Nicholas G. Vlamis

Employment

2021 –	**Doctoral Faculty**, *The Graduate Center, City University of New York*, New York, NY
2018 –	**Assistant Professor**, *Queens College, City University of New York*, Flushing, NY
2015–2018	**RTG Postdoctoral Assistant Professor**, *University of Michigan*, Ann Arbor, MI
2009–2010	**High School Math Teacher**, *Mystic Valley Regional Charter School*, Malden, MA Taught Grades 9-12.

Education

2010–2015	**Mathematics, Ph.D 2015, MS 2012**, *Boston College*, Chestnut Hill, MA Advisors: Martin Bridgeman and Ian Biringer
Fall 2008	**Semester Abroad**, *Budapest Semesters in Mathematics*, Budapest, Hungary
2004–2008	**Mathematics and Physics, BS 2008**, *Northeastern University*, Boston, MA

Awards & Grants

2022–2025	NSF DMS–2212922, Principal Investigator *LEAPS-MPS: Topological symmetries of non-compact Riemann surfaces*
2024–2025	PSC-CUNY Award # 67380-00 55, Principal Investigator
2023–2024	PSC-CUNY Award # 66435-00 54, Principal Investigator
2023	Faculty Fellowship Publication Program, City University of New York
2022–2023	PSC-CUNY Award # 65331-00 53, Principal Investigator
2021–2022	PSC-CUNY Award # 64129-00 52, Principal Investigator
2020–2021	PSC-CUNY Award # 63524-00 51, Principal Investigator
2019–2020	PSC-CUNY Award # 62571-00 50, Principal Investigator
2017	Outstanding Postdoctoral Fellow Award Awarded by University of Michigan Postdoctoral Association.
2017–2021	AMS-Simons Travel Grant
2017	Juha Heinonen Award for Excellence in Teaching, Mentoring, and Research Awarded by the University of Michigan Department of Mathematics.
2014	Donald J. White Teaching Excellence Award Awarded by the Boston College Department of Mathematics.

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829* ● ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com*   *1/8*

Papers

Papers available at `http://qc.edu/~nvlamis`

Published or accepted for publication

- Nicholas G. Vlamis. *Homeomorphism groups of telescoping 2-manifolds are strongly distorted.* Groups Geom. Dyn., to appear.

- Justin Lanier and Nicholas G. Vlamis. *Homeomorphism groups of 2-manifolds with the virtual Rokhlin property.* J. Topol., 17 (2024): e12354.

- Nicholas G. Vlamis. *Homeomorphism groups of self-similar 2-manifolds,* In Ken'ichi Ohshika and Athanase Papadopoulos, editors, *In the Tradition of Thurston III: Geometry and Dynamics*, chapter 5, pages 105–168. Springer, 2024

- Ara Basmajian, Hugo Parlier, and Nicholas G. Vlamis. *Bounded geometry with no bounded pants decompositions.* Israel J. Math. 260 (2024), no.1, 235–260.

- Justin Lanier and Nicholas G. Vlamis. *Mapping class groups with the Rokhlin property.* Math. Z. 302 (2022) 1343–1366.

- Ara Basmajian and Nicholas G. Vlamis. *There are no exotic ladder surfaces.* Ann. Fenn. Math. 47 (2022), no. 2, 1007–1023.

- David Fernández-Bretón, Nicholas G. Vlamis, and Mathieu Baillif. *Ends of non-metrizable manifolds: a generalized bagpipe theorem.* Topology Appl. 310 (2022), Paper No. 108017, 30pp.

- Tarik Aougab, Priyam Patel, and Nicholas G. Vlamis. *Isometry groups of infinite-genus hyperbolic surfaces.* Math. Ann. 381 (2021), 459–498.

- Nicholas G. Vlamis. *Three perfect mapping class groups.* New York J. Math. 27 (2021), 468–474.

- Federica Fanoni, Sebastian Hensel, and Nicholas G. Vlamis. *Big mapping class groups acting on homology.* Indiana Univ. Math. J., 70 (2021), 459–498.

- Javier Aramayona, Priyam Patel, and Nicholas G. Vlamis. *The first integral cohomology of pure mapping class groups.* Int. Math. Res. Not. IMRN (2020), no. 22, 8973–8996.

- Javier Aramayona and Nicholas G. Vlamis. *Big mapping class groups: an overview,* In Ken'ichi Ohshika and Athanase Papadopoulos, editors, *In the Tradition of Thurston: Geometry and Topology*, chapter 12, pages 459–496. Springer, 2020

- Natalia Pacheco-Tallaj[†], Kevin Schreve, and Nicholas G. Vlamis. *Thurston norms of tunnel number-one manifolds.* J. Knot Theory Ramifications, 28 (2019), no. 9, 1950056.

