CURRICULUM VITAE

Lee Kennard
215 Carnegie Building
Syracuse, NY 13244

315-443-1492
ltkennar@syr.edu
ltkennar.expressions.syr.edu

ACADEMIC POSITIONS

Associate Professor, Department of Mathematics, Syracuse University, 2022 – present.

Assistant Professor, Department of Mathematics, Syracuse University, 2018 – 2022.

Assistant Professor, Department of Mathematics, University of Oklahoma, 2015 – 2018.

RTG Visiting Assistant Professor, Department of Mathematics, University of California, Santa Barbara, 2012 – 2015.

VISITS

Research Member, Program on New Frontiers in Curvature, SLMath, Fall 2024.

Visitor, WWU Münster, June – July 2022.

Postdoc, Program on Differential Geometry, MSRI, Spring 2016.

Visiting student, IMPA, Fall 2011 – Spring 2012.

EDUCATION

Ph.D., Mathematics, University of Pennsylvania, 2012.

B.A., Mathematics, Kenyon College, 2007.

EXTERNAL AWARDS

2024 – 2027 P.I., NSF Research Grant DMS-2402129, $292,481.

2023 P.I., Simons Foundation Travel Support for Mathematicians, $42,000.

2020 – 2023 P.I., NSF Research Grant DMS-2005280, $181,397.

2019 P.I., NSF Conference Grant DMS-1855960, $30,000.

2017 – 2020 P.I., NSF Research Grant DMS-1708493/1904354, $130,792.

2017 Co-P.I., NSF Conference Grant DMS-1720590, $36,200.

2014 – 2017 P.I., NSF Research Grant DMS-1404670/1622541, $81,264.

SELECTED INTERNAL FELLOWSHIPS AND AWARDS

Junior Faculty Fellowship, University of Oklahoma Research Council, 2017.

Carlitz-Zippin Thesis Prize, Penn Department of Mathematics, 2012.

Dissertation Completion Fellowship, Penn School of Arts and Sciences (SAS), 2011-2012.

Dean's Award for Distinguished Teaching by a Graduate Student, Penn SAS, 2011.

PUBLICATIONS

17. L. Kennard, M. Wiemeler, B. Wilking. Positive curvature, torus symmetry, and matroids, **J. Eur. Math. Soc. (JEMS)**, to appear.

16. L. Kennard, L. Mouillé. Positive intermediate Ricci curvature with maximal symmetry rank, **J. Geom. Anal.**, 34(5): Paper No. 129, 24 pp., 2024.

15. L. Kennard, Y. Wu (B.S., Syracuse University, 2021). Halperin's conjecture in formal dimensions up to 20, **Comm. Algebra**, 51(8): 3606-3622, 2023.

14. J. DeVito, L. Kennard. Cohomogeneity one manifolds with singly generated rational cohomology, **Doc. Math.**, 25: 1835-1863, 2020.

13. M. Amann, L. Kennard. Positive curvature and symmetry in small dimensions, **Commun. Contemp. Math.**, 22(6): 57 pp., 2020.

12. L. Kennard, W. Wylie, D. Yeroshkin. The weighted connection and sectional curvature for manifolds with density, **J. Geom. Anal.**, 29(1): 957-1001, 2019.

11. L. Kennard, Z. Su. On dimensions supporting a rational projective plane, **J. Topol. Anal.**, 11(3): 535-555, 2019.

10. L. Kennard. Fundamental groups of manifolds with positive sectional curvature and torus symmetry, **J. Geom. Anal.**, 27: 2894-2925, 2017.

9. M. Amann, L. Kennard. On a generalized conjecture of Hopf with symmetry, **Compos. Math.**, 153: 313-322, 2017.

8. L. Kennard, W. Wylie. Positive weighted sectional curvature, **Indiana Univ. Math. J.**, 66(2): 419-462, 2017.

7. L. Kennard, J. Rainone (B.S., University of California, Santa Barbara, 2015). Characterizations of the round two-dimensional sphere in terms of closed geodesics, **Involve**, 10(2):243-255, 2017.

6. M. Amann, L. Kennard. Positive curvature and rational ellipticity, **Algebr. Geom. Topol.**, 15(4): 2269-2301, 2015.

5. L. Kennard. On the Hopf conjecture with symmetry, *Geometry of Manifolds with non-negative sectional curvature*, **Lecture Notes in Math.** 2110:111-116, 2014.

4. M. Amann, L. Kennard. Topological properties of positively curved manifolds with symmetry, ***Geom. Funct. Anal.***, 24(5): 1377-1405, 2014.

3. L. Kennard. Positively curved Riemannian manifolds with logarithmic symmetry rank bounds, ***Comm. Math. Helv.***, 89(4): 937-962, 2014.

