# David Grabovsky

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## Education

**University of California, Santa Barbara (UCSB)** *Sep. 2019 – present*
*M.S. in Physics. GPA: 3.88/4.00.*
*Ph.D. in Physics. Expected: June 2025.*

**Thesis:** semiclassical quantum gravity and holography. **Advisor:** David Berenstein.

**Columbia University in the City of New York** *Sep. 2015 – May 2019*
*B.A. in physics; B.A. in mathematics. GPA: 3.78/4.00; Dean's List.*

**Thesis:** The Limits of the Hubbard Model. **Advisor:** Sebastian Will.

## Research Experience

**Theoretical physics:** quantum fields, strings, and gravity *Apr. 2020 – present*
*Group of David Berenstein (UCSB)*

**Experimental physics:** AMO, condensed matter, high-energy experiment *Jun. 2014 – May 2019*
*Will Lab (Columbia), Pasupathy lab (Columbia), instrumentation (Penn)*

**Programming:** Mathematica, Python, Matlab, LaTeX, Microsoft Office, HTML/CSS
**Languages:** Native fluency in English and Russian

## Publications

1. **D. Grabovsky** and M. Kolanowski, "Spin-Refined Partition Functions and $\mathcal{CRT}$ Black Holes" [arXiv:2406.07609]. (To be published in *JHEP*.)
2. **D. Grabovsky**, "Heavy States in 3d Gravity and 2d CFT," *JHEP* **07**, 287 (2024), doi:10.1007/JHEP07(2024)287 [arXiv:2403.13757].
3. D. Berenstein, **D. Grabovsky**, and Z. Li, "Aspects of Holography in Conical $AdS_3$," *JHEP* **04**, 029 (2023), doi:10.1007/JHEP04(2023)029 [arXiv:2205.02256].
4. D. Berenstein and **D. Grabovsky**, "The Tortoise and the Hare: A Causality Puzzle in AdS/CFT," *Class. Quant. Grav.* **38**, No. 10, 105008 (2021) [arXiv:2011.08934].

## Conferences, Seminars, and Schools

### Conference Talks

"Heavy and Thermal States in 3d Gravity," 40th Annual Pacific Coast Gravity Meeting (UCSB) *Mar. 2024*
"Heavy States in 3d Gravity and 2d CFT," It from Qubit 2023 (Perimeter – virtual poster) *Aug. 2023*
"Aspects of Holography in Conical $AdS_3$," 39th Annual Pacific Coast Gravity Meeting (Caltech) *Mar. 2023*
"A Causality Puzzle in AdS/CFT," 37th Annual Pacific Coast Gravity Meeting (virtual) *Mar. 2021*

### Seminar Talks

"Heavy States in 3d Gravity and 2d CFT," high-energy theory seminar (EPFL) *Mar. 2024*
"Heavy States in 3d Gravity and 2d CFT," string theory journal club (CERN) *Mar. 2024*
"Heavy States in 3d Gravity and 2d CFT," string theory seminar (University of Geneva) *Mar. 2024*
"Heavy States in 3d Gravity and 2d CFT," journal club seminar (TC Dublin) *Mar. 2024*
"Heavy States in 3d Gravity and 2d CFT," string seminar (University of Amsterdam) *Mar. 2024*
"Heavy States in 3d Gravity and 2d CFT," fields and strings seminar (Cambridge) *Mar. 2024*
"Aspects of Holography in Conical $AdS_3$," particle theory HEP seminar (Cornell) *Sep. 2023*
"Aspects of Holography in Conical $AdS_3$," Particle astrophysics seminar (Case Western) *Sep. 2023*
"Aspects of Holography in Conical $AdS_3$," High energy physics seminar (UCSB) *May 2023*

**Other:** I give talks at UCSB's high-energy journal club and the Society of Physics Students. I also spoke at Columbia's Undergraduate Mathematics Society and to high school students through Columbia Splash.

### Summer Schools

Advanced Summer School in QFT and QG (ICISE – Quy Nhon, Vietnam) *Jul. 2023*
Celestial Holography Summer School (Perimeter Institute – Ontario, Canada) *Jul. 2024*

## Honors and Awards

- Awarded the UCSB Graduate Division Dissertation Fellowship (2024).
- Awarded the UCSB Physics Department's Physics Circus and Outstanding TA Awards (2022).
- Nominated for the UCSB Academic Senate's Outstanding TA Award (2019 and 2022).
- Awarded the Worster Summer Fellowship for work with David Berenstein and Ziyi Li (2021).
- Nominated for the UCSB Graduate Student Association's Excellence in Teaching Award (2020).
- Awarded summer fellowships from Columbia's Alumni and Parent Internship Fund and the Work Exemption Program for work in experimental physics with Sebastian Will (2016 – 2018).
- Head organizer of UCSB's high-energy physics journal club (2023 – present).
- President and webmaster of Columbia's Society of Physics Students (2017 – 2019).

## Teaching and Mentorship

**Teaching Associate** *Jun. 2022 – Jul. 2022*
Taught an advanced undergraduate course on classical mechanics and special relativity as the instructor.

**Teaching Assistant** *Sep. 2019 – present*
TA'd 17 lower- and upper-division physics courses across all subjects, including in UCSB's honors college.

**Outreach and Advising** *Oct. 2015 – present*

- Member of Physics Circus, which brings physics to younger, diverse audiences at local elementary schools.
- Graduate advisor and member of Undergraduate Diversity and Inclusion in Physics (UDIP).
- Mentored undergraduates through UDIP, advising them on coursework, grad school applications, research opportunities, and advanced topics. My mentees have become successful grad students at top schools.
- At Columbia, taught math and physics classes to high school students (Splash), organized demonstrations for middle school students (Society of Physics Students), and tutored undergrads in the math help room.