

Alex Teachey

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Education	Columbia University in the City of New York <i>On the Detection and Characterization of Exomoons Through Survey and Targeted Observations</i> – Doctor of Philosophy, Astronomy – Master of Philosophy, Astronomy – Master of Arts, Astronomy	2015 - 2020 2020 2018 2017
	Hunter College (City University of New York) – Bachelor of Arts, Physics – <i>summa cum laude</i>	2012 - 2015
	New York University – Bachelor of Fine Arts, Theatre – <i>magna cum laude</i>	2003 - 2006
Affiliations	Academia Sinica Institute of Astronomy & Astrophysics <i>Distinguished Postdoctoral Fellow</i>	2020 - Present
	Columbia University Department of Astronomy <i>NSF Graduate Research Fellow</i>	2015 - 2020
	The American Museum of Natural History Department of Astrophysics <i>Undergraduate Researcher</i>	2013 - 2015
	The National Radio Astronomy Observatory (Socorro, NM) <i>NSF REU</i>	Summer 2014
Grants, Fellowships, Awards, & Telescope Time	NSF Graduate Research Fellowship Hubble Space Telescope observation GO-15149 (principal investigator) Phi Beta Kappa Undergraduate Research Fellowship (Hunter College) Raab Presidential Fellowship (Hunter College)	2015 - 2020 2017 July 2015 2014 and 2015 2013
Publications & Products	Refereed papers: “Identifying Potential Exomoon Signals with Convolutional Neural Networks”. Teachey, A. , & Kipping, D.M.. Monthly Notices of the Royal Astronomical Society, September 2021. arXiv:2109.10503 “The Exomoon Corridor for Multiple Moon Systems”. Teachey, A. Monthly Notices of the Royal Astronomical Society, July 2021. arXiv:2106.13421 “Loose Ends for the Exomoon Candidate Host Kepler-1625b” Teachey, A. , Kipping, D.M., Burke, C.J., Angus, R., and Howard, A.W.. April 2019. The Astronomical Journal, February 2020. arXiv:1904.11896 “Evidence for a Large Exomoon Orbiting Kepler-1625b” Teachey, A. & Kipping, D.M.. Science Advances, October 2018. arXiv:1810.02362 “HEK VI: On the Dearth of Galilean Analogs in <i>Kepler</i> , and the Exomoon Candidate Kepler-1625b I”. Teachey, A. , Kipping, D.M., and Schmitt, A.R., The Astronomical Journal, January 2018. arXiv:1707.08563 “Impossible moons – Transit timing effects that cannot be due to an exomoon”. Kipping, D.M., and Teachey, A. . The Monthly Notices of the Royal Astronomical Society <i>under review</i> . May 2020. arXiv:2004.04230 “A Cloaking Device for Transiting Planets”. Kipping, D.M. & Teachey, A. . Monthly Notices of the Royal Astronomical Society, June 2016. arXiv:1603.08928 .	

“Calibrating Column Density Tracers with Gamma-Ray Observations of the ρ Ophiuchi Molecular Cloud”. Abrahams, R.D., **Teachey, A.**, Paglione, T.A.D.. The Astrophysical Journal, January 2017. [arXiv:1611.02265](https://arxiv.org/abs/1611.02265).

“A Transiting Jupiter Analog”. Kipping, D.M., Torres, G., Henze, C., **Teachey, A.**, *et al.* The Astrophysical Journal, April 2016. [arXiv:1603.00042](https://arxiv.org/abs/1603.00042).

“A resonant pair of warm giant planets revealed by TESS”. Kipping, D.M., Nesvorný, D., Hartman, J., [...], and **Teachey, A.**. Monthly Notices of the Royal Astronomical Society, April 2019. [arXiv:1902.03900](https://arxiv.org/abs/1902.03900).

In preparation:

“Identification of Planet Candidates in Full-Frame Images from the TESS Continuous Viewing Zone.”

*Chawla, C. & **Teachey, A.** **student advisee*

“On the prediction of microlensing events by known exoplanets for mass determination and exomoon detection”. **Teachey, A.**

Software:

