COOPER KAURI JACOB

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EDUCATION

University of California, Davis   Fall 2016–Summer 2022
    Ph.D. in Mathematics   GPA 3.88
    Thesis Title: *Topological Recursion of Generalized bc-Motzkin Numbers*   Summer 2022
    Advisor: Motohico Mulase

University of California, Berkeley
    Intercampus Exchange Program   GPA 4.0   Fall 2017
    Bachelor of Arts in Mathematics   GPA 3.82   Fall 2014–Spring 2016

College of Marin
    (coursework in lieu of high school)   GPA 4.0   Fall 2009–Spring 2014

EMPLOYMENT

Lecturer of Mathematics at University of California, Davis   Fall 2022-present

Graduate Student Associate Instructor at University of California, Davis   Summer 2020, Summer 2021

Teaching Assistant at University of California, Davis   Fall 2016-Spring 2022

RESEARCH INTERESTS

Differential Geometry, Complex Geometry, Combinatorics, Topological Recursion.

TECHNOLOGY SKILLS

Google Suite (Gmail, Google Docs, Calendar, Google Drive, Google Sheets, Google Slides, Google Forms)

Microsoft Office (Excel, Word, PowerPoint)

Apple iWork (Pages, Numbers, Keynote)

Zoom, BlueJeans, Canvas Conferences video conferencing applications

LaTex, PlainTeX, Beamer

MATLAB, Mathematica

Canvas, Piazza, Gradescope

Digital Photography, Video Editing, Website Design

AWARDS AND HONORS

U.C. Davis Schwarze Scholarship in Mathematics
    (awarded each year to two mathematics graduate students at U.C. Davis
    who have demonstrated excellence in teaching and academic ability)   June 2021

Member of Phi Beta Kappa Honors Society   Spring 2016–present

U.C. Berkeley Dean's Honors List for College of Letters and Sciences   Spring 2015

Member of Phi Theta Kappa Honors Society   Spring 2011–Spring 2014

TEACHING EXPERIENCE

University of California, Davis, Lecturer: (ALL CLASSES IN-PERSON)

Third-Quarter Calculus for Engineers (Math 21C) (approx. 100 students)	Fall 2022
Linear Algebra (Math 22A) (approximately 275 students)	Fall 2022
First-Quarter Short Calculus (Math 16A) (approx. 100 students)	Winter 2023 (future class)
Second-Quarter Calculus for Biology and Medicine (Math 17B) (approximately 275 students)	Winter 2023 (future class)
Second-Quarter Short Calculus (Math 16B) (approximately 275 students)	Spring 2023 (future class)
Linear Algebra (Math 22A) (approx. 100 students)	Spring 2023 (future class)

University of California, Davis, Associate Instructor: (BOTH CLASSES HELD ONLINE / REMOTELY)

Linear Algebra (Math 22A) (approximately 60 students)	Summer 2020, Summer 2021

University of California, Davis, Lead Teaching Assistant:

First-Quarter Calculus for Biology and Medicine (Math 17A) (served as a liaison between instructor, TAs, and students, including coordinating accommodations for students with disabilities and answering logistical questions for students and TAs)	Fall 2021

University of California, Davis, Teaching Assistant: Fall 2016–Spring 2022

Complex Analysis (Math 185A)	Winter 2019, Fall 2020, Winter 2021, Winter 2022
Combinatorics (Math 145)	Fall 2020, Winter 2022
Topics Class on the Mathematics of Theoretical Physics (Math 180)	Fall 2018
Differential Equations (Math 22B)	Spring 2019, Winter 2021
Linear Algebra (Math 22A)	Spring 2017, Fall 2017, Winter 2018, Spring 2018, Winter 2019, Winter 2020, Spring 2020, Spring 2021, Fall 2021, Spring 2022
Third-Quarter Calculus for Engineers (Math 21C)	Winter 2017
First-Quarter Calculus for Engineers (Math 21A)	Fall 2016

University of California, Berkeley, Course Reader:

Complex Analysis (Math 185)	Summer 2019
Abstract Algebra (Math 113)	Summer 2015

ARTICLES

Topological Recursion of Generalized bc-Motzkin Numbers
  (preprint, arXiv:2111.12839)   November 2021

PRESENTATIONS

Equivariant Cohomology and the First Eigenvalue of a Modified Laplacian
  (U.C. Davis Student-Run Research Seminar)   May 2019

The Figure-Eight Knot
  (U.C. Davis graduate Hyperbolic Geometry topics class)   April 2017

Hyperbolic Knots
  (U.C. Berkeley undergraduate Introduction to Research via Knot Theory class)   May 2016

The Mosaic Number of Knots
  (U.C. Berkeley undergraduate Introduction to Research via Knot Theory class)   March 2016

Celtic Knots
  (U.C. Berkeley undergraduate Combinatorial Topology topics class)   May 2015

PROFESSIONAL DEVELOPMENT TRAININGS ATTENDED

Creating Accessible Course Materials Workshop
  (held by U.C. Davis Center for Educational Effectiveness)   Spring 2022

Gatekeeper Training to Support Student Mental Health Workshop
  (held by the U.C. Davis Office of Student Affairs)   Fall 2021

Unlocking the Inspiring Aspects of Teaching Course
  (self-paced course on mentorship, inclusivity, and engagement,
  held by the U.C. Davis Center for Educational Effectiveness)   Spring 2021

Accelerate Asynchronously Course
  (self-paced course on online and hybrid class (re)design and teaching
  best practices, with a focus on equity and inclusion,
  held by the U.C. Davis Center for Educational Effectiveness)   Fall 2020

Inclusive Online Course Design Workshop
  (held by U.C. Davis Center for Educational Effectiveness)   Summer 2020

PROFESSIONAL AFFILIATIONS

American Mathematical Society

Association for Women in Mathematics

Mathematical Association of America

Society for Industrial and Applied Mathematics

SERVICE

U.C. Davis SIAM Chapter Treasurer   Fall 2021–Spring 2022

Volunteer Foster Care Provider for Guide Dogs for the Blind   Spring 2005–present

Forum Moderator for Death Valley hiking forum (dv.netllama.us)   Fall 2020–present

CONFERENCES AND SUMMER SCHOOLS ATTENDED

MSRI May 12 Celebration for Women in Mathematics, year 2022 (online) May 2022

American Mathematical Society 2022 Short Course on 3D Printing (online) January 2022

Graduate Student Geometry and Topology Conference
  (online, hosted by Indiana University, Bloomington) April 2021

MAA Golden Section Meeting (online) February 2021

Topology Students Workshop
  (online, hosted by Georgia Institute of Technology) July 2020

2020 Virtual Workshop on Ricci and Scalar Curvature (online) Spring 2020

Southern California Geometric Analysis Seminar
  (U.C. Irvine, received partial funding to attend) February 2020

New Developments in Quantum Topology Conference
  (U.C. Berkeley, received partial funding to attend) June 2019

Bay Graduate Math Conference (U.C. Berkeley) May 2019

AMS Fall Western Sectional Meeting (San Francisco State University) October 2018

Minimal Surfaces, Flows, and Relativity Summer School
  (University of Connecticut, received partial funding to attend) July 2018

Minimal Surfaces and Mean Curvature Flow Conference (Stanford University) July 2018

MSRI Summer School on the dbar Problem in the 21st Century June 2018

Geometry and Analysis on Manifolds Conference (U.C. Santa Barbara) May 2018

AMS/MAA Joint Mathematics Meeting 2018 (San Diego) January 2018

Bay Area Differential Geometry Seminar (U.C. Davis) April 2017