.