

Sal Wanying Fu

CONTACT INFORMATION	Email: wanying.fu@pomona.edu Website: http://swfu.github.io ORCID: https://orcid.org/0000-0003-2990-0830	
RESEARCH INTERESTS	Near-field cosmology, satellite galaxies, Galactic dynamics, stellar streams, stellar halos, chemical evolution, large surveys	
EDUCATION	B.A. Physics, Pomona College , Claremont, CA Current GPA: 11.655/12	Expected May 2019
RESEARCH EXPERIENCE	Observatories of the Carnegie Institution for Science Undergraduate Research Fellow Advised by: Dr. Josh Simon, Dr. Gwen Rudie	Jun 2016-Present
	<i>The Dynamical Histories of the Crater II and Hercules Dwarf Galaxies</i>	May 2018-Present
	Used optical spectroscopy from the Magellan/IMACS spectrograph to model chemodynamics of Cra II dwarf galaxy. Inferred dynamical histories of Cra II and Herc to test tidal disruption hypotheses surrounding the two dwarf galaxies. Manuscript is currently in preparation. Work will be presented at AAS meeting in Jan 2019.	
	<i>The Origin and Classification of the Sgr II Satellite</i>	Apr 2018-Present
	Used optical spectroscopy from the Magellan/IMACS spectrograph to determine dark matter content and metallicity dispersion of Sgr II satellite. Used high-resolution optical spectroscopy from the Magellan/MIKE spectrograph to infer chemical abundance patterns of Sgr II members. Modeled orbit of satellite to infer possible origin. Work will be presented at AAS meeting in Jan 2019.	
	<i>The Origin of the 300 km/s Stream Near Segue 1</i>	Jun 2017-Aug 2018
	Identified new members of the 300S stream in APOGEE-2 and SEGUE survey data. Used dynamical modeling techniques and chemical abundance analysis to infer the origin of the stellar stream. Work culminated in paper publication and AAS iPoster presentation.	
	<i>Chemical Abundances of UMi dSph in APOGEE-2</i>	Jun 2016-Aug 2016
	Identified systematic velocity variation in timeseries velocity data of faint stars from APOGEE-2 proto-DR14 dataset. Work culminated in AAS poster presentation.	
	Pomona College Department of Physics and Astronomy Undergraduate Research Assistant Advised by: Prof. Philip Choi	Jan 2016-May 2016
	<i>Searching for NEOs Using Synthetic Tracking</i>	Jan 2016-May 2016
	Assisted remote observing program using the 1-meter telescope at Table Mountain Observatory to search for faint, near-earth asteroids.	
PUBLICATIONS	S. W. Fu , J. D. Simon, et al. <i>Dynamical Histories of the Crater II and Hercules Dwarf Galaxies</i> . arXiv:1901.00594	

	S. W. Fu , J. D. Simon, et al. 2018. <i>The Origin of the 300 km s⁻¹ Stream Near Segue 1</i> , ApJ, 866, 42	
PRESENTATIONS	<p>S. W. Fu, J. D. Simon, et al. 2019. <i>Dynamical Histories of the Crater II and Hercules Dwarf Galaxies</i>. Poster presentation at 233rd AAS Meeting in Seattle, WA</p> <p>J. D. Simon, S. W. Fu, et al. 2019. <i>The Nature of the Peculiar Milky Way Satellite Sagittarius II</i>. iPoster presentation at 233rd AAS Meeting in Seattle, WA</p> <p>Sobeck J., ... S. W. Fu, et al. 2019. <i>An Examination of the APOGEE-2 Survey Data for the Draco Dwarf Spheroidal Galaxy</i>. Poster presentation at 233rd AAS Meeting in Seattle, WA</p> <p>W. Fu, J. D. Simon, et al. <i>Characterizing the 300 km/s Stream Near Segue 1</i>. Poster presentation at 231st AAS Meeting in Washington, D.C.</p> <p>W. Fu, J. D. Simon, et al. <i>A Study of Low-Metallicity Red Giant Stars in the Ursa Minor Dwarf Spheroidal Galaxy Using APOGEE Survey Data</i>. Poster Presentation at the 229th AAS Meeting in Grapevine, TX</p>	
AWARDS	<p>Barry M. Goldwater Scholar, Barry M. Goldwater Scholarship and Excellence in Education Foundation 2018</p> <p>Tileston Junior Physics Prize recognizing physics students who demonstrate particular promise Nov 2018 Pomona College Department of Physics and Astronomy</p> <p>Inaugural FUTURE of Physics at Caltech Cohort Nov 2018</p> <p>Pomona College Scholar, Pomona College Jun 2016-Present</p> <p>Tileston Sophomore Physics Prize recognizing physics students who demonstrate particular promise Jan 2018 Pomona College Department of Physics and Astronomy</p> <p>Moncrief Astronomy Prize recognizing astronomy students who demonstrate particular promise Sep 2016 Pomona College Department of Physics and Astronomy</p>	
MENTORING EXPERIENCE	<p>ASTR101: Observational Astronomy — Mentor & Lab TA Fall 2018</p> <p>ASTR51: Introductory Astronomy — Mentor Spring 2018</p> <p>ASTR101: Observational Astronomy — Mentor & Lab TA Fall 2017</p> <p>ASTR51: Introductory Astronomy — Mentor Spring 2017</p> <p>PHYS70: Spacetime, Quanta and Entropy — Mentor & Lab TA Fall 2016</p> <p>ASTR2: Galaxies and Cosmology — Lab TA Spring 2016</p>	
SERVICE	<p>Physics Department Liaison Jan 2016-Present</p> <p>Physics Cohort Program Organizer Jan 2016-Present</p> <p>Carnegie Summer Student Program Student Leader Jun 2018-Aug 2018</p> <p>Community Partnership With Fremont Academy Femineers Mar 2018-May 2018</p> <p>Carnegie Summer Student Program Student Leader Jun 2017-Aug 2017</p> <p>Social Justice in STEM Reading Group Co-Organizer Jan 2017-May 2017</p>	
PROFESSIONAL SOCIETY MEMBERSHIPS	<p>American Astronomical Society, Junior Member Sep 2016-Present</p> <p>Sigma Xi Scientific Research Honor Society, Associate Member Sep 2018-Present</p>	

PROFESSIONAL
REFERENCES

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