Yael Davidov

Email: yael.davidov@rutgers.edu Website: yaeldavidov.github.io

EDUCATION

Rutgers University

Ph.D. candidate, Advisor: Daniel Krashen

New Brunswick, NJ 2017–Expected May 2023

Wesleyan University

BA in Mathematics and Chemistry, GPA: 4.0/4.0

Middletown, CT 2012–2016

- Graduated with Honors

Research Interests

I am broadly interested in arithmetic geometry, and understanding the relationship between algebraic objects over a field, such as division algebras, and the arithmetic properties of that field. Currently I am investigating the admissibility of groups over semi-global fields through the use of field patching techniques.

THESIS WORK

"On the Admissibility of Finite Groups over Semi-Global Fields in the Bad Characteristic Case", in preparation.

TALKS

• Admissibility of Groups over Semi-Global Fields in the Bad Characteristic Case $Rutgers\ Algebra\ Seminar$	October 2022
• Admissibility of Groups: An Application of Field Patching Graduate Student Conference in Algebra, Geometry, and Topology at Temple University	May 2022
• Exploring the Admissibility of Groups and an Application of Field Patching Rutgers Algebra Seminar	April 2022
• Admissibility Problems for Finite Groups Rutgers Graduate Algebra and Representation Theory Seminar	February 2022
• Hunting for Division Algebras in Representations of Finite Groups Rutgers Graduate Algebra and Representation Theory Seminar	October 2021

AWARDS

• AMS Rutgers Student Chapter Award for Leadership	2022
• Rutgers TA Teaching Excellence Award	Spring 2020
• Rice Prize, awarded for excellence in mathematics	2016
• Phi Beta Kappa	Spring 2016

TEACHING

Instructor of Record at Rutgers

• 01:640:300 Introduction to Mathematical Reasoning

In person course which I structured to include group work and guided reading.

Summer 2022

• 16:186:857 Introduction to Online and Hybrid Teaching
Online course for graduate students across different departments.

Spring 2022, Spring 2021

• 01:640:300 Introduction to Mathematical Reasoning
Online course which I structured to include group work and oral exams.

Summer 2020

01 C40 199 D

• 01:640:123 Preparation for Calculus I

Spring 2020

8-week, flipped-format course designed to review prerequisite topics for success in calculus.

TA at Rutgers

• 01:640:291 Honors Calculus III Fall 2021

• 01:640:251 Multivariable Calculus online

Spring 2021

- 01:640:250 Introductory Linear Algebra

Fall 2019

• 01:640:151 Calculus I for the Mathematical and Physical Sciences

Spring 2019

• 01:640:152 Calculus II for the Mathematical and Physical Sciences

Fall 2018

Directed Reading Program Mentor at Rutgers (Spring 2020)

Mentored an undergraduate student in reading about identities involving sums of squares.

ATTENDED CONFERENCES

• The 14th Brauer Group Conference *Israel**	June 2022
• Motivic Homotopy session of the Graduate Summer School IAS/Park City Mathematics Institute (virtual)	July 2021
• ALGAR Summer School: Algebra and Arithmetic University of Antwerp (virtual)	July 2020
• ALGAR Summer School: Algebras with Involution University of Antwerp, Belgium	July 2019
• The 13th Brauer Group Conference Colorado	June 2018
• Graduate Student Conference in Algebra, Geometry, and Topology Temple University, Philadelphia	June 2018
• Northeastern Conference on Research in Undergraduate Mathematics Education Montclair State University, Rutgers University, and Virtually. Attended 5 of the past 6 years.	2017-2022

SERVICE AND OTHER ACTIVITIES

• Program Coordinator, Rutgers TA Project Organize annual university-wide TA orientation program and lead pedagogy workshops for a broad audience of graduate TAs from different department on topic such as "Engaging a Quiet Classroom", "Supporting Students with Diverse Academic Preparation", and "The Role of the TA".	2020-Current
• Co-Organizer, Rutgers Math Teaching Seminar	2019–Current
• Fellow, Rutgers Academy for the Scholarship of Teaching and Learning A selective group of graduate students, faculty, and administrators across the university which meets monthly to review undergraduate instructional practices and issues related to the scholarship of teaching and learning.	2019–Current
• Co-Founder and Vice President, Association for Women in Mathematics Rutgers Chapter	2018-2022
• Head TA, Rutgers Math Department Conducted observations of other graduate student instructors and provided feedback and support.	Summer 2020
• Panelist, Workshop on Math Advice and Networking at the University of Pennsylvania Participated in a panel on graduate student life at an event for undergraduate women.	2019
• TA Orientation Leader Lead a session in the University-wide orientation for incoming Math and Statistics graduate students on discipline specific teaching practices.	2019
• Co-Organizer, Rutgers Pizza Seminar	2018–2019