

Rui Xiong

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Personal Information

- **First Name** *Rui*
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Degrees

- **B.Sc.** 2019, Shandong University, China
Thesis Title: 关于群行列式 (*On the theory of group determinants*)
Supervisor: Shoumin Liu
- **M.Sc.** 2021, Saint Petersburg State University, Russia
Thesis Title: *Comodule Structure of Chow Rings of Flag Varieties*
Supervisor: Victor Petrov

Talks

- **2021 Oct** Spectral Sequence, My Homological Saw at Shandong University
- **2022 May** Hook Formulae and Schubert Calculus at Sichuang University
- **2023 Jan** Murnaghan–Nakayama rules and hook formulas (poster session) at the University of Waterloo, 2023 CAAC
- **2023 Feb** Pieri Type Rules for Chern Classes of Schubert Cells at the University of British Columbia, UBC Discrete Math seminaar
- **2023 Apr** Chern–Schwartz–MacPherson Classes over Flag Varieties: Pieri Rules, Conjectures, and More at Schubert seminar [part 1] [part 2]
- **2023 Jun** Automorphisms of the Quantum Cohomology of the Springer Resolution and Applications at University of Ottawa, CMS

Publications

- [1] 集合论、拓扑与代数初步 (*An introduction to sets, topology and algebra*) Tsinghua University Press.
ISBN: 9787302541646 (with Shoumin Liu)

Preprints

- [2] *Equivariant log-concavity and equivariant Kähler packages.*
(with Tao Gui) [arXiv:2205.05420] [math.CO](#) [math.AG](#)
- [3] *Pieri and Murnaghan–Nakayama type Rules for Chern classes of Schubert Cells.* (submitted)
(with Neil J.Y. Fan and Peter L. Guo) [arXiv:2211.06802] [math.CO](#) [math.AG](#)

- [4] *Structure algebras, Hopf algebroids and oriented cohomology of a group.* (submitted)
(with Martina Lanini and Kirill Zainoulline) [[arXiv:2303.02409](#)] [math.AG](#) [math.RT](#) [math.CO](#)
- [5] *Automorphisms of the Quantum Cohomology of the Springer Resolution and Applications.* (submitted)
(with Changzheng Li and Changjian Su) [[arXiv:2304.07173](#)] [math.AG](#) [math.RT](#) [math.CO](#)
- [6] *Bumpless Pipe Dreams Meet Puzzles.* (submitted)
(with Neil J.Y. Fan and Peter L. Guo) [[arXiv:2309.00467](#)] [math.CO](#) [math.AG](#)

L^AT_EX

- [7] The L^AT_EX package TooYoung. (Github: CubicBear/TooYoung)

Research Areas

Algebraic Combinatorics. Enumerative Geometry.