
Education

- 2022 (exp.) **University of California, Los Angeles (UCLA), Ph.D. Mathematics.**
Thesis: *Explicit homotopies of Liouville domains.*
Advisor: Ko Honda
- 2016 **Northwestern University, B.A. Mathematics with Honors.**
Magna Cum Laude, Phi Beta Kappa
Thesis: *Fredholm operators and the family index.*
Advisor: Ezra Getzler

Selected Awards

UCLA

- 2021 **Beckenbach Fellowship.**
2021 **Liggett Teaching Fellow Award.**

Northwestern University

- 2015, 2016 **Outstanding Contributions to Undergraduate Mathematical Life.**
2016 **Outstanding Achievement in Mathematics by a Graduating Senior.**
2015 **Excellence as an Undergraduate Teaching Assistant.**

Publications

- 2021 **Mitsumatsu's Liouville domains are stably Weinstein.**
arXiv preprint. <https://arxiv.org/abs/2109.07615>.
(Joint with A. Christian.)
- 2021 **Morse-Smale characteristic foliations and convexity in contact manifolds.**
Proc. Amer. Math. Soc. 149 (2021), 3977-3989.
- 2017 **On the sign characteristic of Hermitian linearizations in $\mathbb{D}\mathbb{L}(P)$.**
Linear Algebra and its Applications. 519 (2017), 73-101.
(Joint with M. Bueno, S. Ford, and S. Furtado.)

Teaching Experience

UCLA (Primary Instructor)

Linear Algebra.

Math 115A
Spring 2021

Calculus of Several Variables (Honors).

Math 32AH
Fall 2020

UCLA (Teaching Assistant)

Calculus of Several Variables.

Math 32B
Spring 2020

Calculus of Several Variables.

Math 32A

Winter 2020

Integration and Infinite Series.

Math 31B

Fall 2017, Winter 2018, Spring 2018, Fall 2018, Winter 2019, Spring 2019, Fall 2019, Winter 2020

Differential and Integral Calculus.

Math 31A, 31AL

Fall 2017, Fall 2019

Honors Linear Algebra.

Math 115AH

Spring 2018

Linear Algebra with Applications.

Math 33A

Spring 2018

Northwestern University (Teaching Assisant)**Linear Algebra.**

Math 240-0

Spring 2016

Single Variable Integral Calculus.

Math 224-0

Fall 2014, Winter 2015, Winter 2016

Multivariable Differential Calculus.

Math 230-0

Winter 2015, Fall 2015

Mathematical Foundations of Computer Science.

EECS 212-0

Fall 2015

Service and Other Experience**UCLA**

2020-2021 **Graduate student representative**, *math department Teaching Committee.*

2021 **Instructor**, *Math Summer Bridge Program.*

One of two lead instructors for the math department's pilot Summer Bridge program for incoming underrepresented students. Designed the curriculum, prepared materials, executed lessons, and oversaw a group of undergraduate mentors.

2019-2021 **Instructor**, *Center for Excellence in Engineering and Diversity Summer Bridge Program.*

A single variable calculus preparatory course for incoming underrepresented students. Designed the curriculum, prepared materials, and executed lessons.

2019-2021 **Independent study supervisor.**

Yijie Pan: Morse theory and Morse homology.

Kartik Tandon: Homology and cohomology.

Aditya Nambiar: Complex analysis.

2020-2021 **Study night assistant**, *Center for Excellence in Engineering and Diversity.*

Northwestern University

- 2015-2016 **Head coordinator**, *Undergraduate Mathematics Society*.
Organized weekly meetings and scheduled guest speakers.
- 2014 **Teaching assistant**, *Center for Talent Development Summer Program*.
Introduction to Java Programming and *Web Development with Ruby on Rails* for 7th and 8th grade students.

Lingjie English School, Yueyang, China

- 2013 **Summer instructor**.
Primary instructor for four classes of students ages 12-14. Designed a summer curriculum, planned daily lessons, prepared classroom materials, and administered daily instruction.

Talks

- June 2021 **An introduction to conformal symplectic geometry**, *Virtual Kylerec Seminar*.
- May 2021 **Quilted Floer homology and the geometric construction of $A-\infty$ functors**, *UCLA Topology Seminar*.
- Mar. 2021 **Explicit homotopies of Liouville domains**, *AIM Workshop on Conformal Symplectic Structures, Contact Structures, and Foliations*.
- Sep. 2020 **Gluing a Morse flowline to itself**, *Rice Obstruction Bundle Gluing Seminar*.
- Sep. 2020 **The Hofer-Zehnder capacity**, *UCLA Topology Seminar*.
- Jul. 2020 **TQFTs in dimension ≥ 3** , *UCLA Topology Learning Seminar*.
- May 2020 **Gromov's h-principle**, *UCLA Topology Learning Seminar*.
- Jan. 2020 **A really hard infinite series**, *UCLA GSO Seminar*.
- Nov. 2019 **A really hard integral**, *UCLA GSO Seminar*.
- May 2019 **Sheaves, derived categories, and DG categories**, *UCLA Topology Seminar*.
- May 2019 **The Busemann-Petty problem**, *UCLA GSO Seminar*.
- Mar. 2019 **Systolic geometry and Gromov's inequality**, *UCLA GSO Seminar*.
- Apr. 2017 **Index theory and Toeplitz operators**, *UCLA GSO Seminar*.
- Aug. 2015 **Sign characteristic preserving linearizations in $\mathbb{D}\mathbb{L}(P)$** , *Ohio State Young Mathematicians Conference*.

Conferences and Workshops

- Sep. 2021 **Annual Faculty Workshop on Best Equitable Practices in Teaching**, *UCLA Center for Education Innovation and Learning in the Sciences*.
- Jul. 2021 **Tech Topology Summer School**, *Georgia Institute of Technology*.
- May 2021 **Mathematics Teacher-Scholar Symposium**, *Reed College*.
- Mar. 2021 **Workshop on Conformal Symplectic Structures, Contact Structures, and Foliations**, *AIM*.
- Jan. 2019 **Symplectic Geometry and Homotopy Theory**, *UCLA*.
- Jul. 2018 **The Topology and Geometry of Low-Dimensional Manifolds**, *University of Texas at Austin*.
- Aug. 2017 **Summer Northwestern Analysis Program in PDEs**, *Northwestern University*.
- Aug. 2015 **Young Mathematicians Conference**, *The Ohio State University*.