

MEREDITH SHEA

CIRRICULUM VITAE

Updated February 2022

University of California, Berkeley

Department of Mathematics

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EDUCATION

EXP 2022 **PhD in Mathematics**
University of California, Berkeley
Advisor: Nicolai Reshetikhin

2016 **BS in Applied Mathematics**
Case Western Reserve University
Summa cum laude

RESEARCH INTERESTS

Mathematical physics, quantum and statistical mechanics, combinatorics, probability. Currently I'm interested in the asymptotic behavior of various two-dimensional lattice models.

PAPERS AND PRE-PRINTS

Dimer model on the square lattice with interface, arXiv (2022). <https://arxiv.org/abs/2202.04210> (preprint)

Generalized Gelfand-Yaglom formula for a discretized quantum mechanic system, J. Math. Phys. 62, (2021). <https://doi.org/10.1063/5.0059030>

TEACHING

Lead instructor

SPRING 2022 Precalculus, math 32
SUMMER 2021 Linear algebra, math 110
SUMMER 2020 Linear algebra, math 110
SUMMER 2019 Calculus, math 1B
SUMMER 2017 Calculus, math 1B

Graduate student instructor (GSI)

FALL 2020 Discrete math, math 55
SPRING 2020 Linear algebra and differential equations, math 54
FALL 2019 Linear algebra, math 110
SPRING 2018 Linear algebra and differential equations, math 54
FALL 2017 Calculus, math 1B
SPRING 2017 Calculus, math 1B
FALL 2016 Calculus, math 1B

INVITED TALKS

A Generalized Gelfand-Yaglom formula

NOV 2020 Representation theory and mathematical physics seminar, *UC Berkeley*
FEB 2020 SwissMAP winter school in mathematical physics, *Les Diablerets*

ORGANIZATIONAL AND OUTREACH

- 2021 Private tutor
- FALL 2020 Directed reading program mentor
- SPRING 2019 Student spin geometry seminar co-organizer
- SPRING 2019 Directed reading program mentor
- FALL 2018 Directed reading program mentor

AWARDS AND FELLOWSHIPS

- 2018 Mentored research award fellowship, UC Berkeley
- 2017 Outstanding graduate student instructor award, UC Berkeley
- 2016 George T. Hunt Award, CWRU
To a senior outstanding in leadership, scholarship, and service.
- 2016 Case Alumni Award, CWRU
To an outstanding senior mathematics major.