Alex Michael Garcia

alexgarcia@ufl.edu | LinkedIn | Website | ORCiD | Github

Education

University of Florida   Aug 2021 – May 2023
Master's of Science in Astronomy

University of Illinois at Urbana-Champaign   Aug 2017 – May 2021
Bachelor's of Science in Engineering Physics - *Honors*
Bachelor's of Science in Astronomy - *Distinction*

Research Experience

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

Graduate Researcher   May 2021 – Present
University of Florida - Advisor: Paul Torrey   Gainesville, FL

   REU Students Mentored

    ⋄ *Caitlin O'Brien:* Measuring Splashback Radii in galaxy clusters using IllustrisTNG

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 in Illustris and IllustrisTNG*: **Garcia**, Torrey, Hemler, Hernquist, Kewley, Grasha, Nelson, Zovaro, Chen, MNRAS, August 2022

Textbooks:

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

Professional Experience

Teaching Assistant/Course Assistant   Aug 2020 – Present
University of Florida   Gainesville, FL
University of Illinois   Urbana, IL

	Course			**Semester**
University of Florida	AST 1022	-	*Astronomy Laboratory**	Spring 2022
	AST 1002	-	*Discovering the Universe*	Fall 2021
University of Illinois	ASTR 330	-	*Extraterrestrial Life*	Spring 2021
	ASTR 330	-	*Extraterrestrial Life*	Winter 2021
	ASTR 100	-	*Introduction to Astronomy*	Fall 2020
	ASTR 150	-	*Killer Skies: Astro-Disasters*	Fall 2020

   * Served as primary instructor for the course

– 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– Created lab software in HTML/JS to replace outdated software for three labs (AST 1022).

– 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
Aug 2021 – Present
Santa Fe College – Kika Silva Pla Planetarium
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 a CHRONOS Optical-Mechanical Projector.

Tutor
Aug 2018 – May 2021
Center for Academic Resources in Engineering (CARE) – UIUC
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
Aug 2018 – Aug 2021
Lincoln-Way Marching Band
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

Committee for Diversity, Equity and Inclusion
Fall 2021 - Present
University of Florida Department of Astronomy
Gainesville, FL

Technical Skills

●●● = Fluent   ○●● = Proficient   ○○● = Familiar

●●● Python	●●● LaTeX (●●● Tikz)	●●● Microsoft Office	●●● Google Workspace	○●● Bash	○●● SLURM
○●● HTML	○●● JavaScript	○●● CSS	○○● Git/Github	○○● R	

Honors and Awards

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

Bluecoats Drum and Bugle Corps	Summer 2019, 2020, 2021
Madison Scouts Drum and Bugle Corps	Summer 2017, 2018