Vivian U

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Professional Apointments

- 2020–Present Assistant Research Astronomer, UC Irvine.
 2018–2020 Assistant Project Scientist, UC Irvine.
 2017–2018 Postdoctoral Scholar, UC Irvine.
 2015–2017* University of California Chancellor's Postdoctoral Fellow, UC Riverside/Irvine.
 Faculty sponsors: Gabriela Canalizo and Aaron Barth
 - 2012–2015* Thirty Meter Telescope Postdoctoral Scholar, UC Riverside.

Faculty advisor: Bahram Mobasher

Education

- 2012 **Doctor of Philosophy**, *Astronomy*, University of Hawaii at Manoa, Honolulu, HI. Ph.D. Advisors: David Sanders and Giovanni Fazio
- 2008 Master of Science, Astronomy, University of Hawaii at Manoa, Honolulu, HI.
- 2006 **Bachelor of Science**, *Astrophysics*, California Institute of Technology, Pasadena, CA. Senior Thesis Advisor: Richard Ellis

Awards and Honors

- 2020 AAAS Newcomb Cleveland Prize
- 2019 National Academy of Sciences Kavli Frontiers of Science Fellow
- 2015–2017 University of California Chancellor's Postdoctoral Fellowship (\$110k[†])
 - 2014 Riverside Postdoctoral Association Symposium Oral Presentation Aaward
 - 2013 Earth, Planets and Space Excellent Reviewer
- 2019–2012 NASA Harriett G. Jenkins Predoctoral Fellowship (\$114k)
- 2019–2012 Smithsonian Astrophysical Observatory Predoctoral Fellowship (\$20k)
 - 2011 Achievement Rewards for College Scientists Fellowship (\$1k)
 - 2010 University of Hawaii Graduate Division Achievement Scholarship (\$2.2k)
 - 2010 NASA JPFP Mini Research Award, Jet Propulsion Laboratory (\$8k)
 - 2009 Ford Foundation Diversity Fellowship Honorable
 - 2005 Monticellor Summer Fellowship, Harvard-Smithsonian Center for Astrophysics
 - 2005 Rose Hills Foundation Scholarship, Caltech
- 2004–2005 L.C. & L.P. Smith Hampton Memorial Scholarship, Caltech

^{*}Includes maternity leaves in 2013 and 2016

- 2004 Summer Undergraduate Research Fellowship, Jet Propulsion Laboratory
- 2003–2004 Edwin Hubble Scholarship, Caltech
- 2003–2004 Mayr Scholarship, Caltech
 - 2003 Summer Undergraduate Research Fellowship, Caltech

Selected Telescope and Research Grants

- 2021 **James Webb Space Telescope**, *Cycle 1*, GO-1717, Pl. "Feedback around Supermassive Black Holes in Dusty Nuclei"
- 2021 **Nuclear Spectroscopic Telescope Array**, *Cycle 7*, GO-7153, Co-I (PI: Privon). "Gazing into the Inferno: Embedded AGN in Local ULIRGs"
- 2020 **Nuclear Spectroscopic Telescope Array**, *Cycle 6*, GO-6223, Co-I (PI: Privon). "Gazing into the Inferno: Embedded AGN in Local ULIRGs"
- 2020-2022 **NASA**, Astrophysics Data Analysis Program, PI (\$280k).

 "Hunting for Light in the Dark: A Multiwavelength Guide to Obscured Supermassive Black Holes in Nearby Galaxy Mergers"
 - 2020 **North American ALMA Science Center**, Conference and Workshop Grant, PI (\$7.7k).
 - "Extreme Galactic Nuclear Activity Ultraluminous Starbursts and AGN"
 - 2018 Hubble Space Telescope, Mid-Cycle 25, GO-15472, Co-I (PI: Evans).
 "Star Cluster Formation and Evolution in Luminous Galaxy Mergers: A Joint JWST-HST Investigation"
 - 2017 **James Webb Space Telescope**, *Cycle 0*, ERS-1328, Co-I (PI: Armus). "A JWST Study of the Starburst-AGN Connection in Merging LIRGs"

Press coverage: "NASA's Webb Will Explore the Cores of Merging Galaxies." 2020, NASA,

https://www.nasa.gov/feature/goddard/2020/nasas-webb-will-explore-the-cores-of-merging-galaxies/.

