WILL HOFFER

WEBSITE: https://willhoffer.com ◇ EMAIL: email@willhoffer.com

EDUCATION

University of California, Riverside *September 2019 - Present*
Pursuing a PhD in Mathematics Overall GPA: 3.97/4.00
Advisor: Michel Lapidus

The Ohio State University *August 2015 - May 2019*
Bachelors of Science in Mathematics and Physics (*cum laude; with Honors in the Arts & Sciences*)

RESEARCH

Research Interests

Resurgent Asymptotics Fractal Geometry Mathematical Physics

Publications

· W. Hoffer, A. Vengal, and V. Winstein, "The Structure of Biquandle Brackets," *Journal of Knot Theory and its Ramifications*, Vol. 29, Is. 6 (May 2020.) https://doi.org/10.1142/S021821652050042X

SELECTED SEMINAR AND CONFERENCE PRESENTATIONS

Functional Analysis and Mathematical Phyiscs Seminar Decemeber 2020
https://www.fresnostate.edu/csm/math/colloquia-seminars/famp.html *CSU Fresno*

· *From Rainbows to Resurgence: Asymptotics of the Airy Function* 12/11/20

Fractal Research Group/Math. Physics and Dynamical Systems Seminar 2020-Present
http://www.math.ucr.edu/~frgmpds/seminars.html *UC Riverside*

· *A First Introduction to Resurgence, Parts I & II* 4/16/20, 5/27/20
· *Rainbows Quantum Billiards, and the Birth of Reflections, Parts I & II* 10/22/20, 11/12/20

Young Mathematicians Conference 8/10/18 - 8/12/18
https://ymc.osu.edu/program-schedule *Ohio State/National Science Foundation*

· *Combining Quandle Cohomological and State-Sum Polynomial Knot Invariants*

Shenandoah Undergraduate Mathematics and Statistics Conference 10/13/18
http://www.jmu.edu/mathstat/sums/index.shtml *James Madison University*

· *Combining Biquandle Knot Invariants*

Knots & Graphs Program Summers 2017, 2018
https://people.math.osu.edu/chmutov.1/wor-gr-su18/wor-gr.htm *Ohio State*

· *Enhanced Kauffman bracket* 7/7/17
· *Tricoloring number of links* 7/21/17
· *Tricolorings, Keis, and Quandles* 6/25/18
· *Two cocycles of quandles and the state sum invariants* 7/9/18
· *Cohomology, biquandles, and bracket invariants* 7/23/18

RELEVANT EMPLOYMENT

Microtutorials in Mathematics Video Program Spring 2020
https://microtutorials.ucr.edu/ *University of California, Riverside*

· Content creator for UCR's mathematics supplementary instructional videos project

Teaching Assistant September 2019 - Present
Mathematics Department *University of California, Riverside*

· TA & additional lecturer for courses including differential equations, calculus, linear algebra, etc.

Student Instructional Associate August 2016 - Spring 2019
Mathematics Department *Ohio State*

· TA & Grader for courses including precalculus, trigonometry, and algebra
· Tutor for the Mathematics and Statistics Learning Center

SOFTWARE PROFICIENCY

Programming Languages

· Proficient: Java/Javascript, Python, C/C++, HTML/CSS/SCSS
· Familiar: Ruby, R, Liquid, Julia

More Software Programs

· Proficient: Mathematica, LaTeX, Git/GitHub, RStudio, VSCode
· Familiar: MatLab

ACADEMIC ACHIEVEMENTS & ACCOLADES

Research Accolades

· First Place in the Research Poster Competition at James Madison's SUMS Conference 2018

Academic Accolades

· Phi Beta Kappa Honorary Society Member
· Ohio State Maximus Scholarship & Ohio State Mathematics Department Scholarship Recipient
· Ohio State Dean's List (Multiple Semesters/Years)

LEADERSHIP, ORGANIZATIONS, & OUTREACH

Professional Memberships

· American Mathematical Society (AMS) Member September 2019 - Present
· Spectra: The Association for LGBTQ+ Mathematicians Member November 2020 - Present

Honors & Scholars Program Peer Mentor August 2016- May 2019
Ohio State College of Arts & Sciences *Sophmore through Senior Year*

· I assisted and mentored new freshman acclimating to college in their first year, in and out of class
· I lead group discussions, and helped with student degree planning as part of an associated survey course

Mathematics Peer Mentor August 2019 - May 2020
Ohio State Mathematics Department *Senior Year*

· I individually paired with two freshman majoring in mathematics as part of a new mentoring initiative
· We met to discuss their difficulties and how to overcome them in the first year