

CURRICULUM VITAE

LEVI HEATH

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EDUCATION

Colorado State University	Fort Collins, CO
Ph.D. in Mathematics, Advised by Dr. Mark Shoemaker	2016–2022
Thesis: <i>Quantum Serre duality for quasimaps</i>	
Northern Arizona University	Flagstaff, AZ
B.S. in Mathematics	2012–2015

POSITIONS HELD

University of Nebraska-Lincoln	Lincoln, NE
Teaching Postdoctoral Associate	August 2022–Present
Colorado State University	Fort Collins, CO
Instructor	Summer 2022
Academic Advisor	Spring 2020–Summer 2022
Graduate Teaching Assistant	Fall 2016–Spring 2022
Graduate Research Assistant	Summer 2019
– Supported by NSF grant DMS-1708104 through Dr. Mark Shoemaker.	
Oxford Life Insurance	Phoenix, AZ
Actuarial Analyst	May 2015 - August 2016
Investment, Treasury, and Actuarial Intern	May 2014 - August 2015

TEACHING

Coordinator

- (1) Trigonometry: Math 102, University of Nebraska-Lincoln, Fall 2022–Present.

Instructor - Graduate Level

- (1) Introduction to Abstract Algebra II: Math 818, University of Nebraska-Lincoln, Spring 2024.
–Developed curriculum and taught the course utilizing a flipped classroom.

Instructor - Undergraduate Level

- (12) Introduction to Proofs: Math 309, University of Nebraska-Lincoln, Spring 2023, Spring 2024.
- (11) Math in the City: Math 435, University of Nebraska-Lincoln, Fall 2022.
Interdisciplinary, experiential learning course that partners undergraduate students with a local business, government official, or research laboratory to conduct a mathematical analysis of real data. Instructors of the course advise students throughout the semester, which culminates in a presentation and written report.
- (10) Linear Algebra: Math 314, University of Nebraska-Lincoln, Fall 2022, Spring 2023.
- (9) Actuarial Science: Preparation for the Financial Mathematics Exam: Math 495, Curriculum Developed, Colorado State University, Fall 2019, 2020, 2021.

- (8) Linear Algebra I: Math 369, Colorado State University, Summer 2021.
- (7) Matrices and Linear Equations: Math 229, Colorado State University, Summer 2020, Spring 2022.
- (6) Differential Equations: Math 340, Colorado State University, Summer 2018.
- (5) Calculus III: Math 261, Colorado State University, Summer 2022; Math 208, University of Nebraska-Lincoln, Fall 2023.
- (4) Calculus II: Math 161, Colorado State University, Spring 2018, Fall 2018, Spring 2019.
- (3) Calculus I: Math 160, Colorado State University, Fall 2017.
- (2) Calculus in Management Sciences: Math 141, Colorado State University, Summer 2017, Summer 2022.
- (1) Patterns of Phenomena: Math 105, Colorado State University, Fall 2016.

Lab/Recitation Teaching Assistant

- (2) Linear Algebra for Data Scientists: DSCI 369, Lab TA, Colorado State University, Spring 2021.
- (1) Calculus II: Math 161, Recitation TA, Colorado State University, Spring 2017

Development of New Courses

- (1) Math 495: Actuarial Science: Preparation for the FM Exam. This course prepares students to take the Society of Actuaries' (SOA) Financial Mathematics (FM) Exam. With this course offering, the SOA recognized Colorado State University as a University or College with an Actuarial Program.

Undergraduate Research and Honors Contracts

- (3) Layna Blankenship: Honors contract for Math 208: Calculus III, *Gradient descent*, University of Nebraska-Lincoln, Fall 2023.
- (2) Ben Gerdes: Honors contract for Math 412: Modern Geometry, *Inclusive instruction in high school geometry*, University of Nebraska-Lincoln, Fall 2023.
- (1) Gabe Payson: *Using neural networks to predict home prices*, University of Nebraska-Lincoln, January 2023–May 2023.

RESEARCH

Publications

- (3) *Quantum Serre duality for quasimaps* (with Mark Shoemaker), European Journal of Mathematics, 2022.
- (2) *Prime Vertex Labelings of Families of Unicyclic Graphs*, (with Nathan Diefenderfer, Michael Hastings, Hannah Prawzinsky, Briahna Preston, Emily White, and Alyssa Whittemore), Rose-Hulman Undergraduate Math Journal, 2015.
- (1) *Prime Vertex Labelings of Several Families of Graphs* (with Nathan Diefenderfer, Dana Ernst, Michael Hastings, Hannah Prawzinsky, Briahna Preston, Jeff Rushall, Emily White, and Alyssa Whittemore), Involve, 2015.

Invited Talks

- (8) *Math in the City: Comparing Neural Network and Regression Models in Predicting Lancaster County Housing Prices* (with Gabe Payson), MATH 125, University of Nebraska-Lincoln, April 28, 2023.
- (7) *NAU to Ph.D.*, Friday Afternoon Mathematics Undergraduate Seminar, Northern Arizona University, November 18, 2022.
- (6) *Kontsevich's Formula*, Friday Afternoon Mathematics Undergraduate Seminar, Northern Arizona University, November 18, 2022.
- (5) *Enumerative geometry in physics and quantum Serre duality for quasimaps*, Colloquium, Northern Arizona University, November 17, 2022.
- (4) *Enumerative geometry in physics and quantum Serre duality for quasimaps*, Commutative Algebra Seminar, University of Nebraska-Lincoln, October 19, 2022.
- (3) *Quantum Serre duality for quasimaps*, Algebraic Geometry Northeastern Series (AGNES), Boston College, October 24, 2021.

