

Department of Physics and Astronomy
 University of California, Riverside
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ACADEMIC POSITIONS	Postdoctoral Researcher <i>JWST/MIRI</i> science team, University of Arizona	2017 – Present
EDUCATION	Ph.D. in Physics (2017) — University of California, Riverside M.S. in Physics (2012) — University of California, Riverside B.S. in Physics (2011) — University of Tehran, Iran	
RESEARCH EXPERIENCE	Graduate Student Researcher Dept. of Physics and Astronomy, University of California at Riverside <ul style="list-style-type: none"> • Supervisor: Dr. Naveen Reddy • The MOSFIRE Deep Evolution Field (MOSDEF) Survey 	2011 – 2017 2013 – Present
	Undergraduate Student Researcher Dept. of Physics, University of Tehran <ul style="list-style-type: none"> • Supervisor: Prof. Mohammad Taghi Tavassoly 	2010 – 2011
OBSERVING EXPERIENCE	17 ¹ / ₂ nights observing experience with MOSFIRE on Keck I telescope 1 night observing experience with DEIMOS on Keck II telescope	
OBSERVING PROPOSALS	PI: Large Binocular Telescope/MODS, 2017b Co-I (PI: Naveen Reddy): Keck/LRIS, 2016b-2017b	
HONORS & AWARDS	<ul style="list-style-type: none"> • Robert T. Poe Memorial Scholarship Award Presented for Outstanding Ph.D. Graduate Dept. of Physics and Astronomy, University of California at Riverside • Dissertation Year Program Award University of California at Riverside • NSF Graduate Research Fellowship National Science Foundation (NSF) • Robert L. Wild Family Scholarship Award Presented for Outstanding Graduate Research by a 4th Year Graduate Student Dept. of Physics and Astronomy, University of California at Riverside • Conference Travel Grants (5 times) Graduate Student Association, University of California at Riverside • Dean's Distinguished Fellowship Dept. of Physics and Astronomy, University of California at Riverside • Scholarship to Participate in Students On Ice Antarctic Expedition Ahoora Foundation (Anousheh Ansari) • 2nd Rank at National Astronomy Olympiad Young Scholars Club, Iran 	2017 Fall 2016 2013 – 2016 2015 2014 – 2016 2011 2007 2005

PUBLICATIONS Lead Author:

5. The MOSDEF Survey: direct observational constraints on the photon production efficiency, ξ_{ion} , at $z \sim 2$
Shivaei, I., Reddy, N., Siana, B., Shapley, A., Kriek, M., Mobasher, B., Freeman, W., Sanders, R., Coil, A., Price, S., Fetherolf, T., Azadi, M., Leung, G., Zick, T.
The Astrophysical Journal, submitted
4. The MOSDEF Survey: Metallicity dependence of the PAH emission at high redshift and implications for $24\mu\text{m}$ -inferred IR luminosities and star formation rates at $z \sim 2$
Shivaei, I., Reddy, N., Shapley, A., Siana, B., Kriek, M., Mobasher, B., Coil, A., Freeman, W., Sanders, R., Price, S., Azadi, M., Zick, T.
The Astrophysical Journal, Volume 837, Issue 2, article id. 157, 14 pp. (2017)
Also featured in: Astronomy UCR, UCR Today, Phys.org, Science Daily, EurekAlert, Space Daily
3. The MOSDEF Survey: The strong agreement between $\text{H}\alpha$ and UV-to-FIR star formation rates for $z \sim 2$ star-forming galaxies
Shivaei, I., Kriek, M., Reddy, N., Shapley, A., Barro, G., Conroy, C., Coil, A., Freeman, W., Mobasher, B., Siana, B., Sanders, R., Price, S., Azadi, M., Pasha, I., & Inami, H.
The Astrophysical Journal Letters, Volume 820, Issue 2, article id. L23, 7 pp. (2016)
Also featured in: Astronomy UCR, UCR Today, Keck Observatory, Phys.org, Science Daily, EurekAlert, Space Daily, Astronomy Now
2. The MOSDEF Survey: Dissecting the star-formation rate vs. stellar mass relation using $\text{H}\alpha$ and $\text{H}\beta$ emission lines at $z \sim 2$
Shivaei, I., Reddy, N. A., Shapley, A. E., Kriek, M., Siana, B., Mobasher, B., Coil, A. L., Freeman, W. R., Sanders, R., Price, S., de Groot, L, & Azadi, M.
The Astrophysical Journal, Volume 815, Issue 2, article id. 98, 12 pp. (2015)
1. Investigating $\text{H}\alpha$, UV, and IR Star-formation Rate Diagnostics for a Large Sample of $z \sim 2$ Galaxies
Shivaei, I., Reddy, N. A., Steidel, C. C., & Shapley, A. E.
The Astrophysical Journal, Volume 804, Issue 2, article id. 149, 10 pp. (2015)