"Extragalactic Pioneer." 2020, UCI, https://news.uci.edu/2020/09/23/extragalactic-pioneer/.

- 2014–2017 **National Science Foundation**, Astronomy and Astrophysics Research Grant, 1412851, Co-I (PI: Max).
 - "Outflows and AGN in the Nuclei of Merging Galaxies, Viewed with Laser Guide Star Adaptive Optics" ${\sf Optics}$ "
 - 2015 **Hubble Space Telescope**, *Cycle 23*, AR-14303, Co-I (PI: Mobasher). "Multi-Waveband Photometric Catalogs for the Hubble Frontier Field Clusters and their Parallel Fields"
 - 2015 Chandra X-ray Observatory, Cycle 17, GO-17700440, Co-I (PI: Veilleux).
 "Elliptical Galaxy in the Making: The Black Hole Activity, Galaxy-Scale Outflow, and Metal-Rich Halo of Mrk 273"
 - 2013 **AAS International Travel Grant**, FIRSED2013, (\$1.1k).
 - 2010 **Sigma Xi Grants-in-Aid of Research**, G20101015154321, PI (\$4.5k). "Kinematics and Energetics in Luminous Infrared Galaxies"
 - 2009 AAS/IAU Travel Grant, IAU General Assembly.

[†]Also provides five years of salary support for faculty appointment on UC Campus

Publications (H-index: 22; total citations: 2,036 from ADS) Refereed Publications (top 3 authorship) and Press Releases

- 42. <u>U, V.</u> et al. "The Lick AGN Monitoring Project 2016: Velocity-Resolved H β Lags in Luminous Seyfert Galaxies." 2021, to be submitted; advanced draft available upon request
- 41. <u>U, V.</u> et al. "Keck OSIRIS AO LIRG Analysis (KOALA): Feedback in the Nuclei of Luminous Infrared Galaxies." 2019, ApJ, 871, 166
- 40. Iwasawa, K.; U, V. et al. "Testing a Double AGN Hypothesis for Mrk 273." 2018, A&A, 611, 71
- 39. Davies, R.; Medling, A.; <u>U, V.</u> et al. "Reconstructing merger timelines using star cluster age distributions: the case of MCG+08-11-002." 2016, MNRAS, 458, 158
- 38. <u>U, V.</u> et al. "A Correlation Between Ly α Spectral Line Profile and Rest-Frame UV Morphology." 2015, ApJ, 815, 57
- 37. Medling, A.; <u>U, V.</u> et al. "Following Black Hole Scaling Relations Through Gas-Rich Mergers." 2015, ApJ, 803, 61
- 36. Medling, A.; <u>U, V.</u> et al. "Shocked gas in IRAS F17207-0014: ISM collisions and outflows." 2015, MNRAS, 448, 2301
- 35. Medling, A.; <u>U, V.</u> et al. "Stellar and Gaseous Nuclear Disks Observed in Nearby (U)LIRGs." 2014, ApJ, 784, 70
- 34. <u>U, V.</u> et al. "The Inner Kiloparsec of Mrk 273 with Keck Adaptive Optics." 2013, ApJ, 775, 115 Press coverage: "When do Black Holes Become Active? The Case of the Strangely-Shaped Galaxy Mrk 273." 2013, Universe Today, http://www.universetoday.com/104255/when-do-black-holes-become-active-the-case-of-the-strangely-shaped-galaxy-mrk-273/
- 33. <u>U, V.</u> et al. "Spectral Energy Distribution of Local Luminous and Ultraluminous Infrared Galaxies." 2012, ApJS, 203, 9
- 32. U, V. et al. "Distance Determination to M33 with FGLR." 2009, ApJ, 704, 1120
- 31. Conselice, C. J.; Bundy, K.; <u>U, V.</u> et al. "The faint and extremely red K-band selected galaxy population in the DEEP2/Palomar fields." 2008, MNRAS, 383, 1366

