

ANTONIO C. RODRIGUEZ

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EDUCATION	PH.D. IN ASTROPHYSICS, CALIFORNIA INSTITUTE OF TECHNOLOGY	2020-
	B.S. IN PHYSICS, STANFORD UNIVERSITY	2016-2020
	Honors Thesis: <i>Youthful Exuberance of FU Ori Accretion Disks</i> Advisors: Lynne A. Hillenbrand and Roger W. Romani	
RESEARCH EXPERIENCE	CALTECH SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP (SURF)	2019
	Advisor: Lynne A. Hillenbrand. Created model spectral energy distributions and spectra for FU Ori-type young stellar objects using the suite of NextGen stellar atmospheres. Wrote a proposal for and acquired new optical spectroscopy to compare to models. Wrote a Markov Chain Monte Carlo Bayesian framework to test agreement between models and data. Publication in progress.	
	STANFORD PHYSICS DEPARTMENT SUMMER RESEARCH PROGRAM	2017 and 2018
	2018 Advisor: Roger Blandford. Developed a computational toolkit to characterize and track stationary points of the cosmic microwave background. Collaborated with two other undergraduates as part of a larger project to make a low-resolution map of the Universe, and presented my work at an end-of-summer symposium.	
	2017 Advisor: Roger W. Romani. Improved and added new functionalities to a simulation of detection events by an upcoming space telescope, the Imaging X-Ray Polarimetry Explorer (IXPE). Extended the simulation to time-evolving, extended astrophysical sources, created interactive tools to develop models, and presented my work at an end-of-summer symposium.	
OBSERVING TIME	PALOMAR OBSERVATORY, HALE 200-INCH TELESCOPE	2019
	PI: 1 night. Proposal: <i>Optical Spectroscopy of FU Ori Objects</i> . Instrument used: Double Spectrograph (DBSP).	
AWARDS	ANTHONY FELLOWSHIP, California Institute of Technology	2020
	JEFFREY ALAN WILICK MEMORIAL AWARD, Stanford University	2020
	Outstanding member of the senior class concentrating in astrophysics.	
	FORD FOUNDATION PREDOCTORAL FELLOWSHIP HONORABLE MENTION	2020
OUTREACH	STANFORD ASTRONOMICAL SOCIETY, CO-PRESIDENT	2017-2020
	MEMBER	2016-2020
	Participated in and led quarterly stargazing and informational sessions for the public. Led regular outreach events and directed expansion of events to underserved Bay Area elementary and middle schools. Helped manage a \$10,000+ budget for telescopes, astrophotography, outreach activities, external collaborations, emergency fund, etc.	
TEACHING AND TUTORING	STANFORD CENTER FOR TEACHING AND LEARNING MATH AND PHYSICS TUTOR	2018-2020
	LEAD MATH AND PHYSICS TUTOR	2019-2020
	Stanford Office of the Vice Provost for Teaching and Learning	

Peer tutor in introductory and intermediate physics and math courses, holding multiple drop-in sessions per week open to all Stanford students. Lead tutor responsibilities included hosting biweekly meetings with other math/physics tutors to discuss effective tutoring strategies and continually improve our tutoring services.

- PROFESSIONAL MEMBERSHIP American Astronomical Society, Undergraduate Member 2019-
Stanford Physics Department Committee on Undergraduate Studies 2019 - 2020
- TECHNICAL SKILLS Python (Numpy, Scipy, Jupyter Notebook), Mathematica, Java, C++, R, L^AT_EX, Git, Unix/Linux, IRAF/PyRAF, SExtractor
- PRESENTATIONS [1] A. Rodriguez and L. Hillenbrand. Accretion Disk Modeling of FU Ori Stars. In *American Astronomical Society Meeting Abstracts*, American Astronomical Society Meeting Abstracts, page 308.13, Jan. 2020.
- PUBLICATIONS [1] (*in preparation*) A. C. Rodriguez, L. A. Hillenbrand, et al. New Observations and Modeling of FU Ori-type Objects HBC 722 and Gaia 17bpi (*tentative title*).
[2] (*in preparation*) L. A. Hillenbrand, ..., A. C. Rodriguez, et al. LkH α 225 (V1318 Cyg) South in Outburst (*tentative title*).