

# DAVID POPOVIĆ

dpopovic@math.ucla.edu

UCLA Department of Mathematics

Los Angeles, CA, 90095-1555

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## EDUCATION

- **University of California, Los Angeles**, United States **2021 – 2026**
  - PhD student of Mathematics
  - Advisor: Prof. Sucharit Sarkar
- **University of Cambridge**, United Kingdom **2017 – 2021**
  - Master of Mathematics
  - Grade: Distinction
  - BA in Mathematics
  - Grade: First class honours

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## PUBLICATIONS

- Knots of low knot Floer width  
D. Popović ArXiv:2405.08993
- Link Floer homology splits into snake complexes and local systems  
D. Popović ArXiv:2306.05546
- Algebraic realizability of knot Floer-like complexes  
D. Popović ArXiv:2306.04861
- The soluble radical and orbits of certain maps on finite groups  
D. Popović and J. S. Wilson, *Journal of Algebra*, 2022, **607**, 733-748. ArXiv:2010.03944
- Distinguishing crystallographic groups by their finite quotients  
P. Piwek, D. Popović and G. Wilkes, *Journal of Algebra*, 2021, **565**, 548-563. ArXiv:1910.09845

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## SCHOLARSHIPS AND AWARDS

- Horn-Moez Prize for excellence in first year graduate studies **2022**  
*UCLA Department of Mathematics*
- Lipmann Fellowship **2021 – 2022**  
*UCLA Department of Mathematics*
- Research project funding **2019, 2020**  
*Department of Pure Mathematics, University of Cambridge*
- Ad Futura Scholarship for undergraduate degree **2017 – 2020**  
*Republic of Slovenia*
- Prize for excellent exam performance **2018, 2020**  
*Churchill College, University of Cambridge*
- Zois Scholarship for exceptional academic achievements **2013 – 2017**  
*Republic of Slovenia*
- Gold medal at the Middle European Mathematical Olympiad **2016**
- Bronze medal at the International Mathematical Olympiad **2015**

- 1<sup>st</sup> prize at the Slovenian national competition in mathematics

**2013 – 2017**

## TALKS

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| ◦ Caltech Geometry and Topology Seminar, Pasadena, CA<br><i>Algebraic structure of knot Floer homology</i>                                   | January 2025  |
| ◦ UCLA Topology Seminar, Los Angeles, CA<br><i>Higher dimensional Heegaard Floer homology and Hecke algebras</i>                             | November 2024 |
| ◦ Graduate Student Topology and Geometry Conference 2024, East Lansing, MI<br><i>Algebraic structure of knot Floer and HOMFLY homologies</i> | April 2024    |
| ◦ UBC Topology Seminar, Vancouver, Canada<br><i>Algebraic structure of knot Floer homology</i>   | March 2024    |
| ◦ Stanford Topology Seminar, Palo Alto, CA<br><i>Algebraic structure of knot Floer homology</i>  | February 2024 |
| ◦ Advancement to Candidacy Talk, UCLA, Los Angeles, CA<br><i>Algebraic structure of knot Floer homology</i>                                  | October 2023  |
| ◦ UCLA Topology Seminar, Los Angeles, CA<br><i>Legendrian knots in <math>\mathbb{R}^3</math></i>   | October 2023  |
| ◦ UCLA Topology Seminar, Los Angeles, CA<br><i>The pairing theorem in bordered Heegaard Floer homology</i>                                   | February 2023 |
| ◦ UCLA Algebra Seminar, Los Angeles, CA<br><i>Chromatic Homotopy Theory Through the Lens of Tensor Triangular Geometry</i>                   | April 2022    |
| ◦ UCLA Algebraic Topology Seminar, Los Angeles, CA<br><i>Higher Algebra: Stable <math>\infty</math>-categories</i>                           | January 2022  |
| ◦ Summer Research Festival, Cambridge, UK<br><i>On Profinite Completions of Crystallographic Groups</i>                                      | October 2019  |
| ◦ Slovenian IMO team preparation lecture, Ljubljana, Slovenia<br><i>Diophantine Equations in Olympiad Number Theory</i>                      | January 2019  |
| ◦ Slovenian IMO team preparation lecture, Ljubljana, Slovenia<br><i>Olympiad Combinatorics - Invariants and Double Counting</i>              | December 2017 |

## CONFERENCES

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| ◦ Graduate Student Topology and Geometry Conference 2025, Bloomington, IN                        | April 2025    |
| ◦ The Joint Los Angeles Topology Seminar, Pasadena, CA   | November 2024 |
| ◦ The Joint Los Angeles Topology Seminar, Los Angeles, CA  | November 2024 |
| ◦ 2024 Geometry and Topology workshop at UCLA, Los Angeles, CA                                   | January 2024  |
| ◦ The Joint Los Angeles Topology Seminar, Pasadena, CA   | October 2023  |
| ◦ RTG conference: Topology of 3- and 4-dimensional manifolds, Princeton, NJ                      | July 2023     |
| ◦ Nearly Carbon Neutral Geometry and Topology conference, online                                 | June 2023     |
| ◦ The Joint Los Angeles Topology Seminar, Los Angeles, CA  | March 2023    |
| ◦ Winter school in Singularities and Low-dimensional Topology at Erdős Center, Budapest, Hungary | January 2023  |

- The Joint Los Angeles Topology Seminar, Los Angeles, CA November 2022
- MIT Talbot Workshop:  $K$ -theory and Scissors Congruence, New Lebanon, NY June 2022

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### TEACHING

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- Teaching assistant at UCLA for
  - Introduction to Probability 2025
  - Calculus of Several Variables 2024
  - Mathematics of Finance 2024
  - Linear Algebra 2024, 2025
  - Differential and Integral Calculus 2023
  - Introduction to Statistics 2023, 2025
  - Introduction to Topology 2023
  - Introduction to Discrete Structures 2022, 2023, 2024
  - Linear Algebra and Applications 2021, 2022
- Grader at DMFA 2017 – 2020  
*graded problems for competitions organized by the Slovenian mathematical society*
- Grader at Art of Problem Solving 2018 – 2019  
*graded homeworks for online math classes organized by the AoPS*

### SERVICE

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- Co-organizer of UCLA Topology seminar 2023
  - *Bordered Heegaard Floer homology*
  - *Legendrian contact homology*
- Organizer of the selection process for the teams representing Slovenia at international math competitions. Also 2017 – 2020
  - Deputy Leader at Middle European Mathematical Olympiad (MEMO) 2020
  - Leader at MEMO in Pardubice, Czechia 2019
  - Deputy leader at MEMO in Bielsko-Biala, Poland 2018

### OUTREACH

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- Mentor at Directed Reading Program at UCLA
  - Covering spaces and  $\pi_1$  2023
  - Putnam and beyond 2023
  - Classification of low-dimensional manifolds 2021
- Co-organizer and mentor at Akademeia Privée summer camp 2019  
*a science summer camp for high-school students*
- Co-organizer and mentor at MaRS 2018  
*a math summer camp for high-school students*
- Main organizer and speaker at a math club for high-school students 2015 – 2017

### SKILLS

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Computation: Python, Matlab, GAP, LaTeX  
 Languages: English (fluent), German (basic)