

CONTACT INFORMATION

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EDUCATION **University of Houston**, College of Natural Sciences and Mathematics, Texas, USA. 2022–Present

- PhD Candidate in the Theoretical Particle Physics Group.
Advisor: Prof. Claudia Ratti

University of Houston, College of Natural Sciences and Mathematics, Texas, USA. 2022–2025

- Master of Science in Physics.

Durham University, Ustinov College, Durham, UK. 2018–2019

- Postgraduation in Particles, Strings and Cosmology

Amity University Noida, India. 2015–2018

- B.Sc(Honours) – Physics.

PUBLICATIONS

- **Merging multidimensional equations of state of strongly interacting matter via a statistical mixture.** Phys. Rev. D 113 (2026) 11, 114018. doi:10.1103/pvte-zdyw. arXiv:2601.07987 [nucl-th].
- **Thermodynamically Consistent Merging of Multidimensional QCD Equations of State.** Conference proceeding for Strangeness in Quark Matter 2026. arXiv:2608.20526 [nucl-th].
- **Studying the QCD Matter produced in Heavy-Ion Collisions using the MUSES Calculation Engine.** arXiv:2606.26326 [nucl-th].

CURRENT RESEARCH

1. **PhD Thesis.**
Advisor: Prof. Claudia Ratti, *University of Houston, USA*.
2. **Holography with Multiple Conserved Charges.**
Collaborators: Prof. Claudia Ratti, *University of Houston, USA*; Prof. Jorge Noronha, *University of Illinois Urbana-Champaign, USA*; Dr. Mauricio Hippert, *Centro Brasileiro de Pesquisas Fisicas, Brazil*.
3. **Ising 4D TExS.**
Collaborators: Prof. Claudia Ratti, *University of Houston, USA*; Prof. Mikhail Stephanov, *University of Illinois Chicago, USA*.

ACHIEVEMENTS

- **Best Presentation Award** in the High Energy Session at the **University of Houston Research Day 2026**.
- Selected as an **APS Student Ambassador**, 2025–2026.
- **Cullen Graduate Travel Fellowship 2025**.
- **2025 Underrepresented Minority Travel Award**.
- **Graduate Tuition Fellowship 2025**.
- **Best Presentation Award** at the **Houston APS Space City Symposium 2025**.
- **Best Presentation Award** in the High Energy Session at the **University of Houston Research Day 2025**.
- **Public Choice Award** at the **NSM Three Minute Thesis 2024**.

TEACHING/ LEADERSHIP EXPERIENCE	• APS Student Ambassador	2025–2026
	• Women in Physics Society, APS Chapter President	2023–2025
	• Lead Teaching Assistant	2022–2024
	• University Physics II: Teaching Assistant	2023
	• Undergraduate Classical Mechanics (Physics 1101): Teaching Assistant	2022
TALKS	• The Mystery of Time: Is The Universe Stuck Moving Forward? [Public invited talk] After5Society, Patterson Park Patio Bar, Houston, Texas, August 18, 2026.	
	• What is the Universe Made of? The Quantum Field Story [Public invited talk] After5Society, The Library, Houston, Texas, April 1, 2026.	
	• Merging multidimensional equations of state of strongly interacting matter via a statistical mixture [Colloquium invited talk] Department of Physics, Indian Institute of Technology Delhi, January 15, 2026.	
	• Merging multidimensional equations of state of strongly interacting matter via a statistical mixture [Conference talk] Strangeness in Quark Matter 2026, Los Angeles, California, March 24, 2026.	
	• QCD Equation of State from Black Hole and Hadronic Physics [Conference talk] APS Division of Nuclear Physics 2025, Chicago, Illinois, October 18, 2025.	
	• QCD Equation of State from Holography and HRG [Conference talk] APS Global Physics Summit 2025, Anaheim, California, March 2025.	
	• QCD Equation of State from Holography and HRG [Conference talk] Texas Section of the APS Meeting 2025, University of Houston, Texas, April 2025.	
	• An Introduction to String Theory Swampland [Conference talk] Texas Section of the APS Meeting 2022, Rice University, Houston, Texas, October 14, 2022.	
	• Open problems in Theoretical Physics [Public invited talk] Amity University Noida, India, 2021.	
	• On the Foundations of Quantum Mechanics [Public invited talk] Christ University, Bangalore, India, 2020.	
	• Gravitational Waves and Blackholes [Public invited talk] Beyond Portals Head Quarters, New Delhi, India, 2018.	
	• Nuclear Physics from Multi-Messenger Mergers Summer School.	June 2025 <i>Indiana University, Indiana, USA.</i>
SUMMER/ WINTER SCHOOL	• 101 Introduction to Cluster Computing.	August–October 2023 <i>University of Houston's Hewlett Packard Enterprise Data Science Institute (HPE DSI).</i>
	• Qiskit Global Summer School 2023.	July–August 2023 <i>IBM Quantum.</i>
	• Dualities in Topology and Algebra.	01–13 February 2021 <i>International Centre for Theoretical Sciences, TIFR.</i>
	• Kavli Asian Winter School on Strings, Particles and Cosmology.	10–23 January 2022 <i>International Centre for Theoretical Sciences, TIFR.</i>
	• Nonperturbative and Numerical Approaches to Quantum Gravity, String Theory and Holography.	18–22 January 2021 <i>International Centre for Theoretical Sciences, TIFR.</i>
SCIENCE COM- MUNICATION	• The Knowmads Podcast	
	• Social media science communication with over 100K followers on Instagram	