

Cheyne Glass (Miller)

Associate Professor
St. Joseph's College, NY

cheynejglass.com
cglass@sjcny.edu

Education

PhD, Mathematics CUNY Graduate Center 2016
Thesis Title: *On the Derivative of 2-Holonomy for a Non-Abelian Gerbe*
Advisor: Thomas Tradler, Ph.D.

B.S., Mathematics Iona College 2008
Minor in Computer Science

Positions Held

Associate Professor St. Joseph's College, NY 2021
• Initially held position of Instructor in 2015-2016 academic year, then held the position of Assistant Professor for 2016-2021.

Visiting Scientist Max Planck Institut für Mathematiks, Bonn Summer 2021

Visiting Assistant Professor Iona College 2021

Adjunct Lecturer City University of New York 2008 - 2012
• Taught courses at Baruch College, City College, Brooklyn College, and Hunter College.

Articles

C. Glass, "The derivative of global surface-holonomy for a non-abelian gerbe", *Differential Geometry and its Applications*. 75, (2021). DOI 10.1016/j.difgeo.2021.101737.

C. Glass, M. Miller, T. Tradler, and M. Zeinalian (2021). "The Hodge Chern character of holomorphic connections as a map of simplicial presheaves". arXiv:1905.07674 [math.AT]. [accepted by Algebraic and Geometric Topology; forthcoming]

C. Glass, C. Redden. "Modeling Bundle-Valued Forms on the Path Space with a Curved Iterated Integral". arXiv:2106.15275 [math.AT]. [submitted 2021 to Journal of Homotopy and Related Structures]

C. Glass, L. Viduarre. "Čech Cohomology in the Classroom". [submitted 2021 to College Mathematics Journal]

C. Miller (Glass). "On the Derivative of 2-Holonomy for a Non-Abelian Gerbe". ProQuest LLC, Ann Arbor, MI, 2016. Thesis (Ph.D.)—City University of New York.

Articles in Progress

C. Glass, M. Miller, T. Tradler, and M. Zeinalian. "Smooth and Holomorphic Chern Simons Forms as a Map of Presheaves".

C. Glass, M. Miller, T. Tradler, and M. Zeinalian. "A Chern Character for Infinity Vector Bundles".

C. Glass, M. Miller, T. Tradler, and M. Zeinalian. "A Chern Character for Non-Abelian Gerbes".

C. Glass, C. Redden. "Modeling Bundle-Valued Forms on the Loop Space".

Recent Talks & Panels

"Hypercovers, Sheafification, and Applications" at the Max Planck Institut Für Mathematiks' Oberseminar. (2021)

"The Local Projective Model Structure on Simplicial Presheaves." at the CUNY Graduate Center's Spring 2020 Geometry, Topology, and Physics Seminar. (2020)

"The Algebra of Zigzags" SJC Liberal Arts Colloquium. (2020)

“An explicit description of the totalization of certain cosimplicial simplicial sets in the context of the theory of vector bundles with connection.” at the CUNY Graduate Center’s Spring 2019 K-Theory Seminar. (2019)

“Recovering Chern-Simons forms from the totalization of a map of prestacks.” at the CUNY Graduate Center’s Spring 2019 K-Theory Seminar. (2019)

“Faith in Mathematics” C. Miller, T. Petriano, and R. Schwarz. Panel Discussion. (2019)

“From Linear Algebra to Cech Cohomology in One Undergraduate Semester” presented in the MAA Session on Effective Ways to Teach Linear Algebra at the Joint Mathematics Meetings in San Diego, CA. (2018)

“Equations Flow Down-hill” SJC Liberal Arts Colloquium. (2018)

“God and Infinity” R. Dible, C. Miller, T. Petriano, and R. Schwarz. Panel Discussion. (2018)

“Growing into Topological Data Analysis” presented as the keynote talk for the SJC Undergraduate Research Symposium. (2018)

“2-Groups, Crossed-Modules, and Gluing Squares” at the BMCC Math Colloquium. (2017)

“The Zig-Zag Hochschild Complex and an Iterated Integral” at at AMS Special Sessions: Iterated Integrals, Georgetown U., March 2015, arXiv:1505.03192 (2015)

Grants and Funding

PIC Math Grant Recipient (2021-2022)

Co-PI for MaTECS Grant and developer of mentor program. NSF (1741818). Math and Technology Engagement for Commuter Students. Awarded \$1,000,000.00. (2018-2022)

Visiting Scientist at Max Planck Institute for Mathematics, Bonn. (Summer 2021)

SJC Faculty Summer Research Grant. (2019)

Leadership Roles related to Diversity, Equity, and Inclusion Initiatives

MaTECS Grant Program at St. Joseph's College (2017 - present)

Anti-Racism in Mathematics Peer Reading Group (2020)

SCALE-UP Unified Science Bridge Program at Brooklyn College (2012-2014)

Columba Academy at Iona College (2013)

Selected Student Research

“Quantum Computing”. N. Forman, A. Isiofia, and A. Sutton. Poster abstract accepted for JMM 2022. (2020 - present).

“Minkowski's Theorem” and “Yoneda-ing the p-adics”. H. Cole. (2017-2021).

“Čech Cohomology and Good Covers”. J. Andre and D. Rossano. Undergrad Thesis; Presentation at national Joint Mathematics Meetings; Presented at SJC Symposium; Presented at BMCC's Data Analysis Workshop. (2016-2019)

“Computations of the Weak Global Dimension of a Ring”. A. Knowles and B. Moore. Presented at national Nebraska Conference for Undergraduate Women in Mathematics; Presented at SJC symposium. (2017-2019)

“Computing Čech Cohomology” F. Liang. Student Thesis. (2016)

Service and Engagement

- * Director of Undergraduate Research (2020 - Present, SJC)
- * Living Our Mission episode filmed (2020, SJC)
- * Executive Dean's Search Committee (Fall '19 - Spring '20, SJC)

- * Curriculum Committee (Fall '19 - Present, SJC)
- * Assistant Director of Honors Program (2014, Iona)
- * Academic Development Committee
(Fall '19 - Present, SJC)
- * Math Club Moderator (2016 - Present, SJC)
- * Sustainability Committee (Fall '18 - Present)
- * Undergraduate Research Advisory Committee (Spring '17 - Present)
- * Getting Pi'd in the face by students for charity (multiple semesters)
- * Speakers' Bureau co-coordinator (SJC)

Courses Taught at SJC

- * FYE 100: First Year Experience
- * MAT 105: Fundamentals of Mathematics
in Today's World
- * MAT 106: Excursions in Contemporary Mathematics
- * MAT 111: College Algebra
- * MAT 113: Elementary Functions: Precalculus
- * MAT 151: Fundamentals of Statistics
- * MAT 200: Mathematics for Business and Economics
- * MAT 203: Mathematical Foundations of Computer Science
- * MAT 205: Calculus and Analytic Geometry I
- * MAT 206: Calculus and Analytic Geometry II
- * MAT 208: Advanced Calculus
- * MAT 241: History of Mathematics
- * MAT 307: Real Analysis
- * MAT 354: Modern Algebra
- * MAT 356: Linear Algebra
- * MAT 364: Functions of a Complex Variable
- * MAT 470: Directed Reading: Intro to Homological Algebra
- * MAT 470: Directed Reading: An Intro to Applied Topology
- * MAT 471: Seminar
- * MAT 546: Probability/Stat Inference (graduate)
- * MAT 552: Number Theory (graduate)