2. L. Kennard. On the Hopf conjecture with symmetry, ***Geom. Topol.***, 17(1): 563-593, 2013.

1. J. Holdener, L. Kennard, M. Zaremsky. Generalized Thue-Morse sequences and the von Koch curve, ***Int. J. Pure Appl. Math.***, 47(3):397-403, 2008.

PREPRINTS

4. L. Kennard, L. Mouillé, J. Nienhaus. On Hopf's conjecture and positive second intermediate Ricci curvature. https://arxiv.org/abs/2507.16936.

3. J. Harper, L. Kennard. Extending Adams' theorem from singly generated to periodic cohomology. https://arxiv.org/abs/2412.16340.

2. L. Kennard, E. Khalili Samani, C. Searle. Positive curvature and discrete abelian symmetry, *submitted*, https://arxiv.org/abs/2110.13345.

1. L. Kennard, M. Wiemeler, B. Wilking. Splitting of torus representations and applications in the Grove symmetry program, *submitted*, https://arxiv.org/abs/2106.14723.

INVITED CONFERENCE / SEMINAR TALKS

Conference: Curvature and Global Shape, WWU Münster, Germany, Jul. 2025.

Conference (25 minutes): Special Session on *Recent advances in geometric PDE*, Joint Meeting of the NZMS, AustMS, and AMS, University of Auckland, New Zealand, Dec. 2024.

Seminar: Mathematics Colloquium, University of California, Santa Cruz, CA, Oct. 2024.

Seminar: New Frontiers in Curvature Seminar, SLMath, Berkeley, CA, Oct. 2024.

Conference (20 minutes): Society for Industrial and Applied Mathematics (SIAM) Conference on Discrete Mathematics, Spokane, WA Jul. 2024.

Seminar: Virtual Seminar on Geometry with Symmetries (virtual), Dec. 2023.

Seminar: Geometry Seminar, Michigan State University, Nov. 2023.

Conference (20 minutes): 37th Summer Conference on Topology and its Applications, Youngstown State University, Jul. 2023.

Seminar: Geometry Seminar, University of Rochester, Nov. 2022.

Seminar: Oberseminar Differentialgeometrie, WWU Münster, Jul. 2022.

Conference: Groups in Galway meets The Irish Geometry Conference, NUI Galway (virtual due to COVID-19), May 2022.

Conference (20 minutes): JMM Special Session, Seattle, WA, Jan. 2022 (postponed to Apr. 2022 and made virtual due to the COVID-19 pandemic).

Seminar: Differential Geometry and Dynamical Systems Seminar, Centro de Investigación en Matemáticas (CIMAT), (virtual), Nov. 2021 (postponed).

Seminar: Geometric Analysis Seminar, University of Notre Dame, Nov. 2021.

Seminar: Geometry-Topology Seminar, University of Pennsylvania, Sep. 2021.

Seminar: Irish Geometry Seminar, NUI Galway (virtual), Sep. 2021.

Conference: Curvature and Global Shape, WWU Münster, Germany, Aug. 2021.

Conference (30 min.): Mathematical Congress of the Americas Special Session "Group actions in differential geometry", Buenos Aires, Argentina (virtual), Jul. 2021.

Seminar: Topology-Geometry Zoom Seminar, University of Oregon (virtual), Apr. 2021.

Conference (20 min.): AMS Sectional Meeting Special Session "Recent Developments in Differential Geometry", Brown University (virtual), Mar. 2021.

Seminar: Virtual Seminar on Geometry with Symmetries (virtual), May 2020.

Seminar: Dartmouth Mathematics Colloquium (virtual), Dartmouth College, Apr. 020.

Conference (contributed talk, 20 min.): Union College Mathematics Conference, Sep. 2019.

Seminar: Capital Normal University, Beijing, China, May 2019.

Conference: Curvature and topology of spaces, BICMR, Beijing, China, May 2019.

Seminar: Algebra/Topology Seminar, University at Albany, SUNY, May 2019.

Seminar: Geometry/Topology Seminar, Rutgers University, Apr. 2019.

Seminar: Felix Klein Seminar, University of Notre Dame, Apr. 2019.

Seminar: Topology-Geometry Seminar, Indiana University, Apr. 2019.

Conference (contributed talk): Australian-German workshop on differential geometry in the large, MATRIX, Creswick, Australia, Feb. 2019.

Conference: Geometrie Workshop, MFO, Oberwolfach, Germany, Jun. 2018.

Conference (20 min.): JMM Special Session, San Diego, CA, Jan. 2018.

Conference (20 min.): AMS Sectional, University of California, Riverside, Nov. 2017.

Seminar: Frank Stones Memorial Colloquium, Texas Christian University, Oct. 2017.

