

Ginelle Gonzalez

14533 SW 145th LN Miami, FL 33186

Phone: (786) 853-7075 E-Mail: ggonz271@fiu.edu

Education

Florida International University

Expected Graduation: May, 2025

PhD.- Applied Mathematics

Florida International University

Expected Graduation: Fall, 2022

M.S.- Mathematics

Florida International University

Graduation Date: 31 July, 2020

B.S.- Mathematics & S.M. - Natural/Applied Sciences

Miami Dade College

Graduation Date: Fall 2013

A.A.- Teaching Secondary-Mathematics Education

Teaching Experience

Teaching Assistant

August 2020 – Present

- Advanced Calculus 1
- Advanced Calculus 2
- Graph Theory

Learning Assistant

September 2019-August 2020

- Calculus 1
- Calculus 2
- Multi-variable Calculus
- Ordinary Differential Equations

MDC Internship

Fall/Spring 2012/2013

- Teaching Internship at South Dade High school while I attended Miami Dade College

Research Interests

My interests lie mainly in nonlinear differential equations (both ordinary and partial) because of their wide applications in mathematical biology. I wish to understand more specifically the behavior of blood flow in an arteriovenous malformation during embolization procedures with the goal in mind to help doctors determine an alternate or more personalized course of treatment for AVM patients like myself.

Research Experience

Applied Mathematics Research Program for Undergraduates May-July 2022

Graduate Mentor at AMRPU at FIU, go.fiu.edu/amrpu

Leading a team project in math biology:

“A Mathematical Model of Tumor Cell Populations”

Applied Mathematics Research Program for Undergraduates May-July 2021

Graduate Mentor at AMRPU at FIU, go.fiu.edu/amrpu

Assisted in leading, advising, and editing four projects :

“Topological Data Analysis for Time Series Forecasting”

“Machine Learning for Time Series Clustering”

“Historical Modeling of Polity Dynamics Via Dynamical Systems”

“Policies of Polities: Modeling Secrets to Obtain the Fittest Civilization”

Independent Studies

Fall 2019 - Present

Grad Student- PhD Program at FIU

I've been doing research independently in topics such as Soliton Theory and Nonlinear PDE's with Dr. Svetlana Roudenko.

Publications/Pre-prints

<u><i>“A Mathematical Model of Tumor Cell Populations”</i></u>	May 2022-present	In Progress
<u><i>“Topological Data Analysis for Time Series Forecasting”</i></u>	July 2021	Preprint
<u><i>“Machine Learning for Time Series Clustering”</i></u>	July 2021	Preprint
<u><i>“Historical Modeling of Polity Dynamics Via Dynamical Systems”</i></u>	July 2021	Preprint
<u><i>“Policies of Polities: Modeling the Fittest Civilization”</i></u>	June 2021-present	In Progress

Technical reports can be found at [**go.fiu.edu/amrpu**](https://go.fiu.edu/amrpu)