

WEIHONG XU

weihong@vt.edu \diamond <https://weihong-xu.github.io/>

RESEARCH INTERESTS

Algebraic geometry and combinatorics.

EMPLOYMENT

Postdoctoral Associate, Virginia Tech, Mentor: Leonardo Mihalcea Oct 2022 – Aug 2024

EDUCATION

Ph.D. Mathematics, Rutgers University, Advisor: Anders Buch Sept 2017 – Oct 2022

M.S. Mathematics, Courant Institute Sept 2014 – May 2016

B.S. Theoretical and Applied Mechanics, Peking University Sept 2010 – July 2014

PUBLICATIONS AND PREPRINTS

1. Quantum K Whitney relations for incidence varieties (with W. Gu, L. Mihalcea, E. Sharpe, and H. Zhang), *in preparation*.
2. Quantum K theory rings of partial flag manifolds (with W. Gu, L. Mihalcea, E. Sharpe, and H. Zhang), arxiv: 2306.11094.
3. The isomorphism problem for cominuscule Schubert varieties (with E. Richmond and M. T̄arigradschi), *submitted*, arxiv: 2302.11642.
4. The isomorphism problem for Grassmannian Schubert varieties (with M. T̄arigradschi), *Journal of Algebra* (2023), arXiv: 2205.12814.
5. Quantum K -theory of Incidence Varieties, *submitted*, arXiv: 2112.13036.
6. On an equivalence of divisors on $\overline{M}_{0,n}$ from Gromov–Witten theory and conformal blocks (with L. Chen, A. Gibney, L. Heller, E. Kalashnikov, and H. Larson), *Transformation Groups* (2022), arXiv: 2107.00174.

CONFERENCE AND SEMINAR TALKS

AMS Special Session on Combinatorial Insights into Algebraic Geometry, JMM San Francisco Jan 2024

AMS Special Session on Representation theory and flag varieties, the University at Buffalo (SUNY) Sept 2023

Algebra/Topology Seminar, the University at Albany (SUNY), Albany Sept 2023

Virginia Tech Algebra Seminar Sept 2023

International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC) (*poster*) July 2023

Schubert conference, UIUC June 2023

Equivariant Schubert calculus and beyond, the University of Ottawa June 2023

Women in Algebra and Combinatorics, the University at Albany (SUNY) Apr 2023

Algebra, Geometry and Combinatorics Day (AlGeCom), Loyola University (*poster*) Apr 2023

University of British Columbia Discrete Math Seminar Mar 2023

Canadian Western Algebraic Geometry Symposium, Simon Fraser University (*poster*) Mar 2023

Geometric Representation Theory and Quantum Topology workshop, Paris Cité University Dec 2022

University of British Columbia Algebraic Geometry Seminar Nov 2022

MIT-Harvard-MSR Combinatorics Seminar, MIT	Oct 2022
AMS Special Session on Combinatorial Algebraic Geometry	Oct 2022
Virginia Tech Algebra Seminar	Sept 2022
Algebraic Geometry Northeastern Series, Rutgers University (<i>poster</i>)	May 2022
Schubert Seminar	Mar 2022
Versailles Saint-Quentin-en-Yvelines University Seminars AG	Feb 2022
Rutgers University Algebra Seminar	Jan 2022
ICERM Geometry and Combinatorics from Root Systems workshop	Mar 2021
ICERM Sage/Oscar Days for Combinatorial Algebraic Geometry workshop	Feb 2021
American Graduate Student Algebraic Geometry Seminar (AGSAGS)	Dec 2020

TEACHING

Virginia Tech, Instructor

Modern Algebra	Fall 2023
Introduction to Linear Algebra	Spring 2023

ICERM, Teaching Assistant

Combinatorial Algebraic Geometry Introductory Workshop (<i>online</i>)	Feb 2021
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Rutgers University, Instructor

Introductory Linear Algebra (<i>online</i>)	Summer 2020
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Rutgers University, Teaching Assistant

Special Pre-enrollment Program for New Graduate Students (<i>online</i>)	Aug 2020
Differential Equations for Engineering and Physics	Spring 2020
Calculus I Math/Physics (Honors)	Fall 2019
Graduate Algebra I	Fall 2018

Johns Hopkins Center for Talented Youth, Teaching Assistant

Inductive and Deductive Reasoning (<i>for 5th and 6th graders</i>)	Summer 2017
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New York University, Recitation Leader

Great Ideas in Math	Fall 2015
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SERVICE AND MENTORING

Journals refereed

Advances in Mathematics
Journal of the London Mathematical Society
Journal of Pure and Applied Algebra

Co-organizer, Algebra Seminar, Virginia Tech	Fall 2023
Co-instructor, Blacksburg Math Circle	Feb 2023
Math Department Liaison, Rutgers Overseas Semester Program	Aug 2020 – Dec 2021
Co-organizer, Graduate Student and Postdoc Seminar,	

ICERM Combinatorial Algebraic Geometry Semester Program	Spring 2021
Discussion Leader, International Teaching Assistant Orientation, Rutgers University	Aug 2019
Graduate Mentor, undergraduate research on Schubert calculus (REU), Rutgers University	Summer 2018

HONORS AND AWARDS

Rutgers University School of Arts and Sciences Graduate Fellowship	Spring 2021
Rutgers University Janice Pattwell Annual Mathematics Fellowship	2020
Rutgers University TA/GA Professional Development Fund	2018

OTHER TALKS

Rutgers University

Graduate Algebra and Representation Theory Seminar (<i>2 talks</i>)	2018, 2021
Algebraic Geometry Learning Seminar	2019
Research Glimpse for Incoming Graduate Students	2018
Graduate Combinatorics Seminar	2018
Undergraduate Math Seminar	2018

Temple University

Annual Graduate Student Conference in Algebra, Geometry, and Topology	2018
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Courant Institute

CSplash (<i>annual lecture series for high school students</i>)	2016
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