

# Randall R. Van Why Jr.

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## Education

### Northwestern University

*PhD. Mathematics*

Evanston, IL

2017 – 2024

### Princeton University

*Trailing PhD. Student and Fellow*

Princeton, NJ

2021 – 2023

### University of Chicago

*MSc. in Physical Sciences*

Chicago, IL

2016 – 2017

### New Mexico Institute of Mining and Technology (NMT)

*BSc. in Mathematics and Computer Science; Summa cum laude*

Socorro, NM

2012 – 2016

Interests: Symplectic and Contact Geometry, Low-dimensional Topology

## Affiliation

### Georgia Institute of Technology

*Visiting Assistant Professor*

Atlanta, GA

2024 – Present

### Institute for Advanced Study

*Visiting Graduate Student*

Princeton, NJ

2019

## Conferences and Seminars

## Organizer

### GT-UGA Joint Geometry Topology Seminar

*Georgia Institute of Technology*

Atlanta, GA

October 2024 – Present

### AMS Eastern Sectional at Clemson University

*Special Session on Invariants in Geometric Topology: Low Dimensions and Beyond*

Clemson, SC

March 2025

### Tech Topology Conference

*Georgia Institute of Technology*

Atlanta, GA

December 2024

## Participant

### Midwest Panorama of Geometry and Topology

*University of Iowa*

Iowa City, IA

June 2025

### 2025 Georgia Topology Conference

*University of Georgia*

Athens, GA

May 2025

### Tech Topology Conference

*Georgia Institute of Technology*

Atlanta, GA

December 2024

### Workshop in Geometric Topology

*Calvin University*

Grand Rapids, MI

June 2024

### Graduate Student Topology/Geometry Conference

*Michigan State University*

East Lansing, MI

April 2024

### Tech Topology Conference

*Georgia Institute of Technology*

Atlanta, GA

December 2023

### Trisectors Workshop 2023

*University of California Davis*

Davis, CA

June 2023

<b>2023 Georgia Topology Conference</b> <i>University of Georgia</i>	Athens, GA <i>May 2023</i>
<b>Midwest Geometry Conference 2023</b> <i>Kansas State University</i>	Manhattan, KS <i>March 2023</i>
<b>SYNC Early Career Workshop</b> <i>University of California Davis</i>	Davis, CA <i>August 2022</i>
<b>Deformations of Geometric Structures in Current Mathematics</b> <i>Columbia University</i>	New York City, NY <i>May 2022</i>
<b>Graduate Student Topology/Geometry Conference</b> <i>Indiana University</i>	Online <i>April 2021</i>
<b>Eighth Pacific Rim Conference in Mathematics</b> <i>University of California Berkeley</i>	Online <i>August 2020</i>
<b>Southern California Geometric Analysis Summer School</b> <i>University of California Irvine</i>	Irvine, CA <i>February 2020</i>
<b>Summer Northwestern Analysis Program (SNAP)</b> <i>Northwestern University</i>	Evanston, IL <i>August 2019</i>
<b>Graduate Summer School on the Homological Algebra of Mirror Symmetry</b> <i>Fields Institute</i>	Toronto, Canada <i>July 2019</i>
<b>Current Trends in Symplectic Topology</b> <i>Centre de Recherches Mathématiques</i>	Montreal, Canada <i>July 2019</i>
<b>Kylerec 2019</b> <i>Graduate Workshop</i>	Truckee, CA <i>June 2019</i>
<b>Tsyganfest</b> <i>Northwestern University</i>	Evanston, IL <i>May 2018</i>
<b>UChicago/Northwestern Geometric Analysis Day</b> <i>Northwestern University</i>	Evanston, IL <i>April 2019</i>
<b>Graduate Student Topology and Geometry Conference</b> <i>University of Illinois at Urbana-Champaign</i>	Champaign-Urbana, IL <i>March 2019</i>
<b>Virginia Topology Conference</b> <i>University of Virginia</i>	Charlottesville, VA <i>December 2018</i>
<b>MSRI Summer Graduate School: The h-Principle</b> <i>University of Tokyo</i>	Tokyo, Japan <i>June/July 2018</i>
<b>Graduate Student Topology/Geometry Conference</b> <i>University of Illinois at Chicago</i>	Chicago, IL <i>April 2018</i>
<b>Geometric Analysis Day 2018</b> <i>University of Chicago</i>	Chicago, IL <i>March 2018</i>
<b>Southern California Geometric Analysis Seminar</b> <i>University of California Irvine</i>	Irvine, CA <i>January 2018</i>
<b>2017 Midwest Geometry Conference</b> <i>Kansas State University</i>	Manhattan, KS <i>November 2017</i>
<b>Summer Northwestern Analysis Program (SNAP)</b> <i>Northwestern University</i>	Evanston, IL <i>June-July 2017</i>
<b>Thematic Program on Kähler Geometry</b> <i>University of Notre Dame</i>	Notre Dame, IN <i>June 2017</i>
<b>UChicago Geometric Analysis Learning Seminar</b> <i>University of Chicago</i>	Chicago, IL <i>October 2016</i>
<b>University of Chicago Geometry and Topology Summer School</b> <i>University of Chicago</i>	Chicago, IL <i>August 2016</i>

