

Kumail Zaidi, PhD

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🆔 ORCID: 0000-0002-1163-7790

Research

Argonne National Laboratory

POSTDOCTORAL APPOINTEE

- Research focus: Galaxy-Halo connection through large sky surveys
- Supervisor: Dr. Andrew Hearin

Lemont IL USA

Jun. 2025 - present

Tufts University

GRADUATE RESEARCH ASSISTANT

- Research focus: Galaxy evolution; Photometric catalogs
- Advisor: Prof. Danilo Marchesini

Medford MA, USA

Jan. 2021 - Jun. 2025

Sabancı Üniversitesi

RESEARCH INTERN

- Research focus: Galactic black hole transients.
- Advisor: Prof. Emrah Kalemci

Istanbul, Turkey

Feb. 2018 - Jun. 2018

Universitäts-Sternwarte München (USM) - LMU

RESEARCH INTERN

- Research focus: Stellar Evolution of massive stars
- Advisor: Prof. Joachim Puls

Munich, Germany

Jul. 2017 - Aug. 2017

Technische Universität Chemnitz

RESEARCH INTERN + CULTURAL EXCHANGE

- Research focus: Graphene-based humidity sensors
- Organized by: IAESTE
- Advisor: Ammar Al-Hamry

Chemnitz, Germany

Jun. 2016 - Aug. 2016

UNAM - Bilkent University

RESEARCH INTERN

- Research focus: Strongly correlated material - vanadium dioxide
- Advisor: Asst. Prof. T. Serkan Kasirga

Ankara, Turkey

Jun. 2015 - Aug. 2015

Education

Tufts University

PHD. ASTROPHYSICS

- Dissertation title: Observed cosmic evolution of galaxy stellar mass and dark matter halo mass
- Advisor: Prof. Danilo Marchesini

Medford MA, USA

Sep 2018 - May 2025

Tufts University

MSc. ASTROPHYSICS

Medford MA, USA

Sep 2018 - Jun. 2020

Bilkent University

B.Sc. PHYSICS

Ankara, Turkey

Sep. 2013 - Jan. 2018

Ludwig-Maximilians-University

SEMESTER ABROAD (ERASMUS EXCHANGE PROGRAM)

- Focused on Graduate-Level courses in Philosophy

Munich, Germany

Oct 2015 - Jan. 2016

Teaching/Education Research

Physics Education Research (PER): 'The Listening Project'

PARTICIPANT AND COACH

- The goal of this education research project was to become better listeners to student thinking in class in the hope of becoming more helpful teachers.
- The TAs and faculty, analyzed student artifacts (HWs, class discussion videos, etc.) together, in detail.
- Experienced members of the project served as coaches. I was a coach in my second year of joining the program.

Tufts University

Sep. 2019 - May 2022

Graduate Teaching Assistant

DEPARTMENT OF PHYSICS & ASTRONOMY

- PHY 103: Graduate Teaching Seminar: Teaching for TAs
Led the Physics and Science Education Research seminar for Freshman Physics TAs.
Led the cohort of Lab TAs, in general.
- PHY 1/11/2/12: Freshman Physics labs and recitations
- AST 10: Introductory Astronomy course for non-majors

Tufts University

Sep. 2018 - Jan. 2021

Private lessons

TUTOR

- Gave private lessons to small groups of students in these subjects: High School Physics, High School Mathematics and Basic English
- Age group taught: 10 to 18 years old

Ankara, Turkey

Nov. 2016 - Jun. 2017

Leadership

International Student Chair

GRADUATE STUDENT COUNCIL

- Organized and planned events for international graduate students

Tufts University

Sep. 2021 - Jun 2022

Astronomy Seminar Host

DEPARTMENT OF PHYSICS & ASTRONOMY

- Invited speakers, and hosted talks and post-talk coffee sessions

Tufts University

Feb. 2021 - May 2022

Leader of the Physics & Science Education Seminar for TAs

DEPARTMENT OF PHYSICS & ASTRONOMY

- Led the Physics and Science Education Research-based seminar for Freshman Physics Lab TAs to develop them as more effective teachers

Tufts University

Jan. 2020 - May 2020

Presentations (June 2023–present)

PhD Defense

DEFENSE TITLE: OBSERVED COSMIC EVOLUTION OF GALAXY STELLAR MASS AND DARK MATTER HALO MASS

Tufts University, MA

Apr. 2025

First Galaxies Meeting

TALK (*contribution accepted but canceled attendance due to personal reasons*)

Oxford, UK

Apr. 2025

UCLA Dark Matter 2025POSTER (*contribution accepted but canceled attendance due to personal reasons*)

Los Angeles, CA

Mar. 2025

AAS 245th meetingDISSERTATION TALK: A COMPREHENSIVE STUDY OF THE GALAXY STELLAR MASS-TO-HALO MASS RELATIONSHIP SINCE $z \sim 5$ USING MULTI-WAVELENGTH CATALOGS IN UDS AND COSMOS FIELDS

National Harbor, MD

Jan. 2025

Galaxy Journal Club at STScITALK: THE STELLAR TO HALO MASS RELATIONSHIP IN THE UDS AND COSMOS FIELDS OUT TO $z=5$

Baltimore, MD

Nov. 2024

European Astronomical Society (EAS) annual meetingPOSTER: THE STELLAR TO HALO MASS RELATIONSHIP IN THE UDS AND COSMOS FIELDS OUT TO $z=5$