- Priyam Patel and Nicholas G. Vlamis. *Algebraic and topological properties of big mapping class groups.* Algebr. Geom. Topol. 18 (2018), no. 7, 4109–4142.

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829*   •   ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com*

○ Jonah Gaster, Joshua Evan Greene, and Nicholas G. Vlamis. *Coloring curves on surfaces.* Forum Math. Sigma 6 (2018), E17.

○ Matthew Gentry Durham, Federica Fanoni, and Nicholas G. Vlamis. *Graphs of curves on infinite-type surfaces with mapping class group actions.* Ann. Inst. Fourier (Grenoble) 68 (2018), no. 6, 2581-2612.

○ Nicholas G. Vlamis and Andrew Yarmola. *The Bridgeman-Kahn identity for hyperbolic manifolds with cusped boundary.* Geom. Dedicata 194 (2018), 81-97.

○ Ian Biringer and Nicholas G. Vlamis. *Automorphisms of the compression body graph.* J. London Math. Soc. (2) 95 (2017), no. 1, 94-114.

○ Nicholas G. Vlamis and Andrew Yarmola. *Basmajian's identity in higher Teichmüller-Thurston theory.* J. Topology 10 (2017), no. 3, 744-764.

○ Nicholas G. Vlamis. *Moments of a length function on the boundary of a hyperbolic manifold.* Algebr. Geom. Topol. 15 (2015), no. 4, 1909–1929.

○ Nicholas G. Vlamis. *Quasiconformal homogeneity and subgroups of the mapping class group.* Michigan Math. J. 64 (2015), no. 1, 53–75.

[†]Denotes an author that was an undergraduate at time of publication.

Submitted

○ Javier Aramayona, Rodrigo De Pool, Rachel Skipper, Jing Tao, Nicholas G. Vlamis, and Xiaolei Wu. *Non-planar ends are continuously unforgettable.*

○ Ian Biringer, Yassin Chandran, Tommaso Cremaschi, Jing Tao, Nicholas G. Vlamis, Mujie Wang, and Brandis Whitfield. *Covers of surfaces.*

○ Megha Bhat and Nicholas G. Vlamis. *Orientation-preserving homeomorphisms of Euclidean space are commutators.*

Advising

Graduate advising, CUNY Graduate Center

○ Megha Bhat, Ph.D. student, Fall 2023–present

Undergraduate research

Summer 2024 **Homeomorphism groups of ordinals**
CUNY Queens College

Summer 2024 **Automatic classification of arXiv articles via neural networks**
CUNY Queens College

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829* • ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com*   *3/8*

Summer 2017   **Thurston norm of 2-generator, 1-relator groups**, *Natalia M. Pacheco-Tallaj*, Harvard University, Co-advised with Kevin Schreve
University of Michigan REU

Summer 2016   **Curve complexes of non-orientable surfaces**, *Alex Pieloch*, Duke University, Co-advised with Matt Durham
University of Michigan REU

Summer 2016   **Rigidity of representations of free groups in** $PSL(2, \mathbb{C})$, *Ben Lowe*, University of Chicago, Co-advised with Richard Canary
University of Michigan REU

Laboratory of Geometry at Michigan, LOG(M)

LOG(M) is a vertically integrated research experience for undergraduates. Each project is proposed and supervised by a faculty mentor and the undergraduates are advised by the faculty mentor and a graduate student. This program was started by Anton Lukyanenko, Caleb Ashley, and myself.

Winter 2018   **Chromatic numbers of flip graphs**
Faculty Mentor: Nicholas Vlamis (me)
Graduate Mentor: Francesca Gandini
Students: John Paul Koenig, Sanjana Kolisetty, Zihui Qi

Winter 2017   **Visualizing the Birman-Series set on the punctured torus**
Faculty Mentor: Nicholas Vlamis (me)
Graduate Mentor: Mark Greenfield
Students: Connor Davis, Ben Gould, Luke Kiernan
(The students produced the image—of the Farey tessalation—in the left corner of the first page while learning about Möbius transformations.)

Service

Departmental

2019–   Curriculum Committee, Department of Mathematics, Queens College
Chair of committee, Fall 2022–Present

2019–   Co-organizer of the Hyperbolic Geometry Seminar at the CUNY Graduate Center

2020–   Mathematics minor adviser, Queens College

2023–24   Mathematics pure math major adviser, Queens College

2015–2018   Organizer of the Topology seminar at the University of Michigan

2016–2018   Co-organizer of IBL Lunch at the University of Michigan

2011–15   Mathematics Graduate Association, Boston College
Vice President 2014–2015, Treasurer 2011–2014

2013–15   *Actuary Exam 1/P Review Session*
At Boston College, I co-organized, with Prof. Dan Chambers, weekly sessions consisting of introducing necessary material and solving problems.