Seminar: Geometry & Topology Seminar, University of Toronto, Oct. 2017.

Conference: Curvature and Global Shape, WWU Münster, Germany, Jul. 2017.

Conference: Lie Group Actions in Riemannian Geometry, Dartmouth College, Jun. 2017.

Seminar: Geometric Analysis Seminar, University of Notre Dame, Feb. 2017.

Seminar: Topology-Geometry Seminar, Indiana University, Feb. 2017.

Seminar: Postdoc Seminar, MSRI, Feb. 2016.

Conference: Curvature and Global Shape, WWU Münster, Germany, 7/2015.

Seminar: Geometry and Topology Seminar, KIT, Karlsruhe, Germany, 7/2015.

Conference: Smoky Great Plains Geometry Conference, Wichita State University, 3/2015.

Seminar: Differential Geometry Seminar, Rutgers University, 12/2014.

Seminar: Differential Geometry/Topology Seminar, Ohio State University, 11/2014.

Seminar: Lecture Series in the Mathematical Sciences and the Differential Geometry Seminar, Wichita State University, 10/2014.

Conference: Cascade Topology Seminar, Oregon State University, 4/2014.

Seminar: Differential Geometry Seminar, University of California, Irvine, 1/2014.

Conference (20 min.): AMS Sectional Meeting, University of California, Riverside, 11/2013.

Seminar: Felix Klein Seminar, University of Notre Dame, 10/2013.

Seminar: Geometry Seminar, Indiana University, 10/2013.

Seminar: Geometry and Topology Seminar, KIT, Karlsruhe, Germany 7/2013.

Seminar: Topology Seminar, University of Fribourg, Switzerland, 7/2013.

Conference (20 minutes): AMS Sectional meeting, University of Arizona, 10/2012.

Seminar: Karcher Colloquium, University of Oklahoma, 9/2012.

Seminar: Geometry and Topology Seminar, University of Oklahoma, 9/2012.

Seminar: Differential Geometry Seminar, University of California, Santa Barbara, 6/2012.

Conference: Mini-Workshop on Manifolds with Lower Curvature Bounds, MFO, Oberwolfach, Germany, 1/2012.

Conference: Curvature and Global Shape, WWU Münster, Germany, 7/2011.

Conference: Mini-encuentro de geometría diferencial, CIMAT, Guanajuato, Mexico, 12/2010.

POSTDOCTORAL ADVISING

James Dylan Douthitt, Philip T. Church Postdoctoral Fellow, Syracuse University, 2025 –

Lawrence Mouillé, NSF Postoctoral Fellowship, Syracuse University, 2022 – 2024.

GRADUATE ADVISING

Elana Israel, Ph.D., Syracuse University, 2025.

Marie Kramer, Ph.D., Syracuse University, 2025.

Chelsea Sato, Ph.D., Syracuse University, 2025.

Elahe Khalili Samani, Ph.D., Syracuse University, 2021.

UNDERGRADUATE ADVISING

Yantao Wu, B.S., Syracuse University, 2021.
- Advised undergraduate resource project funded by Syracuse University's SOURCE.
- Student was awarded the SU Scholar award in 2021.
- Ph.D. student in Mathematics at Johns Hopkins University.

Xinxuan Wang, B.S., Syracuse University, 2020.
- Informal mentor.
- Ph.D. in Mathematics completed at the University of Pennsylvania in 2025.

Adam Rose, B.S., University of California, Santa Barbara, 2015.
- Advised senior thesis, which earned distinction in the major.
- Contributed conference talk: Pacific Coast Undergraduate Math Conference, 2015.
- Ph.D. student in Applied Mathematics completed at UC, Davis, in 2024.

Yevgeniya Tarasova, B.S., University of California, Santa Barbara, 2015.
- Advised RTG summer research project and senior thesis.
- Contributed conference talk: MAA SoCal-Nevada Section, Fall Meeting, 2014.
- Ph.D. in Mathematics completed at Purdue University in 2022.

Jordan Rainone, B.S., University of California, Santa Barbara, 2014.
- Advised College of Creative Studies summer research project and senior thesis.
- Ph.D. in Mathematics completed at Stony Brook in 2023.

Eric Ling, B.S. and M.S., University of California, Santa Barbara, 2015.
- Co-advised with Xianzhe Dai an RTG summer research project.
- Ph.D. in Mathematics completed at University of Miami in 2019.