Other Refereed Publications

- 30. Song, Y. et al. "A Comparison between Nuclear Ring Star Formation in LIRGs and Normal Galaxies with the Very Large Array", 2021, ApJ, accepted, arXiv:2107.00412
- 29. Liu, W. et al. "Integral-Field Spectroscopy of Fast Outflows in Dwarf Galaxies with AGN", 2020, ApJ, 905, 166

- 28. Kool, E. et al. "AT 2017gbl: a dust obscured TDE candidate in a luminous infrared galaxy", 2020, MNRAS, 498, 2167
- 27. Treister, E. et al. "The Molecular Gas in the NGC 6240 Merging Galaxy System at the Highest Spatial Resolution." 2020, ApJ, 890, 149
- 26. Larson, K. L. et al. "Star-forming Clumps in Local Luminous Infrared Galaxies." 2020, ApJ, 888, 92
- 25. Fischer, T. et al. "A Dissection of Spatially Resolved AGN Feedback Across the Electromagnetic Spectrum." 2019, ApJ, 887, 200
- 24. Medling, A. M. et al. "How to Fuel an AGN: Mapping Circumnuclear Gas in NGC 6240 with ALMA." 2019, ApJL, 885, L21
- 23. Herrero-Illana, R. et al. "The Molecular Gas and Dust Properties of Galaxies from the Great Observatories All-sky LIRG Survey." 2019, A&A, 628, 71
- 22. Bannister, K. W. et al. "A single fast radio burst localized to a massive galaxy at cosmological distance." 2019, Science, 365, 565
- 21. Linden, S. T. et al. "A Very Large Array Survey of Luminous Extranuclear Star-Forming Regions in Luminous Infrared Galaxies in GOALS." 2019, ApJ, 881, 70
- 20. Liu, W. et al. "Elliptical Galaxy in the Making: The Dual Active Galactic Nuclei and Metalenriched Halo of Mrk 273." 2019, ApJ, 872, 39
- 19. Torres-Albà, N. et al. "C-GOALS II. Chandra Observations of the Lower Luminosity Sample of Nearby Luminous Infrared Galaxies in GOALS." 2018, A&A, 620, 140
- 18. Treister, E. et al. "Optical, Near-IR and Sub-mm IFU Observations of the Nearby Dual AGN Mrk 463." 2018, ApJ, 854, 83
- 17. Riess, A. G. et al. "Type Ia Supernova Distances at z>1.5 From the Hubble Space Telescope Multi-Cycle Treasury Programs: The Early Expansion Rate." 2018, ApJ, 853, 126
- 16. Larson, K. L. et al. "Morphology and Molecular Gas Fractions of Local Luminous Infrared Galaxies as a Function of Infrared Luminosity and Merger Stage." 2016, ApJ, 825, 128
- 15. Stierwalt, S. et al. "Mid-infrared Properties of Luminous Infrared Galaxies. II. Probing the Dust and Gas Physics of the GOALS Sample." 2014, ApJ, 790, 124
- 14. Rodney, S. et al. "Type Ia Supernova Rate Measurements to Redshift 2.5 from CANDELS: Searching for Prompt Explosions in the Early Universe." 2014, AJ, 148, 13
- 13. Graur, O. et al. "Type-Ia Supernova Rates to Redshift 2.4 from CLASH: the Cluster Lensing And Supernova survey with Hubble." 2014, ApJ, 783, 28
- 12. Wang, J. et al. "Fast and Furious: Shock Heated Gas as the Origin of Spatially Resolved Hard X-ray Emission in the Central 5 kpc of the Galaxy Merger NGC 6240." 2014, ApJ, 785, 55

