

# ELLIOT KAPLAN

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## EDUCATION

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### University Illinois at Urbana-Champaign

2015-Present

- Doctoral student in mathematics with a focus on model theory
- Advisor: Lou van den Dries
- Advanced to Candidacy in August 2017

### Undergraduate at Ohio University

Class of 2015

- Bachelor of Science through the Honors Tutorial College
- Mathematics Major; Philosophy Minor
- Graduated Summa Cum Laude

### Other Skills

- Python, AMPL, MATLAB

## AWARDS AND ACHIEVEMENTS

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<b>Gateway Excellence Scholarship</b> (full tuition)	2011 - 2015
<b>Dean's Scholarship</b>	2012 - 2015
<b>Philosophy Department Student Achievement Award</b>	2013, 2014, 2015
<b>Honorable mention, COMAP Mathematical Contest in Modeling</b>	2013, 2015
<b>Outstanding Presentation Award in the MAA Student Paper Session</b>	MathFest 2014
<b>List of Teachers Ranked as Excellent by Their Students</b>	2015, 2017, 2018
<b>Honorable mention, Graduate Research Fellowship Program</b>	2016
<b>Graduate College Conference Travel Award</b>	2016
<b>U.S. Junior Oberwolfach Fellows NSF Grant (DMS-1641185)</b>	2016
<b>Waldemar J., Barbara G., and Juliette Alexandra Trjitzinsky Fellowship</b>	2019

## WORK EXPERIENCE

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### Teaching Assistant

2015-Present

*University of Illinois at Urbana-Champaign*

- Led discussion sections for Calculus II (Fall 2015), Calculus III (Fall 2016, Spring 2017, Fall 2018), and Applied Linear Algebra (Spring 2018).
- Head TA for Elementary Linear Algebra (Fall 2017) and Applied Linear Algebra (Spring 2018).
- Facilitated group work, helped students prepare for exams, helped write worksheets and exams.

### Summer Intern

Summer 2016

*Wolfram Research*

- Worked to develop a way to talk about theorems and definitions in pure mathematics using the Wolfram language.

**Program for Interdisciplinary and Industrial Internships at Illinois** Summer 2015  
*University of Illinois at Urbana-Champaign*

- NSF funded research program.
- Researched random matrix pencils for seven weeks, supervised by a visiting professor.
- Worked as part of a team of four within a program of fourteen students.

**Lead Mathematics Tutor** August 2014 - May 2015  
*Ohio University Tutoring Services*

**CRLA Certified Mathematics Tutor** February 2012 - May 2015  
*Ohio University Tutoring Services*

**Summer Undergraduate Research Institute in Experimental Mathematics** Summer 2014  
*Michigan State University*

## MENTORSHIP AND PROFESSIONAL SERVICE

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**Graduate Mentor** Spring 2018  
*Illinois Geometry Lab*

Helped lead a group of four undergraduate students in a research project studying functions recognizable by Büchi automata.

**Co-organizer** Spring 2017  
*XVIII Graduate Student Conference in Logic*

## INVITED TALKS

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**Joint Math Meetings in Seattle, WA** January 2016  
*Number Systems with Simplicity Hierarchies II*  
Part of the Special Session on Surreal Numbers.

**Mathematical Research Institute of Oberwolfach, Germany** December 2016  
*Number Systems with Simplicity Hierarchies II*  
Part of the Mini-Workshop on Surreal Numbers, Surreal Analysis, Hahn Fields and Derivations.

**Graduate Model Theory Seminar at UCLA** January 2018  
*An Introduction to HT-Fields*

## CONTRIBUTED TALKS

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**MathFest in Portland, OR** August 2014  
*Knot Theory, Combinatorics and Grid Diagrams*

**Young Mathematicians Conference at Ohio State University** August 2014  
*Knot Depth for Positive Braids*

**Undergraduate Mathematics Symposium at UIC** October 2014  
*Knot Depth for Positive Braids*

<b>Joint Math Meetings in San Antonio, TX</b> <i>Poster Session on Knot Depth for Positive Braids</i>	January 2015
<b>North American meeting of the Association of Symbolic Logic at UIUC</b> <i>Number Systems with Simplicity Hierarchies II</i>	March 2015
<b>XVIII Graduate Student Conference in Logic at UIUC</b> <i>An Introduction to HT-Fields</i>	April 2017
<b>XIX Graduate Student Conference in Logic at UW-Madison</b> <i>Pairs of Theories Satisfying a Mordell-Lang Condition</i>	April 2018

## PUBLICATIONS AND PREPRINTS

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<b>Continuous Regular Functions</b> With Alexi Block Gorman, Philipp Hieronymi, Ruoyu Meng, Erik Walsberg, Zihe Wang, Ziqin Xiong, and Hongru Yang. <i>Preprint (arXiv).</i>	2019
<b>Logarithmic Hyperseries</b> With Lou van den Dries and Joris van der Hoeven. <i>Submitted (arXiv).</i>	2018
<b>Pairs of Theories Satisfying a Mordell-Lang Condition</b> With Alexi Block Gorman and Philipp Hieronymi. <i>Submitted (arXiv).</i>	2018
<b>Distality for the Asymptotic Couple of the Field of Logarithmic Transseries</b> With Allen Gehret. <i>Submitted (arXiv).</i>	2018
<b>Number Systems with Simplicity Hierarchies II</b> With Philip Ehrlich. <i>Journal of Symbolic Logic</i> , vol. 83, no. 2, 2018.	2018
<b>Resolution Depth of Positive Braids</b> With Patricia O'Brien and David Krcatovich. <i>Journal of Knot Theory and Its Ramifications</i> , vol. 24, no. 14, 2015.	2015