

Hadrian Quan

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Education

- 2016-2021 PhD in Mathematics, University of Illinois Urbana Champaign
- 2015-2016 MA in Mathematics, University of Illinois Urbana Champaign
- 2011-2015 BA in Pure Mathematics (with Honors in the Major), University of California Santa Cruz

Grants, honors, & awards

- 2020 **Kuo-Tsai Chen Prize in Mathematics**,
(Department prize for outstanding graduate research in geometry and analysis) UIUC
- 2016 **National Science Foundation Graduate Research Fellowship**
- 2015 **Outstanding Presentation Award**, San Antonio Joint Mathematics Meeting: MAA Undergraduate Poster Session, in the category of Analysis

Publications, Talks, & Conferences

JOURNAL ARTICLES

- 2022 **High energy resolvent estimates and the wave kernel on asymptotically complex hyperbolic manifolds**
In preparation
- 2022 **The Calderón problem for the fractional Dirac operator**
with G. Uhlmann.
<https://arxiv.org/abs/2204.00965>
- 2020 **Sub-Riemannian Limit of the differential form heat kernels of contact manifolds**
with P. Albin.
International Mathematics Research Notices
<https://academic.oup.com/imrn/advance-article-abstract/doi/10.1093/imrn/rnaa270/5921740>
- 2016 **Infinite Products Arising in Paperfolding** with L. Almodóvar, V. Moll, F. Roman, E. Rowland, and M. Washington. Journal of Integer Sequences, vol. 19 (2016) Article 16.5.1

TALKS

- 2022 UW Seattle Math, Rainwater Seminar
“Fractional Dirac operators and geometric reconstruction”
- 2020 CRM Spectral Geometry in the Clouds (Young researchers in spectral geometry mini-conference),
“The Heat Kernel of a Contact Manifold in the Sub-Riemannian Limit”
[Recording available here](#)
- 2019 MSRI Microlocal Analysis Program (Graduate Student Seminar), **“The Heat Kernel of a Contact Manifold in the Sub-Riemannian Limit”**
- 2019 AMS Spring Eastern Sectional Meeting, (Special Session on Sub-Riemannian and CR geometric analysis), **“Diabatic Limits of Heat Kernels on Contact Manifolds”**

CONFERENCES AND WORKSHOPS ATTENDED

- 2019 Mathematical Science Research Institute, “Microlocal Analysis”, August 23-December 13
- 2018 Banff International Research Station, “Asymptotically Hyperbolic Manifolds”, May 13th to May 18th, 2018.
- 2016 Casa Matematica Oaxaca, “Geometric and Spectral Methods in PDEs”, December 11-15
- 2016 Fields Institute, “Topology, Stratified Spaces, and Particle Physics Summer School”, August 6-11

Teaching & Grading

AT UW SEATTLE

- 2021-2022 **Instructor, Math 224 Advanced Multivariable Calculus** Fall 2021, Winter 2022

AT UIUC

- 2020 **TA, Math 415 Linear Algebra** Fall 2020.
- 2018 **TA, Math 285 Differential Equations** Spring 2018, [On the list of Teachers ranked as excellent by their students](#)
- Grader, Math 525 Algebraic Topology** Spring 2018.
- 2017 **TA, Math 231 Calculus II** Fall 2017, [On the list of Teachers ranked as excellent by their students](#)
- 2016 **TA, Math 241 Calculus III**, Spring 2016, [On the list of Teachers ranked as excellent by their students](#)
- 2015 **TA, Math 241 Calculus III**, Fall 2015, [On the list of Teachers ranked as excellent by their students \(Outstanding\)](#)

Service

- 2019 Lead Organizer of the 17th Annual [Graduate Student Topology and Geometry Conference](#) (GSTGC 2019), a conference with an attendance of 178+ graduate students, and featuring talks from 3 plenary speakers, 3 young faculty, and 28 graduate researchers
- 2016-2019 [Illinois Geometry Lab](#) Research Manager: Summer 2016-Present
- 2016-2017 UIUC Association for Women in Mathematics academic committee member: Organizer for Graduate Student Colloquium: Fall 2016-Spring 2017
- 2016 [Sonia Math Day for High School Girls](#)-Helped lead the activity: An infinite stroll through Wonderland.
- 2013-2015 Academic Excellence Program (academic support for undergraduate STEM students from under-represented groups in STEM), Section Co-leader: Facilitated collaborative group learning learning problem sessions and peer mentoring for selected courses in math.