- 11. Stierwalt, S. et al. "Mid-infrared Properties of Nearby Luminous Infrared Galaxies. I. Spitzer Infrared Spectrograph Spectra for the GOALS Sample." 2013, ApJS, 206, 1
- 10. Mazzarella, J. et al. "Investigation of Dual Active Nuclei, Outflows, Shock-heated Gas, and Young Star Clusters in Markarian 266." 2012, AJ, 144, 125
- 9. Iwasawa, K. et al. "C-GOALS: Chandra observations of a complete sample of luminous infrared galaxies from the IRAS Revised Bright Galaxy Survey." 2011, A&A, 529, 106
- 8. Iwasawa, K. et al. "The location of an active nucleus and the soft X-ray shadowing by a tidal tail in the ULIRG Mrk 273." 2011, A&A, 528, 137
- 7. Petric, A. et al. "Mid-Infrared Spectral Diagnostics of Luminous Infrared Galaxies." 2011, ApJ, 730, 28
- 6. Haan, S. et al. "The Nuclear Structure in Nearby Luminous Infrared Galaxies: HST NICMOS Imaging of the GOALS Sample." 2011, AJ, 141, 100
- 5. Inami, H. et al. "The Buried Starburst in the Interacting Galaxy II ZW 096 as Revealed by the Spitzer Space Telescope." 2010, AJ, 140, 63
- 4. Howell, J. et al. "The Great Observatories All-Sky LIRG Survey: Comparison of Ultraviolet and Far-Infrared Properties." 2010, ApJ, 715, 572
- 3. Armus, L. et al. "GOALS: The Great Observatories All-sky LIRG Survey." 2009, PASP, 121, 559
- 2. Aspin, C. et al. "V1647 Orionis: Reinvigorated Accretion and the Re-Appearance of McNeil's Nebula." 2009, ApJ, 692, 67
- 1. MacArthur, L. A. et al. "The Evolutionary History of Galactic Bulges: Photometric and Spectroscopic Studies of Distant Spheroids in the GOODS Fields." 2008, ApJ, 680, 70

Selected Non-Refereed Publications

- 12. Koss, M.; <u>U, V.</u> et al. "Black Hole Growth in Mergers and Dual AGN." 2019, Astro2020 Decadal Survey, BAAS, 51, 504
- 11. Kelley, L. Z. et al. "Multi-Messenger Astrophysics with Pulsar Timing Arrays." 2019, Astro2020 Decadal Survey, BAAS, 51, 490
- 10. Gültekin, K. et al. "Black Holes Across Cosmic Time." 2019, Astro2020 Decadal Survey, BAAS, 51, 287
- 9. Lopez-Rodriguez, E. et al. "Tracing the Feeding and Feedback of Active Galaxies." 2019, Astro2020 Decadal Survey, BAAS, 51, 138
- 8. Skidmore, W. et al. "Thirty Meter Telescope Detailed Science Case: 2015." 2015, RAA, 15, 1945
- 7. U, V. et al. "Keck IFU Observations of Mrk 273." 2013, ASPC, 477, 69

- 6. Tan, Q.; Gao, Y.; Wang, Z.; <u>U, V.</u>. "High resolution SMA imaging of (ultra)-luminous infrared galaxies." 2012, IAUS, 284, 471
- 5. **U, V.** et al. "High-Resolution Mapping of CO(3-2) in NGC 6240." 2011, ASPC, 446, 97
- 4. Morzinski, K. et al. "Circuit Design: An inquiry lab activity at Maui Community College." 2010, ASPC, 436, 295
- 3. U, V. and Sanders, D. B. "Spectral Energy Distributions of LIRGs." 2010, IAUS, 267, 143
- 2. Sanders, D. B.; Kartaltepe, J. S.; Kewley, L. J.; <u>U, V.</u>; et al. "Luminous Infrared Galaxies and the Starburst-AGN Connection." 2009, ASPC, 408, 3
- 1. <u>U, V.</u> et al. "Quantitative Spectral Analysis of BA Supergiants in M33." 2007, IAUS 250, *Massive Stars as Cosmic Engines*

