

## EDUCATION

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2019 - Present	<b>Doctor of Philosophy, Physics</b> Rice University, Houston, TX GPA: 3.94/4.00   Advisor: Prof. Guido Pagano with <b>Master of Science, Physics</b> (conferred May 2023) and <b>Graduate Certificate in Teaching and Learning</b> (completed May 2025)
2015 - 2019	<b>Bachelor of Science, Physics (Professional)</b> University of Oklahoma, Norman, OK <i>Summa Cum Laude</i> with Honors GPA: 3.98/4.00   Advisor: Prof. Eric R. I. Abraham Thesis: "Magneto-optical cooling and trapping of neutral Rubidium-87 gas" <i>Davis United World College Scholarship</i>
2013 - 2015	<b>International Baccalaureate (Bilingual)</b> United World College of Adriatic, Trieste, Italy <i>Scholarship from the Italian Ministry of Foreign Affairs</i>

## RESEARCH EXPERIENCE

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2020 - Present	<b>Graduate Research Assistant</b> Rice University, Houston, TX Advisor: Prof. Guido Pagano <ul style="list-style-type: none"><li>Designed, constructed, and maintain a room-temperature trapped-ion apparatus for quantum simulation and computing (first in Texas, United States)</li><li>Lead and perform quantum simulation experiments of excitation and charge transfer dynamics with engineered reservoirs</li><li>Collaborate with Prof. Norbert Linke's group at Duke University and Translume Inc. on the development of next-generation ion traps and contributed as a <u>co-inventor</u> to the <b>Monolithic Three-Dimensional Ion Trap</b> (U.S. Provisional Patent 63/471,173)</li><li>Supervise, mentor, and support undergraduate and graduate research assistants</li><li>Assist with precision spectroscopy projects, theoretical investigations, and literature reviews</li><li>Report findings in peer-reviewed journals and at scientific conferences</li><li>Peer-review original research articles for <i>Nature Communications</i>, <i>PRX Quantum</i>, and <i>Physical Review Applied</i></li></ul>
2019	<b>Graduate Research Assistant</b> Rice University, Houston, TX Advisor: Prof. Randall G. Hulet <ul style="list-style-type: none"><li>Worked on generating ultraviolet light for laser-cooling Lithium atoms using a bowtie-configuration doubling cavity</li></ul>
2017 - 2019	<b>Undergraduate Research Assistant</b> University of Oklahoma, Norman, OK Advisor: Prof. Eric R. I. Abraham <ul style="list-style-type: none"><li>Designed and constructed a tri-axial magnetic coil system for ultracold atom apparatus</li><li>Assisted with the experiment on the transfer and conversion of images based on electromagnetically induced transparency (EIT) in ultracold Rubidium atoms</li><li>Studied the propagation of Laguerre-Gaussian beams created by diffractive optics</li></ul>

## TEACHING EXPERIENCE

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2020 - 2021	<b>Teaching Assistant</b> Rice University, Houston, TX
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	<ul style="list-style-type: none"> <li>• Held laboratory sessions and evaluated reports for General Physics I and II</li> </ul>
2016 - 2019	<b>Peer Learning Assistant and Study Skills Consultant</b> Student Learning Center, University of Oklahoma, Norman, OK <ul style="list-style-type: none"> <li>• Held tutoring sessions for Physics I and II for Engineering and Science Majors</li> <li>• Held one-on-one and group tutoring appointments for Elementary and Intermediate Algebra and General Physics I and II for all Majors</li> <li>• Held one-on-one consultations and group presentations on time management, test-taking, reading comprehension, and note-taking</li> <li>• Assisted with study skills development at <i>Test Prep Nights</i></li> <li>• Attended annual conferences and semester trainings</li> </ul>

