Yael Davidov

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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, 10+ pages.

TALKS

• 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

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

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

Spring 2022, Spring 2021

Online course for graduate students across different departments.

• 01:640:300 Introduction to Mathematical Reasoning

Summer 2020

Online course which I structured to include group work and oral exams.

• 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

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.

SERVICE AND OTHER ACTIVITIES

Program Coordinator, Rutgers TA Project
 Organize annual university-wide TA orientation program and lead pedagogy workshops.

 $2020\hbox{--Current}$

• 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 discuss undergraduate instruction.

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

2019

• TA Orientation Leader

Lead a session in the University-wide orientation for incoming Math and Statistics graduate

students on discipline specific teaching practices.

• Co-Organizer, Rutgers Pizza Seminar

2018 – 2019

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