MoonPy light curve tools. github.com/alexteachey/moonpy 2019

Select Seminars & Conference Presentations	Invited colloquium, National Taiwan Normal University (forthcoming)	November 2021
	Invited talk, Circumplanetary Disk and Satellite Formation II Conference	March 2021
	Invited colloquium, National Central University (Taiwan)	March 2021
	Invited seminar, University of Cambridge	May 2020
	Invited colloquium, Academia Sinica Institute of Astronomy & Astrophysics	February 2020
	Invited seminar, Yale University	January 2020
	AAS 235 in Honolulu, HI (dissertation talk)	January 2020
	Extreme Solar Systems IV in Reykjavík, Iceland (poster)	August 2019
	ERES V conference at Cornell University (talk)	June 2019
	Seminar, University of Oxford	February 2019
	Seminar, University College London	February 2019
	AAS 233 in Seattle, WA (talk)	January 2019
	Exoplanets II conference at the University of Cambridge (poster)	July 2018
	ERES IV conference at Pennsylvania State University (talk)	June 2018
	<i>Diversis Mundi</i> conference in Santiago, Chile (talk)	March 2018
	AAS 231 in Washington, DC (talk and poster)	January 2018
AAS 229 in Grapevine, TX (talk)	January 2017	
AAS 225 in Seattle, WA (poster)	January 2015	
Teaching & Mentoring	ASIAA Summer Student Program 2021	Summer 2021
	Sole advisor for one student (Chetan Chawla) and co-advisor for another (Charity Chien-Chu Wei).	
	Graduate Teaching Fellow	Fall 2016 - Fall 2017
	Taught three semesters of introductory astronomy labs. Designed the curriculum and developed several new labs, incorporating technology resources.	
	Lecture Teaching Assistant	Fall 2015 - Spring 2016
	In-class assistant for “Life in the Universe” and “Stars & Atoms”.	
Outreach	Co-Host, Astronomy on Tap Taipei (monthly)	Fall 2020 - Present
	Co-Host, Weekly Space Hangout (youtube podcast)	February 2020 - Present
	Co-Host, Astronomy on Tap New York City (monthly)	Fall 2018 - Spring 2020
	Co-Host, Out In Space (LGBTQIA+ in astro podcast)	Fall 2019 - Fall 2020
	Cool Worlds Lab YouTube channel (contributor)	2016 - 2020
	Skype A Scientist volunteer	Fall 2019
	Amateur Astronomers Association of New York (public lecture)	December 2019
Intrepid Museum GOALS for Girls (keynote lecture)	November 2019	

	The Bluffs Community Center (public lecture)	December 2018
	Westchester Amateur Astronomers (public lecture)	June 2018
	Westport Astronomical Society (public lecture)	February 2018
	Columbia University Public Outreach Night (lecture)	October 2017
	Rider University "Science Fridays" (public lecture)	October 2017
	Congressional District Office Meeting (Sen. Chuck Schumer)	August 2017
	Entertaining Science at Cornelia Street Cafe (public lecture)	June 2017
	Arts and Astro at Columbia University (public talk)	March 2017
	South Bronx Classical Charter School II (classroom visit)	May 2016
	Astronomy on Tap NYC guest presenter (various topics)	2016 - 2018
	Columbia University Public Outreach Night volunteer	2015 - Present
	<i>Sagan's Brain</i> (science outreach blog)	2009 - 2016
Select Media	Guest, The Download (Radio Taiwan International)	October 2021
	Guest, AAASky (Amateur Astronomers Association of New York)	April 2021
	Guest, Science Friday (WNYC)	October 2018
	Guest, Quirks & Quarks (CBC radio)	October 2018
	Guest columnist, Scientific American	July 2017
	Guest, The Roe Conn Show (WGN radio)	April 2016
	Guest, The Takeaway (WNYC)	March 2014
Administrative Experience & Service	Magellan & MMT Time Allocation Committee (internal ASIAA review)	2021
	Admissions Committee (Columbia Dept of Astronomy)	2019
	Referee, <i>The Astrophysical Journal</i> (2×)	2018, 2021
	Referee, <i>Monthly Notices of the Royal Astronomical Society</i>	2021
	Graduate Student Representative (Columbia Dept of Astronomy)	2017 - 2018
	Building Committee (Columbia Dept of Astronomy)	2017
	Undergraduate Administrative Aide (NYU Dept of French)	2007 - 2012
Graduate Coursework	Radiative Processes	J. Halpern
	Stellar Structure & Evolution	G. Bryan
	Galactic Dynamics	J. van Gorkom & K. Johnston
	Fluid Dynamics	G. Bryan
	Instabilities	L. Sironi
	Physics of the ISM & IGM	F. Paerels
	Astrophysics II (Black Holes and AGN)	A. Beloborodov
	Cosmology	L. Hui
Skills	Python, machine learning, Bayesian analysis, transit modeling, HST observation planning and data reduction, time-domain photometry analysis, German (intermediate), Mandarin Chinese (intermediate), administration, public outreach	
Advisors	David M. Kipping (Columbia)	Fall 2015 - Summer 2020
	Marcel A. Agüeros (Columbia)	Fall 2016 - Spring 2017
	Timothy A.D. Paglione (CUNY / AMNH)	Spring 2013 - Summer 2015
	Elisabeth A.C. Mills (NRAO)	Summer 2014