

# Ryan Sullivan

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Graduate proficient in pure and applied math seeking opportunities in quantitative finance (May '24)

## EDUCATION

<b>University of Rhode Island, PhD in Pure Mathematics</b>   Rhode Island, USA	GPA: ?? / 4.0	June 2024
<b>University of Rhode Island, MS in Pure Mathematics</b>   Rhode Island, USA	GPA: ?? / 4.0	June 2022
<b>University of Rhode Island, BS in Pure Mathematics</b>   Rhode Island, USA	GPA: ?? / 4.0	Aug 2020
<b>Cranston High School West</b> ,   Rhode Island, USA		June 2017

Research Area: Difference Equations | Dynamical Systems | Mathematical Biology

Courses: Probability + Stochastic Calculus | Optimization | Numerical Analysis | Dynamical Systems | PDE | Combinatorics

## EXPERIENCE

**University of Rhode Island, Graduate Teaching Assistant** Aug 2020 - May 2024

- Sole instructor for one class per semester. Assisted other instructors and professors by tutoring and grading.
- Classes taught: *Pre-Calculus*, *Applied Calculus I*, *Calculus II*

**University of Rhode Island, Undergraduate Teaching Assistant** September 2018 - Aug 2020

- Assisted instructors with large lectures, grading, and tutoring
- Graded/Tutored: *Probability and Statistics*, *Linear Algebra*, *Intro. to Math Rigor*, *Multi-Variable Calculus*

**Castle Hill Inn, Room Service** June 2019 - March 2020

- Transported multiple course meals from the restaurant to beach cottages around the property
- Maintained a hospitable environment for guests by setting up welcoming amenities

**Carmax, Sales Associate** May 2018 - May 2019

- Guided customers through the process of buying a used car and/or selling their current vehicle
- Completed rigorous 6 week Carmax sales training

## PUBLICATIONS

**Dynamics of Third Order Beverton Holt Difference Equation** Submitted

- Investigated dynamics of third order difference equation and proved a general result for all 3rd order equations

**Convergent Solutions to Non-Autonomous Difference Equations** Submitted

- Found conditions for when non-autonomous difference equations inherit behavior from their limit models.

**Local Stability Implies Global Stability of 2nd Order Rational Maps** To Appear

- Discovered a heuristic method for solving difference equations and applied results to open problems

## TALKS

<b>AMS Conference</b> <i>Dynamics of Non-autonomous Pielou Equation and Ricker's Map</i>   Brown University, Rhode Island	April 2024
<b>URI Diff Eq. Seminar</b> <i>Convergent Solutions to Non-Autonomous Difference Equations</i>   University of Rhode Island	March 2024
<b>AMS Conference</b> <i>Dynamics of Third Order Beverton Holt Difference Equation</i>   University of Buffalo, New York	Sept 2023
<b>URI Diff. Eq. Seminar</b> <i>Dynamics of Non-Autonomous Pielou Equation and Ricker's Map</i>   University of Rhode Island	Oct 2023
<b>URI Diff. Eq. Seminar</b> <i>Dynamics of Third Order Beverton Holt Difference Equation</i>   University of Rhode Island	Feb 2023
<b>URI Diff. Eq. Seminar</b> <i>Periodic Forced Rational Difference Equations</i>   University of Rhode Island	Oct 2022

## SKILLS

Coding: **Proficient:** Mathematica, LaTeX | **Good With:** R, Matlab, Excel, HTML | **Experience With:** Python, Java  
Personal: Communication | Public Speaking | Critical Thinking | Problem Solving | Creativity | Organization

## ORGANIZATIONS

<b>Graduate Assistants United</b>	<i>Fall 2020-Spring 2024</i>	<b>Graduate Student Association</b>	<i>Fall 2020-Spring 2024</i>
<b>The Xtet (Jazz Band)</b>	<i>2021-Current</i>	<b>URI Jazz Combos</b>	<i>Fall 2017-Spring 2021</i>
<b>URI Orchestra</b>	<i>Fall 2017-Spring 2020</i>	<b>URI Marching Band</b>	<i>Fall 2017-Spring 2019</i>
<b>URI Big Band</b>	<i>Fall 2017-Spring 2022</i>	<b>URI Alpine Racing Team</b>	<i>Fall 2017-Spring 2020</i>
<b>Pi Mu Epsilon Honors Society</b>	<i>Fall 2018-Spring 2020</i>		

## Projects

**Spokane CO2 level** | Implemented Gauss-Newton non-linear least squares regression in Matlab and fit CO2 data April 2020

**Definite Integral Calculator** | Matlab program which can calculate different types of Riemann sums Fall 2018