Talks and Seminars

Invited Talks and Colloquia

- Jul 2021 Multi-institutional AGN Seminar Series, George Mason University (virtual)
- Apr 2021 Astronomy seminar, University of Bath / Bristol / Cardiff (online due to COVID-19)
- Apr 2020 ARC seminar, Queen's University Belfast (online due to COVID-19)
- Feb 2020 Special colloquium, New Mexico State University, Las Cruces, NM
- Feb 2020 Joint NRAO/UVa Colloquium, NRAO / University of Virginia, Charlottesville, VA
- Sep 2019 Astrophysics Colloquium, University of California, Santa Barbara, Santa Barbara, CA
- Sep 2019 Astronomy Seminar, Texas A&M University, College Station, TX
- Jun 2019 Special colloquium, National Optical Astronomy Observatory, Tucson, AZ
- Apr 2019 Special colloquium, University of Melbourne, Victoria, Australia
- Feb 2019 Colloquium, Pomona College, Claremont, CA
- Feb 2019 Special colloquium, University of Chicago, Chicago, IL
- Feb 2019 Special colloquium, University of Kansas, Lawrence, KS
- Feb 2019 Special colloquium, Rochester Institute of Technology, Rochester, NY
- Jun 2018 TAPIR Seminar, California Institute of technology, Pasadena, CA
- Feb 2018 Astrophysics seminar, University of California, Irvine, Irvine, CA
- Feb 2018 Special colloquium, University of California, Santa Cruz, Santa Cruz, CA
- Oct 2017 Bash Symposium, University of Texas, Austin, Austin, TX
- Sep 2017 Lunch Talk, Carnegies Observatories, Pasadena, CA
- Aug 2017 Special colloquium, University of Southern California, Los Angeles, CA
- Mar 2017 Cosmology seminar, University of California, Davis, Davis, CA
- Mar 2017 Special colloquium, Space Telescope Science Institute, Baltimore, MD
- Feb 2017 Astronomy seminar, University of California, Riverside, Riverside, CA

- Feb 2017 Special colloquium, University of Missouri, Columbia, MO
- Mar 2016 Synergistic Science in the Radio Regime, Carnegie Observatories, CA
- Mar 2016 CASS Seminar, University of California, San Diego, San Diego, CA
- May 2015 Colloquium, National Central University, Taiwan
- Apr 2015 Seminar, The University of Hong Kong, Hong Kong
- Apr 2015 Colloquium, National Tsing Hua University, Taiwan
- Apr 2015 Colloquium, Academia Sinica Institute of Astrophysics and Astronomy, Taiwan
- Nov 2014 Science talk, Canada-France-Hawaii Telescope, Kamuela, HI
- Apr 2013 Seminar, University of Groningen, The Netherlands
- Apr 2013 FIRSED2013, Amsterdam, The Netherlands
- Dec 2011 Special seminar, Submillimeter Array, Cambridge, MA
- Nov 2011 Extragalactic seminar, University of California, Los Angeles, Los Angeles, CA
- Nov 2011 Lunch talk, Carnegie Observatories, Pasadena, CA
- Nov 2011 Astronomy seminar, University of California, Riverside, Riverside, CA
- Nov 2011 Tea talk, California Institute of Technology, Pasadena, CA
- Aug 2011 Lunch talk, National Radio Astronomy Observatory, Charlottesville, VA
- Aug 2011 OIR seminar, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA
- May 2010 Seminar, Purple Mountain Observatory, Nanjing, China
- Mar 2010 Science talk, Canada-France-Hawaii Telescope, Kamuela, HI

Outreach Talks

- Aug 2021 NASA Universe of Learning Science Briefing, virtual
- Aug 2019 Lick Observatory Summer Series: Evening with the Stars, Mount Hamilton, CA
- Aug 2018 Lick Observatory Summer Series: Music of the Spheres, Mount Hamilton, CA
- Jul 2018 Riverside Astronomical Society, La Sierra University, Riverside, CA
- Mar 2015 Public lecture, Journey Through The Universe, Hilo, HI
- Dec 2014 Public lecture, University of California, Riverside, Riverside, CA

