

## EDUCATION

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### UNIVERSITY OF CHICAGO

*Candidate for Ph.D. in Physics*

**GPA: 4.0/4.0**

*September 2020 - Current*

**Selected Coursework:** Quantum Information Science · Quantum Computation  
Quantum Programming and Verification · Quantum Complexity Theory

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

*B.S. in Physics and Philosophy with minor in Music and Mathematics*

**GPA: 4.9/5.0**

*August 2016 - June 2020*

## RESEARCH EXPERIENCE

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### MICHELSON CENTER FOR PHYSICS

*Research Assistant to Prof. Clay Cordova*

Chicago, IL

*July 2020 - Current*

- Studied the physics behind Topological Quantum Computing
- Currently investigating Spin-TQFT's and the associated Tensor Categories

### DEPARTMENT OF NUCLEAR SCIENCE AND ENGINEERING

*Research Assistant to Prof. Mingda Li*

Cambridge, MA

*February 2019 - June 2020*

- Studied Kohn anomalies in Topological Weyl Semi-metals using QFT
- Characterized behaviour of Semi-metals via spectroscopy at Oak Ridge

### KAVLI INSTITUTE FOR ASTROPHYSICS

*Research Assistant to Prof. Scott Hughes*

Cambridge, MA

*Dec 2016 - Feb 2018*

- Devised a framework to calculate inclined inspiral trajectories into Kerr Black holes
- Implemented a code to numerically compute inspiral trajectories

## SELECTED PUBLICATIONS

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- Topological Signatures in Nodal Semimetals through Neutron Scattering [Arxiv:2101.04046](#)  
*To appear in Physical Review B*
- Topological Singularity Induced Chiral Kohn Anomaly in a Weyl Semimetal [PhysRevLett.124.236401](#)
- Learning about black hole binaries from their ringdown spectra [PhysRevLett.123.161101](#)
- Exciting black hole modes via misaligned coalescences: [PhysRevD.100.084031](#)  
I. Inspiral, transition, and plunge trajectories using a generalized Ori-Thorne procedure
- Exciting black hole modes via misaligned coalescences: [PhysRevD.100.084032](#)  
II. The mode content of late-time coalescence waveforms

## PROFESSIONAL ACTIVITIES

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- Poster Presentation at conference 'Topological Quantum Matter' KITP, Santa Barbara
- Participated in STAQ Quantum Ideas Summer School Duke University, Durham
- Participated in the Third ERC (HoloBHC) Solvay Workshop on Holography ULB, Brussels
- Talk at APS 2018 April meeting held in Columbus, Ohio [APS Presentation](#)
- Invited outreach talk: 'Physics in Everyday Life' SRM University, Chennai

## HONORS AND AWARDS

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- Awarded **Nambu Fellowship** for being the highest rated applicant to the Ph.D. Program
- **Phi Beta Kappa** inductee from the Class of 2020
- **Gold Medal** in Asian Physics Olympiad 2015
- **Silver Medal** in International Physics Olympiad 2015

## SKILLS

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- Computer Skills: Mathematica, Python, Coq and C++ programming