Contributing Author:

14. The MOSDEF survey: Broad Emission Lines at $z = 1.4 - 3.8$
Freeman, W. R.; Siana, B.; Kriek, M.; Shapley, A. E.; Reddy, N.; Coil, A. L.; Mobasher, B.; Muratov, A. L.; Azadi, M.; Leung, G.; Sanders, R.; **Shivaei, I.**; Price, S. H.; DeGroot, L.; Keres, D.
The Astrophysical Journal, submitted, arXiv:1710.03230
13. The MOSDEF survey: First Measurement of Nebular Oxygen Abundance at $z > 4$
Shapley, A. E.; Sanders, R. L.; Reddy, N. A.; Kriek, M.; Freeman, W. R.; Mobasher, B.; Siana, B.; Coil, A. L.; Leung, G. C. K.; deGroot, L.; **Shivaei, I.**; Price, S. H.; Azadi, M.; Aird, J.
The Astrophysical Journal Letters, Volume 846, Issue 2, article id. L30, 6 pp. (2017)
12. The MOSDEF survey: the prevalence and properties of galaxy-wide AGN-driven outflows at $z \sim 2$
Leung, G.; Coil, A.; Azadi, M.; Aird, J.; Shapley, A.; Kriek, M.; Mobasher, B.; Reddy, N.; Siana, B.; Freeman, W.; Price, S.; Sanders, R.; **Shivaei, I.**
The Astrophysical Journal, in press, arXiv:1703.10255
11. The MOSDEF survey: AGN multi-wavelength identification, selection biases and host galaxy properties
Azadi, M.; Coil, A. L.; Aird, J.; Reddy, N.; Shapley, A.; Freeman, W. R.; Kriek, M.;

