

# Alex Michael Garcia

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## Education

### University of Florida

Master's of Science in Astronomy

Aug 2021 – May 2023

### University of Illinois at Urbana-Champaign

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

Bachelor's of Science in Astronomy - *Distinction*

Aug 2017 – May 2021

## Research Experience

### Graduate Researcher

University of Florida - Advisor: Paul Torrey

May 2021 – Present

Gainesville, FL

**Areas of interest** – Galaxy Formation and Evolution & Cosmological Simulations of the Universe

### Undergraduate Research Assistant

University of Illinois - Advisor: Yue Shen

Feb 2021 – May 2021

Urbana, IL

### Undergraduate Research Assistant

University of Illinois - Advisor: Bryan Dunne

Aug 2020 – May 2021

Urbana, IL

## Publications

### First Author Publications:

1. *Gas-phase Metallicity break radii of TNG50 Galaxies*: **Garcia**, Torrey, Hemler, Hernquist, Kewley, Grasha, Nelson, Zovaro, MNRAS – in progress, expected 2022

### Textbooks:

1. *Hands-on Astronomy – Tenth Edition*: overhauls for UF Astronomy 1022 Lab manual

## Teaching Experience

### Teaching Assistant/Course Assistant

University of Florida

University of Illinois

Aug 2020 – Present

Gainesville, FL

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

- During the Spring 2022 semester, I reformatted the entire AST 1022L lab manual into LaTeX (including most of the figures in Tikz) for ease of editing and uniformity throughout the entire 100+ page manual.
- Created lab software in HTML/JS to replace outdated software for one lab (AST 1022L).

- Host observatory sessions at the campus 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*

Aug 2021 – Present  
Gainesville, FL

- Design, develop, and present planetarium shows for K-12 classes, collegiate-level curriculum, as well as the general public.
- Host several shows, including *Florida Skies*: an hour long tour of the Gainesville night sky using our Chronos Projector.

## 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.
- Planned and led small group exam review sessions, including the creation of worksheets, for specific courses and presented to students in order to help them review for exams.
- Analyzed the data on traffic of incoming students and created monthly reports of attendance, tracking several different variables.

## 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, Spring 2022  
Gainesville, FL

## Technical Skills

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●●● = Fluent

●● = Proficient

●● = Familiar

●●● Python

●●● L<sup>A</sup>T<sub>E</sub>X (●● Tikz)

●●● Microsoft Office

●●● Google Workspace

●● Bash

●● SLURM

●● Origin Pro

●● HTML

●● CSS

●● Java/JavaScript

●● R

## 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