

LALITH ROOPESH

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Pre-medicine student looking to further passions in research and leadership in student engagement. Ample experience in many fields at the university and industry level, alongside strong leadership and teamwork ability. Currently interested in forming and running teams for new, important initiatives.

RESEARCH EXPERIENCE

Research Assistant, Tsai Lab (Tumor Biology at Moffitt Cancer Center), February 2023 - Present

Working on cell culture techniques to do confirmatory analysis and develop chemopreventative treatments using signaling pathways in cuSCC and MCPyV.

Research Assistant, Ullah Lab (Computational Biophysics at USF), March 2023 - Present

Working on project on computational pathway modeling of the onset of neuroinflammation (and subsequent neurodegeneration) due to calcium signaling in SARS-CoV-2 infection.

Research Organizer, Uversky Lab & Engineering Biology Core, October 2022 - April 2023

Homology modeling of vasopressin, oxytocin, dopamine 1, and dopamine 2 receptors across 76 species and molecular with standardized ligands to predict social behaviors. Presented at the 2023 Castle Conference and 2023 USF Undergraduate Research Conference.

Research Organizer, Engineering Biology Core, October 2022 - March 2023

Working on computational characterization of protein interactions with the Merkel cell polyomavirus and how that leads to development of Merkel cell carcinoma.

Bioinformatics Research Assistant, Eli Lilly & Company, June 2021 - July 2021

Worked on genome sequencing and error analysis as part of a paid internship through Indianapolis Project STEM. While the specific project was confidential, presented on techniques and skills learned as part of the program.

Data Analysis Research Assistant, Regenstrief Institute, June 2020 - July 2020

Analyzed factors leading to ICU admittance of Indiana COVID-19 patients using INPC data. Presented a thorough analysis of factors that may intensify COVID-19 and recommendations for further research.

LEADERSHIP & LOGISTICAL EXPERIENCE

During Undergraduate Study:

Founder and President, Bulls Science Olympiad, August 2022 - Present

Oversees hosting a Science Olympiad tournament at USF for over 1100 middle-school and high-school students across dozens of schools.

President, Intl. Society for Computational Biology Student Group Southeast USA, May 2023 - Present

Works to support ISCB student groups through the southeastern US by organizing research symposiums with international attendees and creating organizations at other universities.

Vice-President, Engineering Biology Core, January 2023 - Present

Oversees event planning and marketing for one of USF's largest student-run research organizations. Started two research projects within it, one of which is heading to publication.

Vice-President Internal, Society of Asian Scientists & Engineers, March 2023 - Present

Oversees all committees and most roles via one-on-one meetings and delegating tasks. Responsible for keeping the executive board running smoothly.

Peer Mentor Lead, Judy Genshaft Honors College, November 2022 - Present

Plans, creates curricula, trains teachers, and executes IDH 2930 Honors Foundations, a required class for all freshmen in the Judy Genshaft Honors College.

Co-founder and Financial Director, Journal of Interdisciplinary Sciences & Technology, February 2023 - Present

Involved in planning, garnering support for, and managing financials for a new undergraduate journal launched by USF undergraduates.

Planning Committee Chair, Engineering Biology Core, September 2022 - January 2023

Plans logistics for events and new initiatives, such as our first-ever research seminar and bioinformatics projects. Networked with USF faculty to build support.

Co-founder and Treasurer, Settle Out USF, September 2021 - January 2023

Handles funding and attendance for Settle Out USF, a club founded to help international students become accustomed to Florida.

Honors Peer Mentor, Judy Genshaft Honors College, June 2022 - October 2022

Taught a section of IDH 2930 Honors Foundations, a required class for all freshmen in the Judy Genshaft Honors College.

Events Committee Member, Honors College Student Council, September 2022 - February 2023

Plans and volunteers at events and general activities with the Judy Genshaft Honors College student council.

Event Supervisor for Science Olympiad, UC Davis, UT Austin, MIT, UC Berkeley, Stanford, UPenn, Caltech, August 2021 - Present

Writes college-level exams and supervises competition across numerous disciplines for high-profile competitions across the country.

Mayor, Juniper Hall Council, September 2021 - May 2022

Organized and executed activities and decorations for Juniper Hall at USF. Worked closely with Resident Assistants and the Residence Life Coordinator.

Before Undergraduate Study:

Captain (2020) and President (2021), Carmel HS Science Olympiad, September 2017 - May 2021

Competed for and ran a completely student-run team through two competition seasons, winning the State Tournament for four years consecutively and raising our National placement by 15.

Co-founder and Operations Head, Indiana HS Science Championships, May 2020 - August 2020

Co-founded and became in charge of tournament logistics for one of the first large-scale online science competitions after COVID-19 canceled most in-person opportunities. Had over 130 competitors from schools across the Midwest.

Instructor, Grandmaster Lee's Taekwondo, January 2018 - March 2020

Worked as an instructor for all belt levels, gaining experience working with all ages of people.

Instructor, First Start Computer Science Education, August 2017 - July 2019

Wrote curricula for and taught kids ranging from K-12. Taught Python and hardware courses, specifically using the Raspberry Pi.

EDUCATION

Carmel High School, Carmel, IN
Academic Honors Diploma
GPA: 4.5
Graduated May 2021

University of South Florida, Tampa, FL
B.S. Biomedical Sciences
Minors in Psychology and Biomedical Physics
Judy Genshaft Honors College
GPA: 3.98
Expected graduation: May 2025

AWARDS & SOCIETIES

Sigma Xi (2023)

USF College of Arts & Sciences Dean's List (Fall 2021 - Spring 2023)

National Merit Finalist & Florida Benacquisto Scholarship Recipient (2022)

Carmel High School Top Scholar (2018, 2019, 2020, 2021)

National AP Scholar (2021)

National Honors Society (2021)

SKILLS & TRAINING

Data analysis and general experience in Python & R

Familiar with PyMol, Autodock Vina, Alphafold, and other protein modeling/docking software

Basic wet-lab animal and human cell culture techniques

CITI Program Training through the University of South Florida:

Social and Behavioral Responsible Conduct of Research

Physical Science Responsible Conduct of Research

Biomedical Responsible Conduct of Research

CITI Program Training through Indiana University Health:

Social/Behavioral Researchers

Social and Behavioral Responsible Conduct of Research

Physical Science Responsible Conduct of Research

IUEHS Bloodborne Pathogen Training

IUEHS Biosafety Training

Good Laboratory Practice (GLP)

Biomedical Responsible Conduct of Research

Biomedical Researcher

Environmental Health & Safety Training through the University of South Florida

Lab Safety

Hazardous Waste Awareness and Handling

Lab Techniques Training through the University of South Florida:

CHM 2045L & 2046L

General Chemistry I & II Lab

CHM 2210L

Organic Chemistry I Lab

PCB 3063L
PCB 3023L

Genetics Lab
Cell Biology Lab

CITI Program Training through Regenstrief Institute

Researchers (Conflict of Interest)

Researchers (Responsible Conduct of Research)

Trained and experienced financial officer with USF Student Government

Experienced in website building in HTML5, CSS, and JavaScript

Research and Statistics Fundamentals

Microsoft Office Specialist Expert Certification (2018)

Leadership and Teamwork