University of Chicago REU  
*University of Chicago*  
AMS Sectional Meeting  
*University of New Mexico*

Chicago, IL  
*June 2015*  
Albuquerque, NM  
*April 2014*

## Talks

### Conference Talks

<b>Midwest Panorama of Geometry and Topology</b> <i>Symplectic geometry, surface configurations, and non-algebraic manifolds</i>	Iowa City, IA <i>June 2025</i>
<b>41st Workshop in Geometric Topology 2024</b> <i>Symplectic Stories from Algebraic Geometry</i>	Grand Rapids, MI <i>June 2024</i>
<b>Graduate Student Geometry Topology Conference</b> <i>Symplectic and Contact Geometries in Low Dimensions</i>	East Lansing, MI <i>April 2024</i>
<b>Tech Topology Conference</b> <i>Compactifications of Symplectic Manifolds (Cancelled due to illness)</i>	Atlanta, GA <i>December 2023</i>
<b>Trisectors Workshop 2023</b> <i>Divisors and the Trisection of <math>\mathbb{CP}^2</math></i>	Davis, CA <i>June 2023</i>
<b>2023 Georgia Topology Conference</b> <i>The Symplectic Geometry of <math>\mathbb{CP}^2</math></i>	Athens, GA <i>May 2023</i>
<b>Kylerec 2019</b> <i>Liouville and Weinstein Skeleta</i>	Truckee, CA <i>June 2019</i>

### Invited Seminar Talks

<b>The Simons Center for Geometry and Physics Symplectic Seminar</b> <i>Non-Affine Stein Manifolds and Normal Crossing Divisors</i>	Stony Brook, NY <i>October 2025 (Planned)</i>
<b>University of Alabama Geometry-Topology Seminar</b> <i>Stein Manifolds and Normal Crossing Compactifications of PALFs</i>	Tuscaloosa, AL <i>October 2025 (Planned)</i>
<b>Columbia University Geometry Seminar</b> <i>Non-Affine Stein Manifolds and Normal Crossing Divisors</i>	New York City, NY <i>September 2025 (Planned)</i>
<b>University of Georgia Topology Seminar</b> <i>Symplectic NC-Divisors, Compactifications, and Non-Affine Symplectic Manifolds</i>	Athens, GA <i>March 2025</i>
<b>UMASS Amherst Geometry Topology Seminar</b> <i>Symplectic NC-Divisors, Compactifications, and Non-Affine Symplectic Manifolds</i>	Amherst, MA <i>October 2022</i>

### Seminar Talks

<b>GT-Geometry Topology Research Seminar</b> <i>Special Lecture Series on Kähler Geometry (6 lectures)</i>	Atlanta, GA <i>October 2025 (Planned)</i>
<b>Special Seminar on The Yang-Mills Equations over Riemann Surfaces</b> <i>Equivariant Morse Theory</i>	Atlanta, GA <i>January 2025</i>
<b>GT Geometry Literature Seminar</b> <i>The Structure of Rational and Ruled Symplectic 4-Manifolds by D. McDuff</i>	Atlanta, GA <i>November 2024</i>
<b>GT Geometry Literature Seminar</b> <i>Morse theory for Lagrangian Intersections by A. Floer</i>	Atlanta, GA <i>September 2024</i>
<b>Georgia Tech Geometry Topology Seminar</b> <i>Symplectic NC-Divisors, Compactifications, and Non-Affine Symplectic Manifolds</i>	Atlanta, GA <i>August 2024</i>
<b>Northwestern Graduate Student Seminar</b> <i>Toward Compression Progress</i>	Evanston, IL <i>March 2024</i>