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829*   •   ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com*   *4/8*

2013–15   AMS Graduate Student Chapter, Boston College
Co-founder and Treasurer 2013–2014

College level

2021–23   MNS Division-at-Large Alternate, Queens College Faculty Senate

Larger mathematical community

- Co-organizer of *Workshop on Big Mapping Class Groups at Boston College*, 2022
- **Refereeing:**
  Algebraic and Geometric Topology; Banff International Research Station proposal; Bulletin of the London Mathematical Society; Conformal Geometry and Dynamics; Contemporary Mathematics; Discrete and Computational Geometry; Geometriae Dedicata; Groups, Geometry, and Dynamics; Journal of Differential Geometry; Journal of Topology; Mathematical Research Letters; Mathematische Annalen; Michigan Mathematical Journal; New York Journal of Mathematics; Proceedings of the American Mathematical Society; Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas; Rocky Mountain Journal of Mathematics; Transactions of the American Mathematical Society
- **Quick opinions:**
  Advances in Mathematics; Algebraic and Geometric Topology; International Mathematics Research Notices; Journal of Differential Geometry; Journal of Topology; Mathematische Annalen; Transactions of the American Mathematical Society
- **Grant panels:**
  NSF award panelist, 2023
  Simons Foundation Travel Support for Mathematicians reviewer, 2023

Teaching

Queens College, City University of New York

Math 301/333/601: Abstract Algebra I (Spring 2022/23/24, Fall 2023)

Math 231: Linear Algebra I (Fall 2022/23, Spring 2023)

MATH 618: Foundations of Geometry (Spring 2019/21/22)

Math 241: Introduction to Probability (Fall 2020, Spring 2021)

Math 220: Discrete Mathematics (Fall 2020)

Math 220P: Discrete Mathematics–Introduction to Proofs (Spring 2020)

MATH 143: Calculus/Power Series (Fall 2018/19, Spring 2019/22)

MATH 142: Calculus/Integration (Fall 2018)

University of Michigan

Math 385: Mathematics for Elementary School Teachers (Fall 2015/16/17)
This is an inquiry-based learning (IBL) course.

Math 590: Topology (Winter 2016)
Cross-listed undergraduate/graduate course.

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829* • ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com*   *5/8*

Boston College

MATH1004: Finite Probability and Applications (Fall 2014)

MT101: Calculus II (Spring 2012/13/14)

MT100: Calculus I (Fall 2011/12/13)

Mystic Valley Regional Charter School

2009-10 Algebra I, Advanced Math, IB Math Studies, and Technology

Pedagogical Training

2023 **OER Fellowship**, *Queens College*, Flushing, NY
Taught Math 301: Abstract Algebra I using open educational resources.

2019 **OER Fellowship**, *Queens College*, Flushing, NY
A semester long workshop focused on using open educational resources in QC classes.

2016 **IBL Workshop**, *University of Michigan*, Ann Arbor, MI
A three day workshop focused on observing an IBL classroom.

2015 **TeMaCC**, *University of Michigan*, Ann Arbor, MI
A one day workshop and conference on teaching content courses for future teachers.

2015 **Teacher Training**, *University of Michigan*, Ann Arbor, MI
The training consisted of a week long orientation on implementing active-learning techniques in the classroom and continues throughout the year with weekly seminars and monthly lunches discussing inquiry-based learning.

2015 **IBL Workshop**, *Cal Poly San Luis Opisbo*, San Luis Opisbo, CA
A week long workshop developing the skill and practice necessary for successful implementation of inquiry-based learning.

2015 **Apprenticeship in College Teaching**, *Boston College*, Chestnut Hill, MA
The ACT program combines teaching seminars with independent work conducting class observations and developing teaching materials.

Outreach

2022– *Mathways*
This is an NSF-funded diversity initiative focused on helping Queens College math students to discover career pathways in and around mathematics and to succeed in their career goals. To date, I have organized several career events:
○ Career panel featuring recent math alumni working in the technology industry, Spring 2023
○ Career panel featuring recent math alumni working in the business and insurance industries, Fall 2023
○ Information session featuring our local Casualty Actuarial Society representative, Spring 2024

2015–2018 *Wayne County Math Teachers' Circle*
This is a professional development program for teachers in the Detroit area to work on interesting math problems and gain ideas for their own classroom.