- Leung, G. C. K.; Mobasher, B.; Price, S. H.; Sanders, R. L.; Shivaei, I.; Siana, B.*
The Astrophysical Journal, Volume 835, Issue 1, article id. 27, 22 pp. (2017)
10. The MOSDEF Survey: Detection of [O III] λ 4363 and the Direct-method Oxygen Abundance of a Star-forming Galaxy at $z = 3.08$ *Sanders, R. L.; Shapley, A. E.; Kriek, M.; Reddy, N. A.; Freeman, W. R.; Coil, A. L.; Siana, B.; Mobasher, B.; Shivaei, I.; Price, S. H.; de Groot, L.*
The Astrophysical Journal Letters, Volume 825, Issue 2, article id. L23, 6 pp. (2016)
 9. Dust Attenuation of the Nebular Regions of $z \sim 2$ Star-forming Galaxies: Insight from UV, IR, and Emission Lines *De Barros, S.; Reddy, N.; Shivaei, I.*
The Astrophysical Journal, Volume 820, Issue 2, article id. 96, 15 pp. (2016)
 8. The MOSDEF Survey: Dynamical and Baryonic Masses and Kinematic Structures of Star-forming Galaxies at $1.4 \leq z \leq 2.6$ *Price, S. H.; Kriek, M.; Shapley, A. E.; Reddy, N. A.; Freeman, W. R.; Coil, A. L.; de Groot, L.; Shivaei, I.; Siana, B.; Azadi, M.; Barro, G.; Mobasher, B.; Sanders, R. L.; Zick, T.*
The Astrophysical Journal, Volume 819, Issue 1, article id. 80, 27 pp. (2016)
 7. The MOSDEF Survey: Electron Density and Ionization Parameter at $z \sim 2.3$ *Sanders, R. L.; Shapley, A. E.; Kriek, M.; Reddy, N. A.; Freeman, W. R.; Coil, A. L.; Siana, B.; Mobasher, B.; Shivaei, I.; Price, S. H.; de Groot, L.*
The Astrophysical Journal, Volume 816, Issue 1, article id. 23, 24 pp. (2016)
 6. Spectroscopic Study of Star-forming Galaxies in Filaments and the Field at $z \sim 0.5$: Evidence for Environmental Dependence of Electron Density *Darvish, B.; Mobasher, B.; Sobral, D.; Hemmati, S.; Nayyeri, H.; Shivaei, I.*
The Astrophysical Journal, Volume 814, Issue 2, article id. 84, 21 pp. (2015)
 5. The MOSFIRE Deep Evolution Field (MOSDEF) Survey: Rest-frame Optical Spectroscopy for ~ 1500 H-selected Galaxies at $1.37 < z < 3.8$ *Kriek, M.; Shapley, A. E.; Reddy, N. A.; Siana, B.; Coil, A. L.; Mobasher, B.; Freeman, W. R.; de Groot, L.; Price, S. H.; Sanders, R.; Shivaei, I.; Brammer, G. B.; Momcheva, I. G.; Skelton, R. E.; van Dokkum, P. G.; Whitaker, K. E.; Aird, J.; Azadi, M.; Kassis, M.; Bullock, J. S.; Conroy, C.; Davé, R.; Keres, D.; Krumholz, M.*
The Astrophysical Journal Supplement Series, Volume 218, Issue 2, article id. 15, 27 pp. (2015)
 4. The MOSDEF Survey: Measurements of Balmer Decrements and the Dust Attenuation Curve at Redshifts $z \sim 1.42-1.6$ *Reddy, N. A.; Kriek, M.; Shapley, A. E.; Freeman, W. R.; Siana, B.; Coil, A. L.; Mobasher, B.; Price, S. H.; Sanders, R. L.; Shivaei, I.*
The Astrophysical Journal, Volume 806, Issue 2, article id. 259, 24 pp. (2015)
 3. The MOSDEF Survey: Excitation Properties of $z \sim 2.3$ Star-forming Galaxies *Shapley, A. E.; Reddy, N. A.; Kriek, M.; Freeman, W. R.; Sanders, R. L.; Siana, B.; Coil, A. L.; Mobasher, B.; Shivaei, I.; Price, S. H.; de Groot, L.*
The Astrophysical Journal, Volume 801, Issue 2, article id. 88, 13 pp. (2015)
 2. The MOSDEF Survey: Optical Active Galactic Nucleus Diagnostics at $z \sim 2.3$ *Coil, A. L.; Aird, J.; Reddy, N.; Shapley, A. E.; Kriek, M.; Siana, B.; Mobasher, B.; Freeman, W. R.; Price, S. H.; Shivaei, I.*
The Astrophysical Journal, Volume 801, Issue 1, article id. 35, 19 pp. (2015)
 1. The MOSDEF Survey: Mass, Metallicity, and Star-formation Rate at $z \sim 2.3$ *Sanders, R. L.; Shapley, A. E.; Kriek, M.; Reddy, N. A.; Freeman, W. R.; Coil, A. L.; Siana, B.; Mobasher, B.; Shivaei, I.; Price, S. H.; de Groot, L.*
The Astrophysical Journal, Volume 799, Issue 2, article id. 138, 11 pp. (2015)

- PRESENTATIONS**
24. Constraints on the photon production efficiency using rest-optical spectra
Invited Talk: Characterizing Galaxies with Spectroscopy with a view for JWST
Leiden, Netherlands, Oct 2017
 23. Exploring the ionizing photon production efficiency of galaxies at $z \sim 2$ using optical spectral diagnostics
Conference Talk: Spectral Diagnostics to Explore the Cosmic Dawn with JWST
Space Telescope Science Institute, Baltimore, MD, August 2017
 22. The MOSFIRE Deep Evolution Field Survey
Invited Talk: Advances in Galaxy Evolution through a new Generation of Spectroscopic Surveys
MPIA, Ringberg Castle, Germany, June 2017
 21. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Dissertation Talk: American Astronomical Society 229th Meeting
Grapevine, Texas, January 2017
 20. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: NOAO Scientific Lunch Talks
NOAO, Tucson, AZ, November 2016
 19. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: UT Austin Extragalactic Astronomy Seminar
UT Austin, Austin, TX, November 2016
 18. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: Carnegie Lunch Talks
Carnegie, Pasadena, CA, November 2016
 17. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: Caltech Astronomy Tea Talks
Caltech, Pasadena, CA, October 2016
 16. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: UCI Astrophysics Seminar
UC Irvine, Irvine, CA, October 2016
 15. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: UCLA GalForm
UCLA, Los Angeles, CA, October 2016
 14. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: UC San Diego Journal Club Seminar
UCSD, San Diego, CA, October 2016
 13. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: UC Berkeley Cosmology Seminar
UCB, Berkeley, CA, October 2016
 12. A Multi-Wavelength Census of Star Formation and Dust in Galaxies at $z \sim 2$
Seminar Talk: UC Santa Cruz Cosmology Seminar
UCSC, Santa Cruz, CA, October 2016
 11. The MOSDEF Survey: Dissecting the star-formation rate vs. stellar mass relation at $z \sim 2$
Poster Presentation: Keck Science Meeting 2016
Caltech, Pasadena, CA, September 2016
 10. The MOSDEF Survey: Dissecting the star-formation rate vs. stellar mass relation at $z \sim 2$
Poster Presentation: Mapping the Pathways of Galaxy Transformation Across Time