<b>Northwestern Geometry and Physics Seminar</b> <i>Three Lectures on Weinstein/Liouville Geometry</i>	Evanston, IL January 2024
<b>Northwestern Geometry and Physics Seminar</b> <i>Normal Crossing Divisors and Non-Affine Manifolds</i>	Evanston, IL November 2023
<b>Northwestern Graduate Student Seminar</b> <i>A tale of Exp and Log</i>	Evanston, IL September 2023
<b>GT GAPS Seminar</b> <i>Normal Crossing Divisor Compactifications of Symplectic Manifolds</i>	Online April 2023
<b>Notre Dame Geometry Group Seminar</b> <i>Linear Plumbings of Disk Bundles over Spheres and Symplectic Divisors with Normal Crossings</i>	South Bend, IN July 2021
<b>Northwestern Geometry Group Seminar</b> <i>Linear Plumbings of Disk Bundles over Spheres and Symplectic Divisors with Normal Crossings</i>	Evanston, IL May 2021
<b>Northwestern Graduate Student Seminar</b> <i>Milnor's Fibration Theorem</i>	Evanston, IL January 2021
<b>Notre Dame Graduate Student Seminar</b> <i>Milnor's Fibration Theorem</i>	South Bend, IN December 2020
<b>Northwestern Geometry Group Seminar</b> <i>Symplectic Divisors and Biran-Giroux Decompositions</i>	Evanston, IL September 2020
<b>UCLA Special Seminar on Flexibility in Symplectic and Contact Geometry</b> <i>Flexibility and Plastikstufe</i>	Los Angeles, CA July 2020
<b>Geometry for All Seminar</b> <i>Symplectic Geometry</i>	Evanston, IL March 2020
<b>Special Symplectic Geometry Seminar</b> <i>Donaldson's Divisor Theorem</i>	Evanston, IL January 2020
<b>Northwestern Graduate Student Seminar</b> <i>4-Manifolds</i>	Evanston, IL March 2019
<b>Special Seminar on Gromov's Compactness Theorem for J-Holomorphic Curves</b> <i>Eliashberg's Method of Filling by J-Holomorphic Curves</i>	Evanston, IL March 2019
<b>Special Seminar on Gromov's Compactness Theorem for J-Holomorphic Curves</b> <i>Gromov's Compactness Theorem</i>	Evanston, IL February 2019
<b>Special Seminar on Gromov's Compactness Theorem for J-Holomorphic Curves</b> <i>Higher derivative bounds</i>	Evanston, IL January 2019
<b>New Mexico Tech Philosophy of Mathematics Seminar</b> <i>Various Topics</i>	Socorro, NM 2015-2017
<b>New Mexico Tech ACM</b> <i>Elliptic Curve Cryptography</i>	Socorro, NM February 2016
<b>New Mexico Tech Topology Seminar</b> <i>The h-Cobordism Theorem</i>	Socorro, NM Fall 2015
<b>New Mexico Tech Colloquium</b> <i>Configuration Spaces, Braid Groups, and Polynomials</i>	Socorro, NM September 2015
<b>UChicago REU</b> <i>Configuration Spaces, Braid Groups, and Polynomials</i>	Chicago, IL August 2015

## Teaching

## Instruction

<b>Georgia Institute of Technology Math 1554</b> <i>Linear Algebra</i>	<i>Instructor</i>
<b>Georgia Institute of Technology Math 1553</b> <i>Introduction to Linear Algebra</i>	<i>Instructor</i>
<b>Georgia Institute of Technology Math 1551</b> <i>Single Variable Calculus</i>	<i>Instructor</i>

## Teaching Assistant/Grading

<b>Northwestern University Math 382</b> <i>Complex Analysis</i>	<i>TA/Grader</i>
<b>Northwestern University Math 344</b> <i>Abstract Linear Algebra</i>	<i>TA/Grader</i>
<b>Northwestern University Math 330</b> <i>Abstract Algebra</i>	<i>TA/Grader</i>
<b>Northwestern University Math 310</b> <i>Probability Theory</i>	<i>TA/Grader</i>
<b>Northwestern University Math 300</b> <i>Foundations of Higher Mathematics</i>	<i>TA/Grader</i>
<b>Northwestern University Math 290</b> <i>Linear Algebra</i>	<i>TA/Grader</i>
<b>Northwestern University Math 285</b> <i>Accelerated Mathematics for MMSS: Linear Algebra</i>	<i>TA/Grader</i>
<b>Northwestern University Math 240</b> <i>Matrix Algebra</i>	<i>TA/Grader</i>
<b>Northwestern University Math 234</b> <i>Multivariable Integral Calculus</i>	<i>TA/Grader</i>
<b>Northwestern University Math 230</b> <i>Multivariable Differential Calculus</i>	<i>Exam Grader</i>
<b>Northwestern University Math 224</b> <i>Single Variable Integral Calculus</i>	<i>Exam Grader</i>

## Mentorship

<b>Northwestern University DRP</b> <i>Graduate Mentor</i>	Evanston, IL 2019,2020
<b>Northwestern University Mathematics Department</b> <i>Graduate Tutor</i>	Evanston, IL 2017-2018
<b>University of Chicago REU</b> <i>Graduate Mentor</i>	Chicago, IL 2016,2017,2018,2019,2020

## Memberships and Sponsors

American Mathematical Society (2014–Present)

Georgia Institute of Technology President’s Postdoctoral Fellow (2024–Present)

Princeton University Fellow (2021–2023)

NSF RTG Support DMS-1502632 (2018–2021)

Northwestern University Fellow (2017–2018)