

Tatsuya Akiba

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Education

Expected 2025	<i>Ph.D.</i> , Astrophysical and Planetary Sciences University of Colorado, Boulder Boulder, CO <i>Thesis Title: Eccentric Dynamics in Near-Keplerian Systems</i>
2022	<i>M.S.</i> , Astrophysical and Planetary Sciences University of Colorado, Boulder Boulder, CO
2019	<i>B.S.</i> , Physics (Honors) & Mathematics (Honors); <i>Valedictorian</i> Truman State University Kirksville, MO

Honors and Awards

2024	Richard Nelson Thomas Award (JILA, CU Boulder) Dissertation Completion Fellowship (CU Boulder)
2023	Carl Hansen Memorial Fellowship (CU Boulder)
2022	Chance Irick Cooke Fellowship (CU Boulder)
2021	Raynor L. Duncombe Student Research Prize (DDA) Award for Excellence in Teaching (CU Boulder)
2019	Outstanding Student in Physics (Truman State)
2018	Dr. Lanny C. Morley Scholarship (Truman State) Dr. Robert and Harlene Bailey Scholarship (Truman State)
2017	Dr. Robert Peavler Memorial Scholarship (Truman State) Dr. Wray and Helen Rieger Scholarship (Truman State) Dr. Eugene W. Smith Memorial Scholarship (Truman State) Mr. and Mrs. Robert Lisle Walker Scholarship (Truman State) TruScholars Research Award (Truman State) L. Scott and Carol D. Ellis Scholarship (Truman State) Sigma Pi Sigma (Physics Honor Society)
2016	Duane and Donna Norman Hicks Scholarship (Truman State)
2015	President's Honorary Scholarship (Truman State)

***Invited & Contributed Talks**

2025	Princeton [Feb, 2025]
	AAS Dissertation Talk (National Harbor, MD) [Jan, 2025]
2024	NOIRLab/University of Arizona [Dec, 2024]
	University of Arizona (Origins Seminar) [Dec, 2024]
	Caltech (TAPIR)
	UC San Diego (STRAND Theory)
	*Stanford (KIPAC)
	UCLA (Galactic Center Group)
	UC Santa Barbara
	UC Santa Cruz
	UC Berkeley
	CITA/University of Toronto (Gravitational Wave Seminar)
	Syracuse University (Gravitational Wave Seminar)
	Yale University (Galaxy Lunch Talk)
	Columbia University
	CIERA/Northwestern (Theory Group Meeting)
	UW Madison (Exoplanet Coffee Seminar)
	University of Amsterdam
	Leiden Observatory
	Max Planck Institute for Astrophysics (SESTAS Seminar)
	Institute of Science and Technology Austria
	Tidal Disruption Events & Nuclear Transients (Crete, Greece)
	REBOUND 24 (Virtual)
	Division on Dynamical Astronomy 55 (University of Toronto)
	Tidal Disruption Events Conference (KITP, UC Santa Barbara)
	*UT Austin (WCAPP White Dwarf Group)
2022	*High Energy Astrophysics Division 19 (Pittsburgh, PA)
	*Truman State University (Colloquium)
	Division on Dynamical Astronomy 53 (CCA, New York)
2021	Division on Dynamical Astronomy 52, <i>Duncombe Prize Talk</i>

Research Computing Allocations

2024 – 2025	Alpine Supercomputer 350k CPU hours
2021 – 2022	Summit Supercomputer 384k CPU hours

Peer Review Experience

2024	Referee for Nature
2023	Referee for ApJ Letters

Research Mentoring Experience

2024 – Present	Kalvyn Adams
2023 – 2024	Tom Alexander; <i>high school student admitted to CU Boulder</i>
2021 – 2023	Selah McIntyre; <i>associated publication & Uplift award</i>
2020 – 2021	Allie Christensen; <i>magna cum laude honor's thesis</i>

Teaching Experience

2024	Instructor for ASTR 2600: Scientific Computing (CU Boulder)
2023	Guest Lecturer for ASTR 3710: Planet Dynamics (CU Boulder)
2021 – 2023	Lead Graduate Student Fellow (CU Boulder)
2022	Graduate TA for ASTR 5720: Galaxies (CU Boulder)
2022	Guest Lecturer for ASTR 2030: Black Holes (CU Boulder)
2020	Graduate TA for ASTR 1010: Intro Astronomy (CU Boulder)
2019	Graduate TA for ASTR 3510: Astro Observations (CU Boulder)

Diversity, Equity, & Inclusion (DEI) Outreach Experience

2024	Graduate Mentor (DDA) DEI Committee (DDA) Longmont Astronomical Society Lecture (Longmont, CO)
2019 – 2022	CU-Prime, McNair, & Graduate Peer Mentor (CU Boulder)
2019 – 2021	DEI Committee (CU Boulder)
2019 – 2020	Graduate Curriculum and Concerns Committee (CU Boulder)

Refereed Publications

First-author:

6. **Akiba**, Naoz, & Madigan (2024); [arXiv:2410.19881](#), Submitted to ApJ Letters
On the Formation of S-stars from a Recent Massive Black Hole Merger in the Galactic Center
5. **Akiba**, McIntyre, & Madigan (2024); [ApJ Letters, 966:L4](#)
Tidal Disruption of Planetesimals from an Eccentric Debris Disk Following a White Dwarf Natal Kick; associated press release & podcast
4. **Akiba** & Madigan (2023); [ApJ, 958:137](#)
Anisotropic Star Clusters Around Recoiling Supermassive Black Holes
3. **Akiba**, Dexter, et al. (2023); [ApJ, 953:124](#)
Reprocessing Models for the Optical Light Curves of Hypervariable Quasars from the Sloan Digital Sky Survey Reverberation Mapping Project
2. **Akiba** & Madigan (2021); [ApJ Letters, 921:L12](#)
On the Formation of an Eccentric Nuclear Disk following the Gravitational Recoil Kick of a Supermassive Black Hole; associated press release
1. **Akiba**, Neugarten, Ortmann, & Gokhale (2019); [JAAVSO, 47:2](#)
Multi-filter Photometric Analysis of W Ursae Majoris (W UMa) Type Eclipsing Binary Stars KID 11405559 and V342 Boo

Co-author:

2. Gao, Boekholt, Panda, **Akiba**, & Toonen (2024); Submitted to MNRAS
Tertiary Tides with Eccentric Orbits
1. Bright, **Akiba**, & Madigan (2024); [MNRAS Letters, 534:L42](#)
Counter-Rotation and Slow Precession in Aligned Eccentric Nuclear Disks due to Gravitational Wave Recoil Kicks