


# Rui Xiong

熊锐; Xióng Ruì. 

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`cubicbear.github.io`

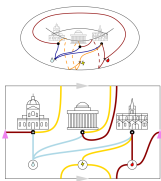
## Personal Information

- **First Name** RUI
- **Last Name** XIONG
- **E-mail** rxion043@uOttawa.ca
- **Advisor** Kirill Zainoulline

## Education

- **B.Sc.** 2015 – 2019, SHANDONG UNIVERSITY, CHINA.  
关于群行列式理论 (*On the theory of group determinants*)  
Advisor: Shoumin Liu
- **M.Sc.** 2019 – 2021, SAINT PETERSBURG STATE UNIVERSITY, RUSSIA.  
*Comodule Structure of Chow Rings of Flag Varieties*  
Advisor: Victor Petrov
- **PhD student** 2022 – 2026, UNIVERSITY OF OTTAWA, CANADA.  
*Hecke type algebras, Schubert calculus and its Applications to algebraic cycles*  
Advisor: Kirill Zainoulline

## Preprints and Publications

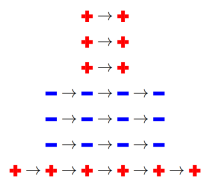


TSINGHUA UNIVERSITY PRESS, ISBN: 9787302541646 (2019).

**集合论、拓扑与代数初步**

(An introduction to set theory, topology and algebra)

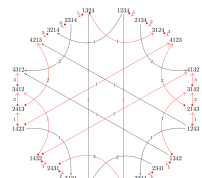
Shoumin Liu and Rui Xiong



JOURNAL OF ALGEBRA, Volume 657, November 2024, 379-401 [[arXiv:2205.05420](#)]

**Equivariant log-concavity and equivariant Kähler packages**

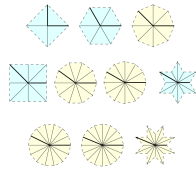
Tao Gui and Rui Xiong



[[arXiv:2211.06802](#)]

**Pieri and Murnaghan–Nakayama type Rules for Chern classes of Schubert Cells**

Neil J.Y. Fan, Peter L. Guo and Rui Xiong



[arXiv:2303.02409]

## Structure algebras, Hopf algebroids and oriented cohomology of a group

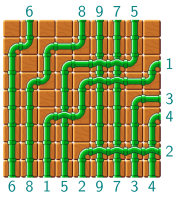
Martina Lanini, Rui Xiong and Kirill Zainoulline

