Sam Sehayek

Graduate Teaching Associate
University of California Santa Barbara
ssehayek@math.ucsb.edu
ssehayek.weebly.com

Education

Doctorate, Mathematics *University of California, Santa Barbara* — Candidate
Advisor: Jon McCammond GPA: 4.00

Master of Arts, Mathematics *San Francisco State University* — June 2018
Advisor: Joseph Gubeladze GPA: 3.98

Bachelor of Science, Mathematics *University of California, Davis* — June 2014
Minor in Philosophy GPA: 3.53

Research

Real Polynomials and Dual Braids — In Preparation

Symmetric Noncrossing Partitions — In Preparation

Unit-Interval Parking Functions and the Permutahedron — In Preparation

Parking Functions of Fixed Displacement — In Preparation

Master's Thesis: *Geometric Extensions and the 1/3—2/3 Conjecture* — Defended Spring 2018
Advisor: Joseph Gubeladze

Expository: *On the Containment Problem* — Spring 2017

Teaching

University of California Santa Barabara, Department of Mathematics — 2018–Present
Instructor Math 34A Calculus for Social Sciences Summer I 2020
Math 4A Linear Algebra Summer I 2021
Teaching Assistant Math 34A/B Calculus for Social Sciences W/S20; W/S19; F18
Math 2/3A Calculus I F20; M19
Math 4A Linear Algebra F/W21; F19; S22
Math 8 Proof Techniques S21
Math 108B Advanced Linear Algebra W22
Lead Teaching Assistant Training/mentoring 1st year Teaching Assistants — 2020–2021

Summer Institute in Mathematics & Science (SIMS), CNSI — 2020–Present
Lead Instructor Linear Algebra and its Applications
Program development, Academic preparation for incoming freshman.

Summer@ICERM, ICERM, Providence, RI — 2022
Research Mentor for computational combinatorics REU

San Francisco State University, Department of Mathematics — 2017–2018
Instructor Math 199 Precalculus Spring 2018, Spring 2017;
Math 70 Entry Math II Fall 2017
Teaching Assistant Math 226 Calculus I Fall 2017

ArborBridge, Los Angeles, CA — 2015
Tutor Professional tutoring services in Geometry, and SAT, ACT, ISEE prep

University of California, Davis Department of Mathematics — 2012–2014
Grader for Linear Algebra, Differential Equations, & Calculus for Biological Sciences

Private Tutor Los Angeles and Davis, CA — 2007–2014
Topics in Geometry, Algebra, Statistics, Calculus, and Symbolic Logic

Awards & Honors

Academic Senate Outstanding TA Award — Nominee 2022
GSA Excellence in Teaching Award — Nominee 2021
Achievement Rewards for College Scientists (ARCS) Scholar 2017–2018
College of Sciences and Engineering Student Showcase — 3rd Place 2018
Dean's Honor List 2011, 2014
National Society for Leadership and Success — Inducted Member 2013
Judy Zadeh Memorial Scholarship 2010

Computer Skills

Proficient in Mathematica ; Macauluy2 ; SAGE ; Python ; MATLab ; Gameplan

Mathematics Presentations

Summer@ICERM Providence, Rhode Island Summer 2022
Braids, Real Polynomials, and Symmetric Noncrossing Partitions
Hyperplane Arrangements
Topology Seminar University of California Santa Barbara
Braids and the Space of Complex Polynomials Spring 2021
Graduate Topology Seminar University of California Santa Barbara
Dual Braids and Polynomials Winter 2021
Hypatian Seminar University of California Santa Barbara
How to Give a Talk Fall 2021
Equity in Math Classrooms Spring 2020
Hypatia: Modern Woman of Antiquity Fall 2018 & 2019
Directed Reading Program University of California Santa Barbara Spring 2019
Graduate School in Mathematics
ARCS Symposium Stanford University Spring 2018
COSE Student Showcase San Fracisco State University
Graduate Student Research Showcase San Francisco State University
Poster: *Geometric Extensions and the 1/3 — 2/3 Conjecture*
Algebraic Topology Seminar San Francisco State University Fall 2017
Fundamental Group of S^n
Classification of Surfaces
Mathematics of Global Change Seminar University of California, Davis Spring 2013
Copernican Revolution, Kepler, and the Mars Year

Community Engagement

Directed Reading Program Mentor for Yanru Liu: Primitive Parking Functions 2022
Jake Annis: Non-Simplicial Faces of Polytopes 2021
Helen Chen: Visualizing 4D Polytopes 2020
Colbert Orta: On Toric Varieties 2019
Hypatian Seminar: Voices of Under-represented Mathematicians; Lead Organizer 2018–Present
Mathematistas: For the advancement of Women & Gender Minorities in Math; Member 2016–Present
American Mathematical Society(AMS) Member 2016–Present
Planet Hope Volunteer 2002–2015
California Scholarship Foundation Tutor 2008–2010

Extracurricular

EFR and CPR Certified; *Advanced SCUBA* PADI Certified; *Awarded Homebrewer*; *Guitarist*; *Martial Artist* Tae Kwon Do (2nd Degree Black Belt); Hapkido (Green Belt); Hwa Rang Do (Green Belt)