Hang Su

Curriculum Vitae

Contact Information

Phone (+1) 860 501-5562

Email HangSu@mit.edu

Website HangChelseaSu.github.io/

Education

2019–2023 **Bachelor of Science, Mathematics (Physics Minor),** *College of Arts and Sciences,* University of New Haven, West Haven, CT, USA.

Major GPA: 4.00 Overall GPA: 4.00

Research

6/2022 – Present **Using machine learning to catalog accreted stars in Gaia ESA DR3 survey,** *Massachusetts Institute of Technology*.

Advisors: Lina Necib Ph.D., Tri Nguyen, Nora Shipp Ph.D., MIT Kavli Institute for Astrophysics and Space Research.

3/2022 **A Functional Equation Motivated by the Tangent Function,** *University of New Haven*.

Advisor: Ramesh Sharma, Ph.D., Department of Mathematics and Physics.

11/2021 – Present **Simulations of Vector Rotating Oscillons,** *Rice University*.

Advisor: Hong-Yi Zhang, Theoretical Cosmology Group, Physics.

12/2021 – Present **Atmospheric and Computational Chemistry,** *University of New Haven & Duke Kunshan University*.

Advisors: Dequan Xiao, Ph.D., Chong Qiu, Ph.D., Chemistry and Chemical Engineering Department.

6/2021 – 4/2022 **Can the Shape of Our Universe Explain the Dark Matter?,** *University of New Haven*.

Advisors: Nikodem Poplawski Ph.D., Kevin Green Ph.D., Department of Mathematics and Physics.

10/2019 – 10/2020 **Single-Atom Zinc Catalyst for Co-Production of Hydrogen and Fine Chemicals in Soluble Biomass Solution,** *University of New Haven*.

Published paper: https://doi.org/10.1016/j.apmate.2022.100058

Advisor: Dequan Xiao, Ph.D., Chemistry and Chemical Engineering Department

Publication

2022 **Single-Atom Zinc Catalyst for Co-Production of Hydrogen and Fine Chemicals in Soluble Biomass Solution,** *Ma, J.; Li, X.; Li, Y.; Jiao, G.; Su, H.; Xiao, D.; Zhai, S.; Sun, R.*.

Advanced Powder Materials 2022, 1 (4), 100058. doi.org/10.1016/j.apmate.2022.100058

Conferences & Talks

4/2022 **National Conference on Undergraduate Research,** *Online*.

12 minutes of slide presentation: "Dark Energy and Dark Matter as Five-Dimensional Stereographic Projection."

11/2021 **Sigma Xi Student Research Conference,** *Online*.

Poster presentation: "Dark Energy and Dark Matter as Five-Dimensional Stereographic Projection."

10/2021 **Gulf Coast Undergraduate Research Symposium,** *Rice University, TX*.

15 minutes slide presentation: "Dark Energy and Dark Matter as Five-Dimensional Stereographic Projection."

10/2021 **Summer Undergraduate Research Fellowship Showcase,** *University of New Haven, CT*.

Video presentation: "Can the Shape of Our Universe Explain the Dark Matter?"

8/2021 **Summer Undergraduate Research Fellowship Presentation,** *Online*.

15 minutes slide presentation: "Can the Shape of Our Universe Explain the Dark Matter?"

Honors & Awards

2022 **MIT Summer Research Program,** *Massachusetts Institute of Technology*.

2022 **Academic Excellence Award in Physics,** *University of New Haven.* Awarded to one student in the Department of Mathematics and Physics.

2022 **Academic Excellence Award in Mathematics,** *University of New Haven.* Awarded to one student in the Department of Mathematics and Physics.

2021 **Summer Undergraduate Research Fellowship – McHale Fellow,** *University of New Haven.* Awarded to 3 students in the SURF program.

2021 **CRLA International Tutor Training Program Certification Level 2,** *University of New Haven.* Completed training and tutoring hours.

2021 **CRLA International Mentor Training Program Certification Level 1,** *University of New Haven.* Completed training and mentoring hours.

2019 – Present **Dean's List,** *University of New Haven.* Awarded to undergraduate students with GPA of 3.50 or higher.

2019 – Present **Presidential Scholarship,** *University of New Haven.* Awarded to students with excellent high school performance.

2019 **The Hector and Wanda Levesque Memorial Scholarship Award for Science,** *Academy of the Holy Family*. Awarded to one graduating senior.

2019 **Valedictorian,** *Academy of the Holy Family*.

2018 **Worcester Polytechnic Institute 2018 STEM Leadership Book Award,** *Academy of the Holy Family.* Awarded to one student in the school.

2018 **UCONN Avery Point Book Award,** *Academy of the Holy Family.* Awarded to one student in the school.

2016 **The 4th International Deutscher Irmler – Klaviewettbewerb Piano Contest 1st Prize**.

2015 **China National Opera and Dance Drama Theater Piano Level 10/10**.

2013 **Chinese Dancers Association Level 9/10**.

2011 **Artwork Collection Certificate,** *Shenzhen Summer Universiade.* Artwork collected by Universiade athletes.

Employment

1/2022 – 6/2022 **Research Assistant,** *University of New Haven*.

8/2020 – 5/2022 **Leaching Assistant,** *University of New Haven*.

Spring 2022 PHYS 2205 Electromagnetism/Optics with Laboratory

Fall 2021 MATH 1118 Calculus II

Spring 2021 MATH 1118 Calculus II

Fall 2020 MATH 1118 Calculus II

8/2020 – 5/2022 **Undergraduate Peer Tutor,** *University of New Haven*.

Community Outreach

6/2022 **Organizer of SURF 2022 Alumni Panel,** *University of New Haven*.

Coordinated and hosted the Panel Discussion.

Established a network of SURF alumni and shared experience with 2022 SURF participants.

4/2022 **Volunteer at the Undergraduate Open House,** *University of New Haven*.

Represented the Department of Mathematics and Physics.

eached out to prospective students and parents about the program details.

3/2021 **Panelist at Courageous Conversations: The Rise in Anti-Asian Violence,** *University of New Haven*.

Delegated Asian international students to speak up against violence against Asian communities.
Responded and proposed new strategies to implement diversity and inclusion.

8/2021 – 8/2022 **President of Chinese Student and Scholar Association ,** *University of New Haven*.

Organized cultural events and maintained communication with the New York Chinese Consulate.
Managed a budget of approximately 8,000 dollars and distributed COVID-19 resources to international students.

8/2018 – 8/2019 **Student Council President,** *Academy of the Holy Family*.

Represented the student body at the school district and civic events and other meetings.

Developed the agenda for and presided over the meetings of the Student Council.

Computer Skills

Operating Systems	Linux, macOS, Windows.
Languages	Python, Jupyter Notebook, PyTorch, Bash, SQL, HTML, Markdown, LaTeX, RStudio.
Softwares	Avogadro, Gaussian, Vienna Ab initio Simulation Package, Visual Studio Code, GitHub, GarageBand, Microsoft Office Suite

Languages

English	Native Proficiency
Chinese	Native Proficiency
Japanese	Minimum Professional Proficiency, JLPT N1 (most advanced level)

Interests

- Piano, Vocal Recording (YouTube Channel: FelineClavicle)
- Swimming, Badminton, Basketball
- Asian Cooking