Douglas Franz, Ph.D.

Professional Summary

Experienced computational scientist with a demonstrated history of development, maintenance and deployment of scientific software in several languages/platforms, resulting in internationally used programs with >1,000 downloads per year.

Strong leadership skills and experience managing research professionals resulting in 20+ publications in peer-reviewed journals and acquisition of >$1.8M in government grant funding. Successful research on DoD, DoE, NSF grants and other programs.

Effective communicator and instructor, excellent interpersonal skills, project planning and execution. Collaborative lead on international research projects in India, Ireland and China. Mentor to >5 graduate researchers; teacher/instructor to hundreds of undergraduate students and graduate students.

Work Experience

2021 - 2023 **Geospatial Data Scientist** Ursa Space Systems

Built and improved algorithms for radar image processing, including image formation, projection, machine learning object detection, and other analytics.

2020 **Adjunct Professor** Florida Institute of Technology

Taught courses in Systems Engineering (part-time).

2019 - 2021 **Scientist/Engineer** Rincon Research Corporation

Lead of software development for highly parallelized, machine learning radar physics applications. Active role in business development and contract acquisition.

2019 **Postdoctoral Scientist** Molekule

Conducted computational chemistry research for DoD grant -- interface chemistry simulations, optimization, minimization and related aspects

2014-2019 **Computational Scientist** University of South Florida Dept. of Chemistry

Ph.D. student/researcher. Performed computational/theoretical research using large datasets to create predictive models for molecular simulation. Created a full open-source molecular simulation package (https://github.com/khavernathy/mcmd) including a GUI for live visualization of simulation results using new and more efficient techniques.

2014-2019 **Chemistry Instructor** University of South Florida Dept. of Chemistry

Gave lectures and guided laboratory courses for 30-200 students per semester in physical, organic, general and introductory chemistry. Improved laboratory course outline based on student feedback and performance analyses.

Education

B.S.	Environmental Science & Policy	2014	*U. South Florida*
Ph.D.	Computational/Physical Chemistry	2019	*U. South Florida*

Technical Skills

C, C++, Python, Linux	MATLAB, CI/CD	Git, AWS, bitbucket	Javascript, jQuery
GPU programming	Parallel computing	SQL-type databases	HTML, CSS, Ruby
numpy, scipy, pandas	Cloud computing	ML: tensorflow, pytorch	Geospatial science
Quantum chemistry	Modeling, simulation	Aviation, Radar	ArcGIS, QGIS

Licenses/Credentials

➔ FAA Sport Pilot License

Professional Awards

➔ USF Presidential Scholars Award (2009, 2010)
➔ USF Undergraduate Research Scholarship (2009, 2010)
➔ Fred L. & Helen Tharp Endowed Scholarship (2010)
➔ Outstanding Undergraduate Research Presentation Award, Environmental Sciences, Florida Academy of Sciences (2011)
➔ Study Abroad Scholarship for study in Germany (Universität Osnabrück) (2013)
➔ Martin Travel Award for Graduate Research (to U. Texas at Austin) (USF) (2015)
➔ First Place Research Talk, USF Chemistry Castle Research Conference (2016)
➔ Alexiou Award in Environmental Chemistry, USF Dept. of Chemistry (2017)
➔ Outstanding Employee Recognition Award, Rincon Research (2020)
➔ US Geospatial Intelligence Foundation YPG Golden Ticket Award (2023)

Service/Leadership

➔ Hospice of Florida Suncoast volunteer (2007-2009)
➔ Research Conference Committee planning (co-)chair, USF Castle Conf. (2016-2019)
➔ University Lab and Field Safety Committee Member, USF (2014 – 2019)
➔ Environmental Health & Lab Safety Committee Member, Dept. of Chemistry, USF (2014 – 2019)
➔ Volunteer grant and proposal writer, Town of Melbourne, FL (2022)

Publications/Presentations

➔ 20+ academic publications in journals such as *Science*, *Journal of American Chemical Society,* etc. 400+ citations. [Google Scholar](#)
➔ 12+ professional talks in venues around the world (Florida, Texas, Maryland, Ireland, Belgium, etc.)