Contributed Talks

- Jul 2021 European Astronomical Society Annual Meeting 2021, S10: The many faces of black hole accretion, Virtual
- Jan 2020 American Astronomical Society 235th Meeting, Honolulu, HI
- Sep 2019 Keck Science Meeting, UCLA, Los Angeles, CA
- Jan 2019 Extremely Big Eyes on the Early Universe, UCLA, Los Angeles, CA
- Jan 2019 American Astronomical Society 233rd Meeting, Seattle, WA
- Dec 2018 Thirty Meter Telescope Science Forum, Pasadena, CA
- Jul 2018 Chinese Academy of Sciences The National Academies 8th Forum for New Leaders in Space Science, Pasadena, CA

| Jan 2018 | Chinese Academy of Sciences - The National Academies $7^{\rm th}$ Forum for New Leaders in Space Science, Guangzhou, China |
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| Aug 2017 | Galaxy Formation and Evolution in Southern California, Caltech, Pasadena, CA |
| Jun 2017 | Institute for Astronomy 50 th Anniversary, Kaneohe, HI |
| Apr 2017 | President's Postdoctoral Fellowship Program Academic Retreat, Lake Arrowhead, CA |
| Jan 2017 | American Astronomical Society 229 th Meeting, Grapevine, TX |
| Aug 2016 | Mapping the Pathways of Galaxy Transformation Across Time and Space, Avalon, CA |
| Nov 2015 | 50 years of Infrared Astronomy, Caltech, Pasadena, CA |
| Mar 2015 | Unveiling the AGN-Galaxy Evolution Connection, Puerto Varas, Chile |
| Jan 2015 | American Astronomical Society 225 th Meeting, Seattle, WA |
| Sep 2014 | Riverside Postdoctoral Association Symposium, UC Riverside, Riverside, CA |
| Jul 2014 | Thirty Meter Telescope Science Forum, Tucson, AZ |
| Nov 2012 | Binary Black Holes & Dual AGN, Tucson, AZ |
| Jan 2012 | American Astronomical Society 219 th Meeting, Austin, TX |
| Oct 2011 | Galaxy Mergers in an Evolving Universe, Hualien, Taiwan |
| Sep 2011 | Keck Science Meeting, Caltech, Pasadena, CA |
| Jul 2011 | NASA Harriett Jenkins Fellowship Annual Meeting, NASA Ames, Moffett Field, CA |
| Oct 2010 | Galaxy Evolution: Infrared to Millimeter Wavelength Perspective, Guilin, China |
| Jan 2010 | American Astronomical Society 215 th Meeting, Washington, DC |
| Aug 2008 | Asian-Pacific Regional IAU Meeting, Kunming, China |

Telescope Time

| 2005–2021 | Keck – OSIRIS, DEIMOS, NIRC2, KCWI, MOSFIRE, LRIS, NIRES | 45n, 11n as PI |
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| 2015-2020 | Lick – Kast | 19n |
| 2019–2020 | ALMA | 18h |
| 2009–2016 | Gemini – NIFS | 2n, 20h as PI |
| 2010–2011 | SMA | 11n, 17t as PI |
| 2009–2011 | JCMT – HARP, RxA3 | 7n, 48h as PI |
| 2009 | CSO – Rx, CHARCII | 4n, 3n as Pl |
| 2009 | Subaru — Suprime-Cam | 1n |
| 2008 | UH2.2m — Tek | 11n, 8n as PI |
| 2008 | UKIRT – CGS4, UFTI | 9n, 3n as Pl |
| 2005 | Whipple – FAST | 3n |