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829* ● ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com* 6/8

Fall 2016/17   *Wolverine Pathways*
This is a program for underserved middle and high school students in the Ypsilanti and Southfield school districts. The goal of the program is to offer a pathway to college. Students who complete the rigorous program and are accepted to UM receive a full-tuition scholarship. The math department runs math circles for the students introducing fun and interesting math.

Fall 2016/17   *FEMMES Capstone*
This is a program dedicated to closing gender and racial divides in STEM fields. FEMMES hosts a capstone once a semester for girls between 4th and 6th grade from diverse, underserved communities where the students partake in various STEM activities led by volunteers.

Invited Talks

Conference Talks

March 2024	GLaD: Groups, Logic, and Dynamics, Rutgers University
Jan. 2023	Workshop on the Geometry and Dynamics of Groups of Transformations, Fields Institute
June 2021	Nearly Carbon Neutral Geometric Topology Conference
Oct. 2020	Special Session, AMS Fall Eastern Sectional Meeting
Oct. 2019	Special Session, AMS Fall Eastern Sectional Meeting
Aug. 2019	Wasatch Topology Conference
April 2019	Infinite-type Surfaces, American Institute of Mathematics (AIM)
Aug. 2018	Geodesics on hyperbolic manifolds and related topics
April 2018	Interaction between geometry, group theory and dynamics, AMS Special Session
Sept. 2017	Geometric Group Theory, AMS Special Session
Aug. 2017	13th William Rowan Hamilton Geometry & Topology Workshop
Dec. 2016	Geometric Group Theory and Topology in Low Dimensions, CMS Special Session
Sept. 2016	Convex Cocompactness, AMS Special Session
March 2016	Workshop on Surface Group Representations
June 2015	Moduli Crossroads Retreat
May 2015	Graduate Student Conference in Algebra, Geometry, and Topology
May 2014	GEAR Junior Retreat

Seminar/Colloquium Talks

Sept. 2024	Purdue University: *Geometry and Geometric Analysis Seminar*
April 2024	Brandeis University: *Topology Seminar*
Oct. 2023	Cornell University: *Topology Seminar*
Oct. 2023	KAIST/KIAS: *Virtual Seminar on Geometry and Topology*
June 2023	ICMAT: *Agol Lab Seminar*
Feb. 2023	Temple University/Bryn Mawr College: *PATCH Seminar*
April 2022	University of Wisconsin–Milwaukee: *Topology Seminar*

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829*   •   ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com*   *7/8*

Feb. 2021	Big Surf(aces) Seminar
Dec. 2020	UNAM: *Long-distance seminar on Geometric Group Theory*
Dec. 2019	City College of New York, CUNY: *Colloquium*
Nov. 2019	Columbia University: *Geometric Topology Seminar*
Oct. 2019	Binghamton University: *Geometry and Topology Seminar*
April 2019	Rutgers University: *Geometry/Topology Seminar*
March 2019	Temple University: *Geometry and Topology Seminar*
March 2019	Graduate Center, City University of New York: *Geometry and Topology Seminar*
March 2018	Brown University: *Geometry/Topology Seminar*
Jan. 2018	Caltech: *Geometry & Topology Seminar*
Jan. 2018	University of California, Santa Barbara: *Topology Seminar*
Oct. 2017	University of Tortonto: *Geometry & Topology Seminar*
July 2017	Georgia Institute of Technology: *Geometry Topology Seminar*
April 2017	Graduate Center, City University of New York: *Geometry and Topology Seminar*
March 2017	Université du Luxembourg: *Geometry and Topology Seminar*
March 2017	Universidad Autónoma de Madrid: *Group Theory Seminar*
Jan. 2017	University of Illinois Urbana-Champaign: *Geometry, Groups, and Dynamics Seminar*
April 2016	Graduate Center, City University of New York: *Hyperbolic Geometry Seminar*
March 2016	Tufts University: *Geometric Group Theory and Topology Seminar*
Nov. 2015	Purdue University: *Geometry Seminar*
Sept. 2015	Michigan State University: *Geometry and Topology Seminar*
Sept. 2015	University of Michigan: *Topology Seminar*
Nov. 2014	Cornell University: *Topology and Geometric Group Theory Seminar*
July 2013	National University of Singapore: *Topology Seminar*

507 Kiely Hall, Department of Mathematics, Queens College, CUNY
65-30 Kissena Blvd, Flushing, NY 11367
📞 *718.997.5829* • ✉ *nicholas.vlamis@qc.cuny.edu*
🌐 *www.nickvlamis.com* *8/8*