

XIAOTONG “DAWSON” YANG

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EDUCATION

- 2023–present **University of Illinois Chicago**, PhD (Advisor: Prof. Mimi Dai), Mathematics
- 2019–2023 **University of Notre Dame**, B.S. (Advisor: Prof. Liviu I. Nicolaescu), Mathematics, Minors in Actuarial Science and Musical Theatre

QUALIFICATIONS

- 2025 **Licentiate of the Royal Schools of Music (LRSM)**, ABRSM, Music Teaching

RESEARCH INTERESTS

Partial Differential Equations, Fluid Dynamics.

PREPRINTS AND PAPERS

- 2026 **Instantaneous Blowup of Incompressible Flow with Passive Tracer**
[arXiv:2604.11769](#) (with M. Dai)
- 2026 **Half Strong Ill-Posedness of $2\frac{1}{2}$ D Electron Magnetohydrodynamics with Fractional Resistivity**
[arXiv:2603.20477](#) (with H. Zhu)
- 2023 **Asymptotic Fluctuations of the Standard Random Walk**
[doi:10.7274/cj82k646m61](#) (Undergraduate thesis advised by Prof. Liviu I. Nicolaescu)

INVITED RESEARCH TALKS

- July 2026 **2026 SIAM Annual Meeting**, New Perspectives in the Mathematical Theory of Fluid Mechanics
Instantaneous Blowup of Incompressible Flow with Passive Tracer

TEACHING

- 2023–present **Teaching Assistant, University of Illinois Chicago**
Led undergraduate discussion sections and supported course instruction.
- Summer 2026 *Math 218 Applied Linear Algebra*
- Spring 2026 *Math 294 Special Topics in Mathematics / Math 330 Abstract Algebra I*
- Summer & Fall 2025 *Math 210 Calculus III*
- Spring 2025 *Math 121 Precalculus Mathematics*
- Fall 2024 *Math 181 Calculus II*
- Summer 2024 *Math 165 Calculus for Business*
- Spring 2024 *Math 125 Elementary Linear Algebra for Business*
- Fall 2023 *Math 180 Calculus I*
- 2025–present **Mentor, Directed Reading Program, University of Illinois Chicago**
Mentored undergraduates in advanced mathematics reading projects and independent mathematical exposition.

INDUSTRY EXPERIENCE

2021	Society of Actuaries (SOA), Exams P and FM
June–July 2022	Actuarial Intern, RenaissanceRe Worked with actuarial pricing, exposure management, underwriting, and claims; researched and presented on social inflation.
May–July 2021	Consulting Intern, Publicis Sports & Entertainment Collected and analyzed monthly performance data for KFC Gaming and evaluated customer engagement and social media impressions.
2019–2022	Member, Notre Dame Student International Business Council (SIBC) <i>Project Leader, Uber Freight project:</i> led a team in lane health analysis and application development. <i>Project Leader, Cardinal Health project:</i> led predictive analysis and machine learning work using Tableau and Alteryx. <i>Member, Salesforce project:</i> supported data application and processing. <i>Member, Deloitte / Brey's project:</i> developed technology solutions and performance indicators for customer behavior. <i>Member, Bain & Company project:</i> analyzed Disney+ and the impact of COVID-19 on the subscription video-on-demand industry. <i>Member, BDO project:</i> completed a case study on machine learning and blockchain technology for accounting firms.

SERVICE AND OUTREACH

2020–2022	Academic Division Representative, Club Coordination Council, University of Notre Dame Oversaw club registration and activities, reviewed funding applications, held consulting office hours.
2019–2023	Volunteer, South Bend Center for the Homeless
2016–2019	Piano Tutor, Shanghai Children's School

SKILLS

Languages: Mandarin Chinese (native); English (fluent)

Technical: LaTeX, Matlab, Julia, Python, SQL, Tableau, Alteryx, Microsoft Word, PowerPoint, and Excel