

# Kayla Orlinsky

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## Education

Current	Ph.D. Student	University of Southern California	Advisor: S. Montgomery
Jun 2017	B.S.	University of California, San Diego	
May 2015	A.A.	Irvine Valley College	Honors Student – summa cum laude
Oct 2011	High School Diploma	School of the Arts	Homeschooled

## Work Experience

Aug 2022 - Current	<b>Instructor of Record of MATH 040</b>	University of Southern California	Los Angeles, CA 90007
	<ul style="list-style-type: none"><li>Sole instructor for a review of algebra course</li><li>Original homework and exam questions typed in Latex</li></ul>		
Aug 2018 - Current	<b>Teaching Assistant and Tutor</b>	University of Southern California	Los Angeles, CA 90007
	<ul style="list-style-type: none"><li>Writing weekly quizzes in Latex, leading discussion sections twice weekly, holding office hours in math center</li><li>Calculus I (MATH 125), Calculus III (MATH 226), Linear Algebra (Math 225), Abstract Algebra (MATH 410).</li></ul>		
Jan 2018 - Aug 2018	<b>Adjunct Instructor of Record</b>	West Los Angeles College	Culver City, CA 90230
	<ul style="list-style-type: none"><li>Comprehensive Adult Student Assessment Systems (CASAS) and Just in Time Teaching (JiTT) methods to improve classroom equity</li><li>Math for Preparation and Assessment (Basic Skills 023CE), Arithmetic I (Basic Skills 056CE), Arithmetic II (Basic Skills 057CE), Pre-Algebra Review I (Basic Skills 058CE)</li></ul>		
May 2018 - Aug 2018	<b>Trainer Presenter</b>	West Los Angeles College	Culver City, CA 90230
	<ul style="list-style-type: none"><li>Held monthly trainings for current and incoming faculty on PeopleSoft and Excel</li><li>Created Excel sheet to streamline calculation of instructor hours</li></ul>		
Jul 2016 - Jun 2017	<b>Teaching Assistant and Tutor</b>	University of California San Diego	La Jolla, CA 92093
	<ul style="list-style-type: none"><li>Calculus I (MATH 10A), Calculus II (MATH 10B) and Mathematical Reasoning (MATH 109)</li><li>Worked as a tutor in UCSD's Math Lab</li></ul>		

## Research Interests

Representation theory and group representation theory. Hopf algebras, semisimple Hopf algebras and their representations. Indicators of the simple modules of Hopf algebras. Bismash product and Drinfel'd double Hopf algebras and the indicators of their representations.

## Research Papers

### PREPRINTS

1. **Kayla Orlinsky**. "An indicator for the Hopf Algebra  $k^{S_{n-1}} \# kC_n$ " arXiv:2208.12714. 2022.

### PUBLICATIONS

1. Clifford Kapon, James Morton, Amina Bouslimani, Alexey Melnik, **Kayla Orlinsky** et al. "Creating a 3D microbial and chemical snapshot of a human habitat." Scientific reports 8.1 (2018): 1-12.

### ABSTRACT PUBLICATIONS

2. **Kayla Orlinsky** "Computing indicators of simple modules of a bismash product" *Abstracts Vol 43*, Number 1, Issue 207. Abstract 1174-16-7637. 2022.
1. **Kayla Orlinsky** and Milena Tintcheva "Outbreak Imminent: A Math Model Illustrating the Emerging Problem of Ineffective Quarantine Measures due to Overcrowding in Hospitals" *Building Bridges 15 ed.* 2014.

## Presentations

### INVITED TALKS

Oct 2022	<b>AMS JMM</b> , The permutations which count the representations of a semisimple Hopf algebra	University of Utah
Apr 2022	<b>AMS JMM</b> , Computing indicators of simple modules of a bismash product	Virtual
May 2015	<b>Bay Honors Symposium</b> , Protecting our Nurses: Using Mathematical Modeling to Illustrate how the Problem of Hospital Overcrowding Could Propagate Ebola	Stanford University
Mar 2015	<b>Honors Transfer Council of California</b> , Promoting a Cure: Using Mathematical Modeling and Experimental Results to Predict the Infectiousness of the Ebola Virus	UC Irvine