Mentoring and Teaching

Research Mentoring

- 2020-Present Tianmu Gao, Beijing Normal University Grad, Masters Thesis.
 - 2020-2021 Liam Hunt, UCI Undergrad, Senior Thesis.
- 2021 Summer **Daphne Ghazizadeh**, *George Washington University Undergrad*, co-advising with Hengxiao Guo.
- 2021 Summer Jeffrey Gong, Diamond Bar High School, co-advising with Hengxiao Guo.
- 2020 Summer **Akshay Gowrishankar**, *Caltech Undergrad*, *SURF Program*, co-advising with George Privon.
 - 2019-2020 **Ansh Vashisth**, *Orange County School of the Arts*, (now undergrad at UC Berkeley).
- 2019 Summer Bailey Liu, Orange County School of the Arts, Regeneron Top 300 Scholar, (now Woodrow Wilson Undergrad Research Fellow at Johns Hopkins University).
 - 2016-2017 Alex Vogler, UCI Undergrad, co-advised with Aaron Barth, (now grad at UC Davis).
 - 2013-2015 Laura DeGroot née Green, *UCR Grad*, co-advised with Bahram Mobasher, (now Visiting Assistant Professor of Physics at The College of Wooster).
 - 2012-2015 **Shoubaneh Hemmati**, *UCR Grad*, co-advised with Bahram Mobasher, (now science staff at IPAC).
 - 2013-2015 **Armeen Mobasher**, *Riverside STEM Academy*, co-advised with Laura DeGroot, (now undergrad at UC Riverside).
 - 2013-2015 **Alex Herrera**, *Riverside STEM Academy*, co-advised with Laura DeGroot, (now undergrad at MIT).
 - 2014-2015 Elizabeth Fletes, Riverside STEM Academy, co-advised with Laura DeGroot.
- 2013 Summer Nathan Sherrier, Riverside STEM Academy, co-advised with Laura DeGroot.
- 2009 Summer Michele Dufault, Yale Undergrad, IfA REU Program, (deceased).

Formal Teaching

- 2009 **Astronomy 110 Instructor**, *University of Hawaii at Manoa*, Co-taught an introductory summer course including designing a curriculum with inquiry-based activities.
- 2009 **ISEE/CfAO Professional Development Program**, *Maui Community College*, Attended workshops and designed an inquiry-based lab activity for electrical engineers.
- 2006 **Astronomy 1 Undergraduate Teaching Assistant**, *Caltech*, Led discussion sessions reinforcing material taught in lectures through problem-solving and other activities.

Professional Society and Service

- 2021-Present IAU Member
- 2020-Present AAAS Member
- 2017-Present Panel Reviewer and Chair, NASA ADAP, HST, Swift, JWST, IRIS-DRS
- 2017-Present UCI Committee on Inclusive Excellence / APS-IDEA Team

- 2014-Present Thirty Meter Telescope International Science Development Team
- 2012-Present Thirty Meter Telescope IRMS Science Team
- 2010-Present Journal Reviewer, Astr. & Space Sci., EPS, ApJ, MNRAS, A&A
- 2008-Present AAS Member
 - 2015–2021 UCI Women in Physics and Astronomy Executive Committee
 - 2017-2020 UCI Advisory Council on Campus Climate, Culture, and Inclusion
 - 2020 Scientific Organizing Committee and Session Chair, Keck Science Meeting, *Pasadena*, *CA*
 - 2020 Scientific Organizing Committee and Session Chair, Galaxy Formation and Evolution in the Era of Roman Space Telescope, *Baltimore*, *MD*
 - 2020 Leader and Organizer, JWST Training Workshop, Irvine, CA
 - 2020 Scientific Organizing Committee Chair, Extreme Galactic Nuclear Activity Ultraluminous Starbursts and AGN, *Honolulu*, *HI*
 - 2019–2020 Organizing Committee, CUWiP 2020, Irvine, CA
 - 2018–2020 Chairperson, Vejar Elementary School Site Council, Walnut, CA
 - 2019 External Reviewer, Canadian Time Allocation Committee
 - 2019 Session Chair, Extremely Big Eyes on the Early Universe, UCLA, Los Angeles, CA
 - 2018–2019 US Extremely Large Telescope Program: Galaxy Evolution Workgroup
 - 2018 Session Chair, TMT Science Forum, SMBH session, Pasadena, CA
 - 2016 External Reviewer, China's Telescope Access Program TAC
 - 2006–2012 Graduate Education and Public Outreach Committee. If A
 - 2011 Harvard-Smithsonian Graduate Student Committee, CfA
 - 2009 Time Allocation Committee, IfA
 - 2009 Graduate Admissions Committee, IfA
 - 2007 Local Organizing Committee, IAU 250, Kauai, HI
 - 2003–2006 Student for the Exploration and Development of Space, Executive Committee, Caltech
 - 2004–2005 Student Faculty Conference Committee: Physics, Applied Physics, and Astronomy, Caltech