

# Alex Michael Garcia

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[LinkedIn]

[Website]

## Education

### University of Florida

Aug 2021 – May 2023

Master's of Science in Astronomy

Research Advisor: Paul Torrey

### University of Illinois

Aug 2017 – May 2021

Bachelor's of Science in Engineering Physics - *Honors*Bachelor's of Science in Astronomy - *Distinction*

## Research Experience

### Graduate Researcher

May 2021 – Present

University of Florida - Advisor: Paul Torrey

Gainesville, FL

- Utilize high-performance computer, [HiPer Gator], to analyze data of [Illustris TNG] simulations.
- One first-authored paper in progress.

### Undergraduate Research Assistant

Feb 2021 – May 2021

University of Illinois - Advisor: Yue Shen

Urbana, IL

### Undergraduate Research Assistant

Aug 2020 – May 2021

University of Illinois - Advisor: Bryan Dunne

Urbana, IL

## Publications

### First Author Publications:

1. *Gas-phase Metallicity break radii of TNG50 Galaxies*, **Garcia, A.** et. al. MNRAS – in progress, expected 2022

## Teaching Experience

### Teaching Assistant/Course Assistant

Aug 2020 – Present

University of Florida

Gainesville, FL

University of Illinois

Urbana, IL

	Course	Semester	Professor(s)
University of Florida	AST 1022L - <i>Astronomy Laboratory</i>	Spring 2022	Paul Sell
	AST 1002 - <i>Discovering the Universe</i>	Fall 2021	Paul Sell, Naibi Mariñas, & Elizabeth Lada
University of Illinois	ASTR 330 - <i>Extraterrestrial Life</i>	Spring 2021	Xin Liu
	ASTR 330 - <i>Extraterrestrial Life</i>	Winter 2021	Leslie Looney
	ASTR 100 - <i>Introduction to Astronomy</i>	Fall 2020	Amanda Winans
	ASTR 150 - <i>Killer Skies: Astro-Disasters</i>	Fall 2020	Bryan Dunne

- Host a virtual weekly office hour for students to come and ask questions pertaining to the course material and evaluations.

- Host observatory sessions at the campus teaching observatory for students in the course to attend. Includes setting up an array of telescopes and fielding student questions on their assignments.

### Part-Time Specialist

*Santa Fe College – Kika Silva Pla Planetarium*

Oct 2021 – Present  
Gainesville, FL

- Design, develop, and present planetarium shows for K-12 classes and the general public.
- Assist the planetarium manager in developing of programs to support collegiate level curriculum.

### Tutor

*Center for Academic Resources in Engineering (CARE) – UIUC*

Aug 2018 – May 2021  
Urbana, IL

- Guided undergraduate students towards success in various homework assignments in a number of different disciplines. Subjects included: introductory mechanics, electricity & magnetism, quantum mechanics, thermodynamics, calculus, intro to python, differential equations, and linear algebra.
- Planned and led small group presentations for specific courses and presented to students in order to help them succeed on exams.
- Analyzed the data on traffic of incoming students with python and created LaTeX reports of monthly attendance, broken up into several different categories.
- Created and maintained worksheets for peer-led exam review sessions in several math and physics courses.

### Visual Instructor

*Lincoln-Way Marching Band*

Aug 2018 – Aug 2021  
New Lenox, IL

- Assisted on the field teaching students how to perfect and perform an eight-minute field show. Included teaching management of simultaneous demand and awareness.
- Worked within a group of staff members on lesson plans and communicated on how to most effectively budget and allocate time to improving the overall product.

## Committees

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### Committee for Diversity, Equity and Inclusion

*University of Florida Department of Astronomy*

Fall 2021  
Gainesville, FL

## Technical Skills

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**Fluent:** Python, L<sup>A</sup>T<sub>E</sub>X (Tikz), Microsoft Office

**Literate:** Bash, SLURM, HTML, CSS, R, Origin Pro, Java/JavaScript

## Honors and Awards

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University of Illinois Tutor of the Year Honorable Mention

Spring 2021

University of Illinois Tutor of the Year Finalist

Spring 2021

Dean's List, College of Liberal Arts and Sciences – UIUC

Fall 2020

Dean's List, Grainger College of Engineering – UIUC

Spring 2018, 2019

Access and Achievement Scholar – UIUC

Fall 2017 – Spring 2021

Eagle Scout, Boy Scouts of America

April 2015

## Activities

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Bluecoats Drum and Bugle Corps

Summer 2019, 2020, 2021

Madison Scouts Drum and Bugle Corps

Summer 2017, 2018