- (2) *Quantum Serre duality for quasimaps*, Front Range Algebraic Geometry and Number Theory Seminar, Colorado State University, October 21, 2021.
- (1) *Cycle-valued quantum Serre duality for quasimaps*, Joint Mathematics Meeting AMS Special Sessions, Denver, CO, January 15, 2020.

AWARDS, GRANTS AND HONOURS

Grants and Scholarships

- (3) Colorado Graduate Grant, State of Colorado, Fall 2021–Spring 2022.
- (2) Center for Undergraduate Research in Mathematics Grant Recipient, Brigham Young University, Fall 2014–Spring 2015.
- (1) Arizona’s Instrument to Measure Standards Scholarship (full tuition waiver to any public institution in Arizona renewable for up to 4 years), State of Arizona, Fall 2012–Spring 2015.

SERVICE AND OUTREACH

Committee Assignments

- (3) Math Day Organizing Committee, Chairman, University of Nebraska-Lincoln, Fall 2023–Spring 2024.
- (2) Diversity, Equity, and Inclusion Committee, Committee Member, University of Nebraska-Lincoln, Fall 2022–Spring 2023.
- (1) Second-Year Mathematics Task Force, Committee Member, University of Nebraska-Lincoln, Fall 2022–Spring 2023.

Mentorship

- (2) Graduate Student Mentor to incoming graduate teaching assistants, Colorado State University, Fall 2020–Spring 2022.
–Administered training sessions and completed formal teaching observations.
- (1) Academic Advisor for undergraduate math majors with an actuarial science concentration, Colorado State University, Spring 2020–Summer 2022.

Seminars and Conferences Organized

- (2) Southwestern Undergraduate Mathematics Research Conference, Colorado State University, Spring 2020, Cancelled due to COVID-19.
- (1) Graduate Student Seminar in Algebraic and Arithmetic Geometry, Colorado State University, Fall 2019–Spring 2020.

Recruitment Events Organized

- (4) Anthem Actuarial Internship Presentation, Colorado State University, Fall 2021.
- (3) AIG Actuarial Internship Presentation, Colorado State University, Fall 2021.
- (2) Cigna Actuarial Internship Presentation, Colorado State University, Fall 2020 and 2021.
- (1) Hannover Reinsurance Actuarial Internship Recruitment Panel, Colorado State University, Fall 2020 and 2021.

Outreach

- (16) Panel Moderator, Nebraska Conference for Undergraduate Women in Mathematics, University of Nebraska-Lincoln, January 26-28, 2024.
- (15) Presenter/session leader, *Giving good feedback*, GTA Orientation Week, University of Nebraska-Lincoln, August, 18 2023.
- (14) Math Counselor, Summer Bridge Program, University of Nebraska-Lincoln, August 2023.
–Hired by UNL’s Engineering Department to run the math portion of a two-week program that prepares incoming students for college.
- (13) Breakout Session Leader, Nebraska Conference for Undergraduate Women in Mathematics, University of Nebraska-Lincoln, January 20-22, 2023.

- (12) Presenter, Friday Afternoon Mathematics Undergraduate Seminar, Northern Arizona University, November 18, 2022.
- (11) Presenter/session leader, *Giving good feedback*, GTA Orientation Week, University of Nebraska-Lincoln, August, 19 2022.
- (10) Western Algebraic Geometry Symposium refreshments co-organizer, Colorado State University, Spring 2022.
- (9) Inflection Point mentor (peer-mentoring group for students of color and first-generation students), Colorado State University, Fall 2021.
- (8) International school on Tropical Geometry Zoom room moderator, Summer 2020.
- (7) Sonia Kovalevsky Day volunteer (program for young women in high school and middle school), Colorado State University, March 2020.
- (6) Graduate student liaison for graduate student recruitment day, Colorado State University, March 2019.
- (5) Math Circles volunteer, Colorado State University, Summer 2018 and 2019.
- (4) Calculus Center Exam Reviews, Colorado State University, Fall 2017–Spring 2019.
- (3) Math Day volunteer, Colorado State University, Fall 2016–Fall 2019.
- (2) Math, Science, and Technology Day volunteer, Colorado State University, Fall 2016.
- (1) Math Club Fundraising Coordinator, Northern Arizona University, Fall 2014–Spring 2015

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Professional Affiliations

- (3) National Center for Faculty Development and Diversity
- (2) National Association of Mathematicians
- (1) American Mathematical Society

Professional Development

- (9) Neuordivergence Workshop: Creating an Inclusive Classroom for Neurodivergent Students, University of Nebraska-Lincoln, April 25, 2023.
- (8) Diversity Symposium, Colorado State University, October 25–29, 2021.
- (7) TILT Inclusive Pedagogy Course (4-week long course), Colorado State University, Spring 2021.
- (6) Diversity Symposium, Colorado State University, October 19–23, 2020 and October 25–29, 2021.
- (5) Equity in Online Teaching Panel, Virtual Seminar, May 2020.
- (4) Lunch in the Time of COVID, Virtual Seminar, Spring 2020–Spring 2022.
- (3) Diversity Reading Group, Colorado State University, Spring 2020.
- (2) Department-wide conversation with Dr. Edray Goins on diversity and supporting mathematicians from underrepresented groups, Colorado State University, February 2018.
- (1) Lecture given by professor and activist Angela Davis, Northern Arizona University, April 24, 2013.