HASSAAN SALEEM

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Inspire ◇ Google Scholar ◇ LinkedIn

RESEARCH INTERESTS

- String Theory
- Swampland Program
- Conformal Field Theories

EDUCATION

- Ph.D. in Theoretical Physics, SUNY Albany, Albany, New York — Aug 2020 - Present
  - Ph.D. Dissertation: In preparation
  - Doctoral Advisor: Dr. Daniel Robbins
- Master of Science in Physics, SUNY Albany, New York — Aug 2020 - May 2023
  - Relevant Coursework: QFT, Introduction to String Theory
  - Academic Advisor: Dr. Daniel Robbins
- HECAP Postgraduate diploma, ICTP, Trieste, Italy — Sep 2019 - Aug 2020
  - Relevant Coursework: Lie Algebras, QFT, GR & Cosmology and The Standard Model
  - Master Thesis: Magnetic Monopoles, duality and Supersymmetry
  - Thesis advisor: Dr. K.S. Narain
- Master of Science in Physics, University of the Punjab — Oct 2018 - Dec 2020
  - Relevant Coursework: QFT, The Standard Model, Computational Physics
  - Thesis: Review of Seiberg Witten duality
  - Thesis Advisor: Dr. Bushra Haider
- Bachelors of Science in Physics, University of the Punjab — Oct 2014 - May 2018

LIST OF PUBLICATIONS

- Daniel Robbins and Hassaan Saleem. "O(16) × O(16) heterotic theory on $AdS_3\times S^3\times T^4$". In: *JHEP* 03 (2026), p. 212. DOI: 10.1007/JHEP03(2026)212. arXiv: 2510.20915 [hep-th]
- Ivano Basile, Daniel Robbins, and Hassaan Saleem. "Non-supersymmetric heterotic strings on $AdS_4 \times S^3 \times S^3$". In: (Apr. 2026). arXiv: 2604.18692 [hep-th]
- Yucong Cai, Daniel Robbins, and Hassaan Saleem. "Constraining boundary conditions in nonrational CFTs". In: *Phys. Rev. D* (2026). DOI: 10.1103/44rr-dz2y. arXiv: 2504.00367 [hep-th]
- Ariel Caticha and Hassaan Saleem. "Entropic Dynamics Approach to Relational Quantum Mechanics". In: *Entropy* 27.8 (2025), p. 797. DOI: 10.3390/e27080797. arXiv: 2506.07921 [quant-ph]
- Daniel Robbins and Hassaan Saleem. "O(16)×O(16) heterotic theory at *ADE* points". In preparation

CONFERENCES AND WORKSHOPS ATTENDED

- Eurostrings 2024, University of Southampton, UK — Sep 2024
- Simons Physics Summer Workshop, SCGP, SUNY Stony Brook, NY, USA — Aug 2025

EXPERIENCE

- **Teaching assistant**, SUNY Albany, Albany, New York — Aug 2020 - July 2024
  Responsibilities: Teaching first and second-year undergraduate physics labs, grading lab reports, and grading homeworks for graduate physics courses.
- **Adjunct Professor**, SUNY Albany, Albany, New York — July 2024 - December 2025
  Responsibilities: Teaching physics courses and assisting TAs in their grading duties.
- **Research assistant**, SUNY Research foundation, Albany, New York — May 2025 - Aug 2025
  Responsibilities: Contributing to research on the symmetry enhancement in $c = 1$ conformal field theories
- **Teaching assistant**, SUNY Albany, Albany, New York — Jan 2026 - Present
  Responsibilities: Teaching first and second-year undergraduate physics labs, grading lab reports, and grading homeworks for graduate physics courses.

INVITED TALKS

- Eurostrings 2024: Parallel session talk (Recording) — Sep 2024
- OIST, Okinawa, Japan: Quantum Gravity seminar talk (Recording) — Feb 2026
- McGill University, Montreal, Canada: Theory HEP seminar talk (Recording) — Mar 2026
- 'Stringy Seminars' series: Seminar talk (Recording) — Mar 2026
- Masaryk University, Czechia: Theory seminar (Recording) — Apr 2026
- String-Pheno seminar series (Coming Up) — May 2026

ACADEMIC SERVICES

- **Physics graduate student Liaison**, SUNY Albany, Albany, New York — May 2023 - July 2024
  Responsibilities: Reporting the concerns and suggestions from graduate students to the physics graduate committee and representing the graduate student body on various occasions.
- **Lecturer for ICTP Physics Without Frontiers**, School on GR and Cosmology — May-July 2025
  Recordings of the lectures: Lecture 5, Lecture 6, Lecture 7, Lecture 8

AWARDS RECEIVED

- Excellence in Comprehensive Exam Performance Award, at Department of Physics, SUNY Albany. — May 2021
- Best student talk award at 2023 PASCAL conference, at Department of Physics, SUNY Albany. — Dec 2023
- Akira Inomata Award for excellence in theoretical Physics research, at Department of Physics, SUNY Albany. — May 2026

SCIENTIFIC OUTREACH

- I make videos essays and other videos on my YouTube channel about Physics and Mathematics. These videos also include lecture videos for topics in theoretical physics. I also host a podcast on my channel named PhyMaths Podcast to discuss cutting-edge topics in theoretical physics and adjacent areas with the researchers working in these areas. In addition, I have the following appearances for the purpose of scientific outreach
  - Session on Kainaat Astronomy
  - Discussion to push back against physics misinformation

  - Interactive session about quantum gravity with students at PIEAS, Pakistan
  - Appearance on Desi Academia podcast to discuss theoretical physics
  - Several appearances [1, 2, 3, 4] to explain physics to students and lay audience
- I write popular science articles in some newspapers/magazines (e.g. this article), on my blog, which is found on my website. I also convert these articles to Twitter threads for a wider reach.

OTHER INTERESTS

- Other than physics and mathematics, I am very interested in moral and political philosophy, philosophy of science, and other related topics. My reading list is available on my Goodreads account.