

Andrew Ortegaray

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EDUCATION

- Ψ **California Institute of Technology (Caltech)** Pasadena, CA
Bachelor of Science in Mathematics; GPA: 3.5
Sep. 2016 – June 2020 (Expected)
- Ψ **Arcadia High School** Arcadia, CA
High School Diploma; GPA: 3.94
Aug. 2012 – June. 2016

EXPERIENCE

- Ψ **California Institute of Technology** Pasadena, CA
Teaching Assistant
March 2018 – Present
- ψ Ph 1 The yearlong introductory physics course at Caltech. Graded student papers, typeset new solutions, and assisted students with course topics.
 - ψ Ma 0 The introduction to proofs course at Caltech. Held weekly office hours and graded student assignment on topics including the Peano axioms and complex numbers.
- Ψ **Prep School Consulting (PrepSC)** Arcadia, CA
STEM Tutor
April 2018 – Present
- ψ PrepSC is a company formed to help students grow and prepare for college. Tutored students in mathematics and physics, and provided preparation for related AP exams.
- Ψ **Private Tutoring** Nationally
Tutor
Dec. 2016 – Present
- ψ Provided tutoring services across the LA county and nationally for students in courses ranging from Algebra 1, to Calculus, to Bayesian Statistics, etc.

PROJECTS

- Ψ **Summer Undergraduate Research Fellowship (SURF)** Pasadena, CA
Research Fellow
June 2016 – June 2017
- ψ SURF is a Summer research program by Caltech. Participated in research analyzing linguistic data in a geometric setting. See papers below.
- Ψ **Youth Math League** Arcadia, CA
Lead Coach
Jan. 2019 – Present
- ψ Youth math program organized with PrepSC to prepare 5th/6th grade students for Olympiad-style competitions. Organized practice and lessons for students weekly.
- Ψ **calTechers for a Sustainable Future (TSF)** Pasadena, CA
Secretary
Aug. 2018 – Present
- ψ TSF is a student club at Caltech focused on community environmental awareness and sustainability of Caltech. Performed secretary duties and worked on club projects.

KNOWLEDGE/SKILLS

- Ψ **Languages/Software:** Fusion 360, Inventor, L^AT_EX, Mathematica, Python, R, Spanish (Intermediate)
- Ψ **Mathematics:** Abstract Algebra, Algebraic Topology, Real/Complex Analysis, Riemannian Geometry...

PAPERS

- Ψ [arXiv:1712.01719](#) | “Phylogenetics of Indo-European Language families via an Algebro-Geometric Analysis...”
- Ψ [arXiv:1803.09832](#) | “Heat Kernel analysis of Syntactic Structures”