and Space
Avalon, Catalina Island, CA, August 2016

9. The MOSDEF Survey: Dissecting the star-formation rate vs. stellar mass relation at $z \sim 2$
Conference Talk: 32nd Institut d'Astrophysique de Paris Colloquium
Paris, France, June 2016
8. The MOSDEF Survey: The Strong Agreement Between $H\alpha$ and UV-To-FIR Star Formation Rates for $z \sim 2$ Star-Forming Galaxies
Conference Talk: American Astronomical Society 228th Meeting
San Diego, CA, June 2016
7. Tracing Star Formation in Galaxies at $z \sim 2$
Seminar Talk: UC Riverside Astronomy Seminars
UC Riverside, Riverside, CA, January 2016
6. The MOSDEF Survey: Dissecting the Star Formation Rate vs. Stellar Mass Relation at $z \sim 2$
Conference Talk: Keck Science Meeting
UCLA, Los Angeles, CA, September 2015
5. Tracing Star Formation in Galaxies at $z \sim 2$
Seminar Talk: UC Berkeley Galform Meeting
UC Berkeley, Berkeley, CA, August 2015
4. The MOSDEF Survey: The Star-Forming Main Sequence at $z \sim 2$
Conference Talk: Back at the Edge of the Universe Conference
Sintra, Portugal, March 2015
3. A Multi-wavelength Study of Galaxies at $z \sim 2$: Implications for Star Formation and Dust Properties at High Redshifts
Poster Presentation: European Week of Astronomy and Space Science (EWASS)
Geneva, Switzerland, July 2014
2. A Multi-Wavelength Imaging Study of a Large Sample of Galaxies at $z \sim 2$: Implications for Star Formation and Dust Properties at High Redshift
Conference Talk: American Astronomical Society 223rd Meeting
Washington, DC, January 2014
1. Comparing $H\alpha$, UV, and Far-IR Star Formation Rates of Galaxies at $z \sim 2$
Poster Presentation: American Astronomical Society 221st Meeting
Long Beach, CA, January 2013

SERVICE & OUTREACH

- Referee for A&A
- Organizer of [UCR Astronomy Journal Clubs](#) Fall 2015 – Spring 2017
Dept. of Physics and Astronomy, University of California, Riverside
- AWIS-UCR Outreach Committee 2015 – 2017
Association for Women in Science (AWIS) - UCR Chapter
- UCR Astronomy Department Outreach Group 2014 – 2017
Dept. of Physics and Astronomy, University of California, Riverside
- Co-founder and Author of [www.staryab.com](#) 2014 – Present
[Staryab](#) is a weekly astrophysical literature website managed by [Iranian astronomers](#) across the globe for farsi-speakers.
- Teacher and Leader 2012 – 2015
Astronomical Society of [Riverside STEM Academy](#)

- Co-founder of StarPeace Global Project 2009 – 2014
StarPeace was an international project aiming to popularize astronomy and peace among people of all nations. It was selected as one of the Special Projects of [International Year of Astronomy 2009](#) by UNESCO and [International Astronomical Union](#).
- Science Journalist 2006 – 2009
Nojum Astronomy Magazine, Iran
Asemaneshab TV show, Iran
- Member of Organizing Committees of Several Public Outreach Activities 2006 – 2010
[Astronomical Society of Iran](#)
Zaferanieh Educational Observatory, Iran

**TEACHING
EXPERIENCE**

- Graduate Teaching Assistant 2011 – 2013
Dept. of Physics and Astronomy, University of California at Riverside
- Science Olympiad High School and Middle School Teacher 2014 – 2015
[Riverside STEM Academy](#)

**COMPUTER
SKILLS**

- Expert: IDL, Python, \LaTeX , MOSFIRE data reduction
- Basic: Unix, Git, R, SourceExtractor, IRAF, CLOUDY