Padova, Italy

Jul. 2024

First Stars VII meetingTALK: THE STELLAR TO HALO MASS RELATIONSHIP IN THE UDS AND COSMOS FIELDS OUT TO $z=5$

Flatiron Institute, NYC

May 2024

Survey Science Discussion

TALK: STELLAR-DARK MATTER HALO MASS RELATIONSHIP IN UDS+COSMOS

Princeton University, NJ

May 2024

Tufts Astronomy Seminar

TALK: STELLAR-DARK MATTER HALO MASS RELATIONSHIP

Tufts University, MA

Apr. 2024

Pizza Lunch Talk

TALK: CONSTRAINING THE GALAXY-HALO CONNECTION

Columbia University, NYC

Jan. 2024

CCA-NY area galaxy formation seminarTALK: THE STELLAR TO HALO MASS RELATIONSHIP IN THE UDS AND COSMOS FIELDS OUT TO $z=5$

Flatiron Institute, NYC

Jan. 2024

AAS 243rd meetingTALK: THE STELLAR TO HALO MASS RELATIONSHIP IN THE UDS AND COSMOS FIELDS OUT TO $z=5$

New Orleans, Louisiana

Jan. 2024

First Light ConferencePOSTER: STELLAR-HALO MASS RELATIONSHIP IN UDS AND COSMOS OUT TO $z=5$

MIT

Jun. 2023

Papers (ADS Public Library; ORCID: 0000-0002-1163-7790)

Zaidi, K., D. Wake, D. Marchesini, et al.: *Stellar-Halo Mass relationship of central and satellite galaxies with JWST since $z \sim 12$* . In: (2025; in-prep.).

Zaidi, K., D. A. Wake, D. Marchesini, K. Iyer, A. Muzzin, C. Papovich, J. Antwi-Danso, K. Glazebrook, and I. Labbé: *The FENIKS Survey: Stellar-Halo Mass Relationship of Central and Satellite Galaxies in UDS and COSMOS at $0.2 < z < 4.5$* . In: *arXiv-prints*, arXiv:2411.04256 (Nov. 2024b; ApJ submitted), arXiv:2411.04256. arXiv: **2411.04256** [astro-ph.GA].

Zaidi, K., D. Marchesini, C. Papovich, J. Antwi-Danso, M. Nonino, M. Annunziatella, G. Brammer, J. Esdaile, K. Glazebrook, K. Iyer, I. Labbé, Z. C. Marsan, A. Muzzin, and D. A. Wake: *The FENIKS Survey: Multiwavelength Photometric Catalog in the UDS Field, and Catalogs of Photometric Redshifts and Stellar Population Properties*. In: 969.2, 84 (July 2024a), p. 84. doi: **10.3847/1538-4357/ad45fa**. arXiv: **2401.03107** [astro-ph.GA].

Forrest, B., ..., **K. Zaidi**, et al.: *MAGAZ3NE: High Stellar Velocity Dispersions for Ultramassive Quiescent Galaxies at $z \gtrsim 3$* . In: 938.2, 109 (Oct. 2022), p. 109. doi: [10.3847/1538-4357/ac8747](https://doi.org/10.3847/1538-4357/ac8747). arXiv: [2208.04329](https://arxiv.org/abs/2208.04329) [astro-ph.GA].

Conference Abstracts

Zaidi, K., D. Wake, and D. Marchesini: “The stellar-to-halo mass relationship in the UDS and COSMOS fields out to $z \sim 5$ ”. In: *EAS2024*. July 2024, p. 735.

Zaidi, K., D. Marchesini, D. Wake, J. Antwi-Danso, and C. Papovich: “The stellar to halo mass relationship in the UDS and COSMOS fields out to $z \sim 5$.” In: *American Astronomical Society Meeting Abstracts*. Vol. 243. American Astronomical Society Meeting Abstracts. Feb. 2024, p. 347.01.

Antwi-Danso, J., ..., **K. Zaidi**, and Feniks Collaboration: “First Results from the Gemini F2 Extragalactic Near-IR K-Split (FENIKS) Survey”. In: *American Astronomical Society Meeting Abstracts*. Vol. 54. American Astronomical Society Meeting Abstracts. June 2022, p. 241.20.

Awards and Grants

JOHN F. BURLINGAME GRADUATE FELLOWSHIP • Departmental Graduate Fellowship given to outstanding PhD students to cover 1 yr. of stipend.	<i>Sep. 2023 - Aug. 2024</i>
GERMAN ACADEMIC EXCHANGE SERVICE (DAAD) • Grant amount: 1700 euros (for the duration of internship at TU Chemnitz, Germany)	<i>Jun. 2016 - Aug. 2016</i>
ERASMUS+ • Grant amount: 2000 euros (for the duration of semester abroad at LMU Munich, Germany)	<i>Oct. 2015 - Feb. 2016</i>
BILKENT UNIVERSITY HONORS AND HIGH HONORS • High Honor in the last semester for attaining a GPA of 3.50 • Honor awarded in five other semesters for attaining a GPA greater than 3.00	<i>Aug. 2013 - Jan. 2018</i>
BILKENT UNIVERSITY MERIT-BASED SCHOLARSHIP • Full tuition waiver equalling 14,000 U.S dollars/year	<i>Aug. 2013 - Jan. 2018</i>
BILKENT UNIVERSITY DORMITORY SCHOLARSHIP • Free residence in dormitories for 4 years	<i>Aug. 2013 - Aug. 2017</i>

Skills

Programming languages	Python, JAVA, MATLAB, LaTeX, (ghost), (github)
Astrophysics software	SExtractor, eazy-py, Bagpipes, Dense Basis, Astropy halomod, halotools, CORRFUNC, GALFIT, Firedec
Spoken languages	English, Urdu, German, Turkish