Cheyne Glass (Miller)

Assistant Professor
SUNY New Paltz, NY

cheynejglass.com
glassc@newpaltz.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

Assistant Professor — SUNY New Paltz, NY — 2022 - present

Associate Professor — St. Joseph's College, NY — 2015 - 2022

- Initially held position of Instructor in 2015-2016 academic year, then held the position of Assistant Professor for 2016-2022. Awarded tenure.

Visiting Scientist — Max Planck Institüt für Mathematiks, Bonn — Summer 2021

Visiting Assistant Professor — Iona College — 2012 - 2015

Adjunct Lecturer — City University of New York — 2008 - 2012

- Taught courses at Baruch College, City College, Brooklyn College, and Hunter College.

Articles

C. Glass, M. Miller, T. Tradler, and M. Zeinalian. "Chern Character for Infinity Vector Bundles". arXiv:2211.02549v2 (math.AT) [submitted to Algebr. Geom. Tool.]

C. Glass, M. Miller, T. Tradler, and M. Zeinalian. "The Hodge Chern character of holomorphic connections as a map of simplicial presheaves." Algebr. Geom. Topol. 22 (2022), no. 3, 1057–1112.

C. Glass, C. Redden. "Modeling bundle-valued forms on the path space with a curved iterated integral." J. Homotopy Relat. Struct. 17 (2022), no. 3, 309–353.

C. Glass, "The derivative of global surface-holonomy for a non-abelian gerbe." Differential Geom. Appl. 75 (2021), Paper No. 101737, 32 pp.

C. Glass, L. Viduarre. "Čech Cohomology in the Classroom", (2021). [submitted 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 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 Join 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)

BESt 2.0 at Hunter College (2012)

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)

Selected 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 & SUNY New Paltz

- First Year Experience
- Fundamentals of Mathematics in Today's World
- Excursions in Contemporary Mathematics
- College Algebra
- Elementary Functions: Precalculus
- Fundamentals of Statistics
- Mathematics for Business and Economics
- Mathematical Foundations of Computer Science
- Calculus and Analytic Geometry I
- Calculus and Analytic Geometry II
- Advanced Calculus
- History of Mathematics
- Real Analysis
- Modern Algebra
- Linear Algebra
- Functions of a Complex Variable
- Directed Reading: Intro to Homological Algebra
- Directed Reading: An Intro to Applied Topology
- Senior Seminar
- Probability/Stat Inference (graduate)
- Number Theory (graduate)