$$\begin{array}{l} \begin{array}{cccc} \begin{array}{c} 0 \\ \chi_1 \chi_2 \chi_3 \end{array} & \begin{array}{c} 1 \\ \chi_1 \chi_2 \chi_3 \end{array} & \begin{array}{c} 2 \\ \chi_1 \chi_2 \chi_3 \end{array} & \begin{array}{c} 3 \\ \chi_1 \chi_2 \chi_3 \end{array} \\ \begin{array}{c} \frac{h^2 \chi_1 \chi_2 \chi_3}{(n-1)!} & \frac{h^2 \chi_1 \chi_2 \chi_3}{(n-1)!} & \frac{h^2 \chi_1 \chi_2 \chi_3}{(n-1)!} & \frac{h^2 \chi_1 \chi_2 \chi_3}{(n-1)!} \end{array} \\ \chi_1 \chi_2 \chi_3 & \chi_1 \chi_2 \chi_3 & \chi_1 \chi_2 \chi_3 & \chi_1 \chi_2 \chi_3 \\ \begin{array}{c} 0 \\ \chi_1 \chi_2 \chi_4 \end{array} & \begin{array}{c} 1 \\ \chi_1 \chi_2 \chi_4 \end{array} & \begin{array}{c} 2 \\ \chi_1 \chi_2 \chi_4 \end{array} & \begin{array}{c} 3 \\ \chi_1 \chi_2 \chi_4 \end{array} \\ \begin{array}{c} \frac{h^2 \chi_1 \chi_2 \chi_4}{(n-1)!} & \frac{h^2 \chi_1 \chi_2 \chi_4}{(n-1)!} & \frac{h^2 \chi_1 \chi_2 \chi_4}{(n-1)!} & \frac{h^2 \chi_1 \chi_2 \chi_4}{(n-1)!} \end{array} \\ \chi_1 \chi_2 \chi_4 & \chi_1 \chi_2 \chi_4 & \chi_1 \chi_2 \chi_4 & \chi_1 \chi_2 \chi_4 \\ \begin{array}{c} 0 \\ \chi_1 \chi_3 \chi_4 \end{array} & \begin{array}{c} 1 \\ \chi_1 \chi_3 \chi_4 \end{array} & \begin{array}{c} 2 \\ \chi_1 \chi_3 \chi_4 \end{array} & \begin{array}{c} 3 \\ \chi_1 \chi_3 \chi_4 \end{array} \\ \begin{array}{c} \frac{h^2 \chi_1 \chi_3 \chi_4}{(n-1)!} & \frac{h^2 \chi_1 \chi_3 \chi_4}{(n-1)!} & \frac{h^2 \chi_1 \chi_3 \chi_4}{(n-1)!} & \frac{h^2 \chi_1 \chi_3 \chi_4}{(n-1)!} \end{array} \\ \chi_1 \chi_3 \chi_4 & \chi_1 \chi_3 \chi_4 & \chi_1 \chi_3 \chi_4 & \chi_1 \chi_3 \chi_4 \\ \begin{array}{c} 0 \\ \chi_2 \chi_3 \chi_4 \end{array} & \begin{array}{c} 1 \\ \chi_2 \chi_3 \chi_4 \end{array} & \begin{array}{c} 2 \\ \chi_2 \chi_3 \chi_4 \end{array} & \begin{array}{c} 3 \\ \chi_2 \chi_3 \chi_4 \end{array} \\ \begin{array}{c} \frac{h^2 \chi_2 \chi_3 \chi_4}{(n-1)!} & \frac{h^2 \chi_2 \chi_3 \chi_4}{(n-1)!} & \frac{h^2 \chi_2 \chi_3 \chi_4}{(n-1)!} & \frac{h^2 \chi_2 \chi_3 \chi_4}{(n-1)!} \end{array} \\ \chi_2 \chi_3 \chi_4 & \chi_2 \chi_3 \chi_4 & \chi_2 \chi_3 \chi_4 & \chi_2 \chi_3 \chi_4 \end{array}$$

ADVANCES IN MATHEMATICS, Volume 442, April 2024, 109577. [arXiv:2304.07173]

## Automorphisms of the Quantum Cohomology of the Springer Resolution and Applications

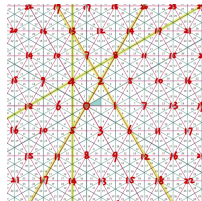
Changzheng Li, Changjian Su and Rui Xiong



[arXiv:2309.00467]

## Bumpless pipe dreams meet puzzles

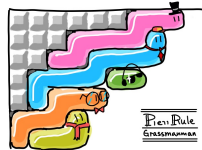
Neil J.Y. Fan, Peter L. Guo and Rui Xiong



[arXiv:2312.03965]

## On the Peterson subalgebra and its dual

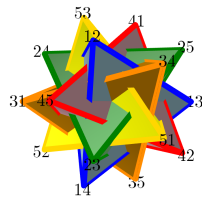
Rui Xiong, Changlong Zhong and Kirill Zainoulline



[arXiv:2402.04500]

## A Pieri type formula for motivic Chern classes of Schubert cells in Grassmannians

Neil J.Y. Fan, Peter L. Guo, Changjian Su and Rui Xiong



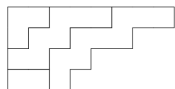
[arXiv:2404.07314]

## Motivic Lefschetz theorem for twisted Milnor hypersurfaces

Rui Xiong and Kirill Zainoulline

**L<sup>A</sup>T<sub>E</sub>X**

[Github:CubicBear/TooYoung]



## The L<sup>A</sup>T<sub>E</sub>X package TooYoung

