Hakeem Frank

Environmental Systems Research Institute (ESRI)
380 New York Street
Redlands, CA, 92399 U.S.A.

email: hakeemtfrank@gmail.com
URL: hakeemtfrank.github.io

Research Interests

Gaussian Processes • Computational Fluid Dynamics • Kernel Methods

Education

2018-2020   **MSc in Mathematics**, California Polytechnic State University, Pomona

2013-2017   **BSc in Mathematics**, Xavier University of Louisiana

Experience

07/2019-present   **Esri**, Redlands, CA
Data Scientist, User Analytics

01/2018-07/2019   **Esri**, Redlands, CA
Analyst, Business Development

02/2018-05/2020   **California Polytechnic State University**, Pomona, CA
Research Assistant, Computer Vision

09/2016-12/2016   **Propellor Startup Accelerator**, New Orleans, LA
Venture Fellow, Urban Agriculture

05/2016-05/2017   **Center of Computational Science**, New Orleans, LA
Research Fellow, Computational Fluid Dynamics

08/2015-05/2017   **Kostrov Lab**, New Orleans, LA
Research Fellow, Difference Equations

Papers & Talks

Journal articles

2020   **H. Frank**. "Gaussian Process Models for Computer Vision". *Master's Thesis.*

2017   A. Hoover, **H. Frank**, M. Kala, G. Sandler, R. Cortez, and L. Fauci. "Optimizing the Propulsive Performance of Heaving Panels with Nonuniform Elastic Profiles". *Submitted to Physical Review E in November 2017.*

2020   "Gaussian Processes for Aircraft Detection in Aerial Imagery", Oral Presentation, *California Polytechnic State University Mathematics and Statistics Colloquium*, Pomona, CA.

2017   "The Euler Number and Computer Vision", Oral Presentation, *Xavier University of Louisiana Math Colloquium*, New Orleans, LA.

2017   "Quantifying the Performance of Flexible Propulsors with Nonuniform Stiffness", Oral Presentation, *Xavier University of Louisiana Festival of Scholars Research Symposium*, New Orleans, LA.

2017   "Modeling the Impact of Sustainable Growing Practices on Urban Farms", Posterboard Presentation, *Xavier University of Louisiana Festival of Scholars Research Symposium*, New Orleans, LA.

2017   "Quantifying the Performance of Flexible Propulsors with Nonuniform Stiffness", Posterboard Presentation, *National Research Conference for McNair Scholars and Undergraduate Research*, College Park, MD.

2016   "Quantifying the Performance of Flexible Propulsors with Nonuniform Stiffness", Posterboard Presentation, *Annual Biomedical Research Conference for Minority Students (ABRCMS)*, Tampa, FL.

2016   "On the Boundedness Character of First Order Systems of Rational Difference Equations with Periodic Coefficients", Oral and Posterboard Presentation, *Xavier University of Louisiana Festival of Scholars Research Symposium*, New Orleans, LA.

Teaching

Spring 2017   **Xavier University of Louisiana**, New Orleans, LA
Ordinary Differential Equations, Teaching Assistant

Fall 2016   **Xavier University of Louisiana**, New Orleans, LA
Calculus II, Teaching Assistant

Fall 2016   **Xavier University of Louisiana**, New Orleans, LA
Statisics I, Teaching Assistant

2014-2017   **Xavier University of Louisiana**, New Orleans, LA
Calculus I-III, Mathematics Resource Center Tutor

Fellowships & Awards

2017   Ronald E. McNair Postbaccalaureate Program Scholar

2016	National Science Foundation RTG in Computational and Mathematical Biofluids
2015	National Institute of Health MARC U-STAR Grant Awardee
2013	Xavier University of Louisiana Full Merit Scholarship

Service

2020 - Present	**NorthStar GIS**, Redlands, CA *BRIDGE Program Volunteer*
2017-2018	**San Bernardino Mountains Wildlife Society**, Lake Arrowhead, CA *Wildlife Care Volunteer*
2016-2017	**Building Infrastructure Leading to Diversity (BUILD)**, New Orleans, LA *Peer Mentor*
2016-2017	**Xavier University of Louisiana Department of Mathematics**, New Orleans, LA *Student Mentor*
2014-2017	**Agrowtopia Farms**, New Orleans, LA *Farm Volunteer Coordinator*
June 2016	**Para El Mundo**, Mancora, Peru *Water Treatment Volunteer*

Software & Language Proficiencies

PROGRAMMING

Python, R, MATLAB, SQL, C++, Julia

CLOUD COMPUTING

AWS Redshift, Lambda, SageMaker, EC2, S3

SOFTWARE

ArcGIS, Tableau, PowerBI

LANGUAGES

English (Fluent), Spanish (Fluent)