## SERVICE EXPERIENCE

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2021 - 2022	<b>Elected Secretary</b> , Physics and Astronomy Graduate Student Association Rice University, Houston, TX <ul style="list-style-type: none"> <li>• Prepared meeting agendas and minutes</li> <li>• Communicated with members and assisted with application forms</li> </ul>
2017 - 2018	<b>Elected Secretary</b> , Student Association of Southeast Asian Nations University of Oklahoma, Norman, OK <ul style="list-style-type: none"> <li>• Prepared meeting agendas and minutes</li> <li>• Communicated with members and assisted with application forms</li> <li>• Designed publicity materials including posters, flyers, and banners</li> <li>• Won the 2018 Most Active Cultural Association on OU-Norman Campus Award</li> </ul>

## RESEARCH PRESENTATIONS

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Invited Talk (Finalist), *Quantum Talents Symposium in Munich* (Munich, Germany; 2025)  
Poster Presentation, *Rice Thematic Working Interest Group Meeting* (Texas, United States; 2025)  
Poster Presentation, *Texas Quantum Submit* (Texas, United States; 2025)  
Oral Presentation, *QSim Conference* (New York City, United States; 2025)  
Oral Presentation, *Rice SCI Summer Research Colloquium* (Texas, United States; 2025)  
Oral and Poster Presentations, *APS DAMOP Meeting* (Oregon, United States; 2025)  
Invited Talk, *Rice Quantum Group Meeting Seminar Series* (Texas, United States; 2025)  
Poster Presentation, *Rice Thematic Working Interest Group Meeting* (Texas, United States; 2024)  
Poster Presentation, *North American Conference on Trapped Ions* (California, United States; 2024)  
Oral and Poster Presentations, *Rice SCI Summer Research Colloquium* (Texas, United States; 2024)  
Oral Presentation, *APS DAMOP Meeting* (Texas, United States; 2024)  
Poster Presentation, *Rice SCI Summer Research Colloquium* (Texas, United States; 2023)  
Poster Presentation, *APS DAMOP Meeting* (Washington, United States; 2023)  
Oral Presentation, *Rice SCI Summer Research Colloquium* (Texas, United States; 2022)  
Poster Presentation, *APS DAMOP Meeting* (Florida, United States; 2022)  
Oral Presentation, *Rice SCI Summer Research Colloquium* (Texas, United States; 2021)  
Poster Presentation, *APS DAMOP Meeting* (Remote; 2021)

## SELECTED HONORS, AWARDS, AND CERTIFICATIONS

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2025	Quantum Talents Award <i>Issued by</i> IMPRS-QST, Munich Quantum Valley, MCQST, Women in Quantum Optics, Max-Planck Institute for Quantum Optics <i>Sponsored by</i> planqc <i>Selected as one of five awardees for the outstanding work on "Quantum Simulation of Open-System Chemical Dynamics with Trapped Ions" from twelve finalists, chosen from a global pool of applications by outstanding, driven early-career researchers in quantum computing</i>
2025	Henry F. and Margaret Dunlap Fellowship

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|      |  | <i>for two upper-level physics graduate students showing exceptional performance in scholarship and research at Rice University</i>               |
| 2019 |  | 4.0 Medallion<br><i>for undergraduate students with an overall 4.0 GPA at the University of Oklahoma (one of only two international students)</i> |
| 2019 |  | J. Clarence Karcher Award<br><i>for the outstanding senior in physics and astronomy at the University of Oklahoma</i>                             |
| 2018 |  | Duane E. Roller Award<br><i>for the outstanding junior in physics and astronomy at the University of Oklahoma</i>                                 |
| 2018 |  | Phi Beta Kappa Honor Society's Elected Membership   |
| 2018 |  | Ian and Richard Crawford Outstanding Study Consultant Award   |
| 2017 |  | Master Certified Tutor, Level III from CRLA's International Tutor Training Program  |

## PATENTS

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| 2023 |  | U.S. Provisional Patent 63/471,173, "Monolithic three-dimensional ion trap"<br>Inventors: G. Pagano, R. Zhuravel, <u>V. So</u> , M. Duraisamy Suganthi, A. Sheffield, A. Menon, H. De Luo, M. Strauss, N. M. Linke, and M. Dugan |
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