## SEMINAR TALKS

Oct 2021	<b>USC Graduate Student Seminar</b> , The permutations which count the representations of a semisimple Hopf algebra	USC
Oct 2019	<b>USC Graduate Student Seminar</b> , Hopf Bismash: The structure of a specific Hopf algebra	USC
Nov 2019	<b>USC Graduate Student Algebra Seminar</b> , The theory of Set: A summary of game-inspired fun and facts about cap sets	USC

## Leadership/Mentorship/Outreach

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Aug 2020 - Current	<b>Charlotte's Web President</b> University of Southern California	Los Angeles, CA 90007
Aug 2018 - Dec 2020	<b>Charlotte's Web Board Member</b> <ul style="list-style-type: none"><li>Plan and advertise social events: escape room activity, indoor rock climbing event, beach bike rides, more</li><li>Maintain group mailing list</li><li>Organize budget and communicate student needs to faculty</li></ul>	
Aug 2022 - Current	<b>MGSA Charlotte's Web Liaison</b> University of Southern California	Los Angeles, CA 90007
Aug 2020 - Dec 2022	<b>MGSA Vice President</b>	
Aug 2019 - Dec 2020	<b>MGSA Outreach Coordinator</b> <ul style="list-style-type: none"><li>Represent graduate students at faculty meetings</li><li>Ran the math booth at MESA College and Career Fair on USC's campus in Oct 2019</li><li>Organized the poster session, graduate student panel, and Gather Town webpage for USC math graduate student open house in 2021 and 2022</li><li>Registered club with IKON to get exclusive reduced price ski passes for 2021-2022 season</li><li>Provide care packages for graduate students before qualifying exams</li></ul>	
Aug 2019 - Current	<b>Graduate Mentor</b> University of Southern California <ul style="list-style-type: none"><li>Mentored four incoming first-years to the math graduate program in 2019, 2021, and 2022</li><li>Mentored a second year earth science graduate student in 2020</li></ul>	Los Angeles, CA 90007
Jan 2022 - Current	<b>Undergraduate Mentor (DRP)</b> University of Southern California <ul style="list-style-type: none"><li>Mentored an undergraduate in a directed reading program (DRP). Met weekly to discuss the linear algebra used in computer vision</li><li>Mentoring an undergraduate of the uses of differential geometry as it relates to her Calculus III course</li></ul>	Los Angeles, CA 90007
Jun 2020 - Jun 2022	<b>WiSE Liaison</b> University of Southern California <ul style="list-style-type: none"><li>Organized annual Passion Talks social event for Women in Science and Engineering</li><li>Spread information about events to the math department</li></ul>	Los Angeles, CA 90007
Jan 2018 - Aug 2018	<b>Curriculum Committee Member</b> West Los Angeles College <ul style="list-style-type: none"><li>Attended curriculum committee meetings</li><li>Created the COR course outline and SLO student learning outcome documents for three new non-credit curricula for basic skills math</li></ul>	Culver City, CA 90230
Aug 2014 - May 2015	<b>Research Coordinator</b> Irvine Valley College <ul style="list-style-type: none"><li>Held biweekly workshops encouraging community college students to pursue undergraduate research</li><li>Organized guest speakers for workshops on public speaking, abstract writing, and research topics</li><li>Caused participation at research conferences to double in the 2014/2015 academic year</li></ul>	Irvine, CA 92618

## Awards

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Jun 2017	<b>Undergraduate Employee of the Year</b> University of California San Diego <ul style="list-style-type: none"><li>received for teaching assistant work and consistently high student evaluation scores received from four different courses throughout the academic year</li></ul>	La Jolla, CA 92093
Oct 2016	<b>Sixth College Certificate of Fulfillment and Culmination</b> UC San Diego <ul style="list-style-type: none"><li>received for presenting on the applications of mathematical reasoning in everyday life</li></ul>	La Jolla, CA 92093
Mar 2015	<b>Honors Transfer of California Exemplary Achievement Award</b> UC Irvine	Irvine, CA 92697
Apr 2015	<b>Phi Theta Kappa All USA scholarship Finalist</b> Irvine Valley College <ul style="list-style-type: none"><li>listed as PTK All USA Team for 2015 and invited to awards luncheon in Sacramento to honor the achievements of college students whose leadership benefited their greater community</li></ul>	Irvine, CA 92618
Mar 2015	<b>Outstanding Abstract Award</b> University of California Irvine	Irvine, CA 92697

References available upon request.