VISAL SO

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EDUCATION

Rice University, Houston, TX
Doctor of Philosophy in Physics, GPA: 3.94/4.00 — Expected graduation: May 2026
with Graduate Certificate in Teaching and Learning and Master of Science in Physics

University of Oklahoma, Norman, OK
Bachelor of Science in Physics (Professional), GPA: 3.98/4.00 (*Summa Cum Laude*, with Honors) — May 2019
Davis United World College Scholar

United World College of Adriatic, Trieste, Italy
International Baccalaureate Diploma – Bilingual — May 2015
Scholarship from the Italian Ministry of Foreign Affairs

RESEARCH EXPERIENCE

Graduate Research Assistant, Advisor: Guido Pagano, Rice University, Houston, TX — January 2020 – Present
- Modeled, designed, constructed, and maintained a room-temperature trapped-ion apparatus for quantum simulation and computing
- Lead and perform quantum simulation experiments of open-system chemical dynamics
- Collaborate with the group of Professor Norbert Linke at Duke University and Translume Inc. and contributed to the invention of the "Monolithic Three-Dimensional Ion Trap" resulting in the United States Patent Application No. 63/471,173
- Supervise and mentor undergraduate and graduate research assistants
- Report findings in peer-reviewed journals and at scientific conferences

Graduate Research Assistant, Advisor: Randall G. Hulet, Rice University, Houston, TX — July 2019 – December 2019
- Worked on generating ultraviolet light for laser cooling of Lithium atoms using a bowtie-configuration doubling cavity

Undergraduate Research Assistant, Advisor: Eric R. I. Abraham, University of Oklahoma, Norman, OK — August 2017 – May 2019
- Modeled, designed, and constructed a tri-axial square coil system for ultracold atom apparatus
- Assisted with the experiment on the transfer and conversion of images based on electromagnetically induced transparency in ultracold Rubidium atoms

WORK EXPERIENCE

Teaching Assistant, Rice University, Houston, TX — January 2020 – December 2021
- Held laboratory sessions and evaluated reports for General Physics I and II

Peer Learning Assistant and **Study Skills Consultant,** University of Oklahoma, Norman, OK — January 2016 – May 2019
- Held tutoring sessions and appointments for undergraduate STEM courses
- Held consultations and study skill development appointments and sessions
- Attended annual conferences and semester trainings

SELECTED HONORS, AWARDS, AND CERTIFICATIONS

Quantum Talents Award, sponsored by planqc, in Munich, Germany — 2025
Henry F. and Margaret Dunlap Fellowship for Outstanding Upper-Level Physics Graduate Student at Rice University — 2025
4.0 Medallion at the University of Oklahoma, one of only two international student recipients — 2019
J. Clarence Karcher Award for Outstanding Senior in Physics and Astronomy at the University of Oklahoma — 2019
Duane E. Roller Award for Outstanding Junior in Physics and Astronomy at the University of Oklahoma — 2018
Phi Beta Kappa's Elected Membership, the oldest academic honor society in the United States — 2018
Ian and Richard Crawford Outstanding Study Consultant Award at the University of Oklahoma — 2017
Master Certified Tutor, Level III of CRLA's International Tutor Training Program Lifetime Certification

SELECTED RESEARCH PUBLICATIONS

V. So, M. D. Suganthi, A. Menon, M. Zhu, R. Zhuravel, H. Pu, P. G. Wolynes, J. N. Onuchic, and G. Pagano. Trapped-ion quantum simulation of electron transfer models with tunable dissipation. *Science Advances* **10**, eads8011 (2024)

V. So, M. D. Suganthi, M. Zhu, A. Menon, G. Tomaras, R. Zhuravel, H. Pu, P. G. Wolynes, J. N. Onuchic, and G. Pagano. Quantum simulation of charge and exciton transfer in multi-mode models with engineered reservoirs. Accepted at *Nature Communications* (2025)

V. So, M. Zhu, M. D. Suganthi, A. Menon, G. Tomaras, R. Zhuravel, H. Pu, and G. Pagano. Experimental realization of thermal reservoirs with tunable temperature in a trapped-ion spin-boson simulator. arXiv: 2511.08689 (2025)