COURSES TAUGHT

Syracuse University
    MAT 296: Calculus II (Fa 2018, online in Fa 2020, Sp 2025), MAT 397: Calculus III (Sp 2019, Fa 2025), MAT 545: Introduction to Combinatorics (Fa 2023), MAT 551: Fundamental Concepts of Geometry (Sp 2020, Sp 2022, Sp 2023, Sp 2024), MAT 645:

Graph Theory (Sp 2025), MAT 661: Introduction to Topology (Fa 2019, Fa 2021), MAT 761: Introduction to Algebraic Topology (Sp 2023, Sp 2025, Sp 2026), MAT 762: Algebraic Topology (Sp 2024), MAT 860: Topics in Topology: Lie groups, Lie algebras, and representations (Sp 2021)

University of Oklahoma
Math 2433: Calculus and Analytic Geometry III, Math 2924: Differential and Integral Calculus II, Math 3113: Introduction to Ordinary Differential Equations, Math 3333: Introduction to Linear Algebra, Math 5863: Topology II, Math 6833: Topics in Topology, I (co-taught with Max Forester and Jing Tao)

University of California, Santa Barbara
Math 5A: Differential Equations and Linear Algebra 2, Math 8: Transition to Higher Mathematics, Math 113: Non-Euclidean Geometry, Math 147A/147B: Elementary Differential Geometry I and II, Math 260P: Bundles, curvature, and anomalies (with David Morrison), Math 260P: Fundamental groups and curvature bounds (with Guofang Wei), Math 260P: Group actions in Riemannian geometry (with Xianzhe Dai)

University of Pennsylvania
Math 170: Ideas in Mathematics (Instructor of Record twice), Math 114: Calculus II (TA), Math 260: Honors Calculus II (TA), Math 509: Advanced Analysis II (TA), Math 608: Graduate Analysis (Grader)

SERVICE TO THE DEPARTMENT

Chair: Graduate Committee, SU Department of Mathematics, Fall 2025 – present.

Member: Executive Committee, SU Department of Mathematics, Fall 2023 – Spring 2025.

Member: Search Committee, Applied Mathematics, Fall 2023.

Member: Undergraduate Committee, SU Department of Mathematics, 2019 – 2022.

Member: Graduate Recruiting Committee, SU Department of Mathematics, 2018 – 2020.

Organizer: Riemannian Geometry Seminar, MSRI, Spring 2016.

Organizer: Differential Geometry Seminar, UCSB, Fall 2014 and Spring 2015.

Master Teaching Assistant: TA Training Program, University of Pennsylvania, 2009 – 2011.

SERVICE TO THE UNIVERSITY

Member: CAS|MAX Faculty Council, Fall 2025 – present.

Member: Parking and Transportation Services Advisory Group, Summer – Fall 2025.

Member: University Senate and Employee Services, Fiscal Affairs, and Operations Committee, 2024 – 2025.

Member: University Senate and Budget & Fiscal Affairs Committee, 2023 – 2024.

Reviewer, Syracuse Office of Undergraduate Research and Creative Engagement (SOURCE), 2020 – 2022.

Reviewer, Future Professoriate Program, Women in Science and Engineering (WiSE), 2021 – 2023.

SERVICE TO THE PROFESSION

Reviewed/refereed papers for *Mathematical Reviews* and over 20 mathematics journals.

Reviewer/Panelist for ERC, IRC, NSF, and Simons Foundation.

Co-organizer: MSRI (SLMath) Special Session on Summer Research in Mathematics (SRiM): Differential and Metric Geometry, JMM, Boston, January 2023.

PI on NSF Conference Grant: Australian-German Workshop on Differential Geometry in the Large, University of Melbourne, Creswick, Australia, February 2019.

Co-organizer and Co-PI on NSF Conference Grant: Representations of Riemannian Geometry Conference, Saint Joseph's University, Philadelphia, PA, August 2017.

Member: Student Competition Committee, MAA Oklahoma/Arkansas Section Meeting, University of Oklahoma, Norman, OK April 2017.

Presentations and panels aimed at graduate students
- Graduate student seminars at UCSB (April 2013 and 2014) and the University of Oklahoma (November 2016 and 2017).
- Hypatian Seminar, UCSB (April 2013, February 2014, December 2014).

SERVICE TO THE COMMUNITY

Volunteer, Parent Teacher Organization, Edward Smith K-8 School, SCSD
- Co-organizer, Chess Club, 2022 – present.
- Treasurer, 2021 – 2023.

Public lectures:
- SU Project Advance seminar for high school teachers of Calculus III, March 2024.
- Science Cafe, Norman, OK, February 2018.
- Public Lecture, Lie Group Actions in Riemannian Geometry Conference, Dartmouth College, June 2017.
- Pi Mu Epsilon Induction Ceremony, Kenyon College, April 2016.

Event organizer: University of Oklahoma Math Day, 2016 and 2017.
- Annual event, attracting over 300 high school students each year.
- Chaired committee to advertise, plan, and run the event.