

Department of Physics and Astronomy
 University of California, Riverside
 Email: irene.shivaei@email.ucr.edu
 Website: www.astro.ucr.edu

- ACADEMIC POSITIONS** Postdoctoral Research Associate for *James Webb Space Telescope*/MIRI (2017, expected) — [Steward Observatory, University of Arizona](#)
- EDUCATION** Ph.D. in Physics (2017, expected) — [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
- Supervisor: [Dr. Naveen Reddy](#) 2011 – Present
 - [The MOSFIRE Deep Evolution Field \(MOSDEF\) Survey](#) 2013 – Present
- Undergraduate Student Researcher
 Dept. of Physics, University of Tehran
- Supervisor: [Prof. Mohammad Taghi Tavassoly](#) 2010 – 2011
- OBSERVING EXPERIENCE** 17½ nights observing experience with [MOSFIRE](#) on Keck I telescope
 1 night observing experience with [DEIMOS](#) on Keck II telescope
- HONORS & AWARDS**
- Robert T. Poe Memorial Scholarship Award 2017
 Presented for Outstanding Ph.D. Graduate
 Dept. of Physics and Astronomy, University of California at Riverside
 - Dissertation Year Program Award Fall 2016
 University of California at Riverside
 - NSF Graduate Research Fellowship 2013 – 2016
[National Science Foundation \(NSF\)](#)
 - Robert L. Wild Family Scholarship Award 2015
 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) 2014 – 2016
 Graduate Student Association, University of California at Riverside
 - Dean’s Distinguished Fellowship 2011
 Dept. of Physics and Astronomy, University of California at Riverside
 - Scholarship to Participate in [Students On Ice Antarctic Expedition](#) 2007
[Ahoora Foundation \(Anousheh Ansari\)](#)
 - 2nd Rank at National Astronomy Olympiad 2005
 Young Scholars Club, Iran

PUBLICATIONS Lead Author:

4. [The MOSDEF Survey: Metallicity dependence of the PAH emission at High Redshift and Implications for 24 \$\mu\$ 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 H α 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 H α and H β 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 H α , 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:

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, submitted, 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 (2016), 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.; Shivaiei, 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 \$\sim 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.; Shivaiei, 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 1.42.6\$](#) *Reddy, N. A.; Kriek, M.; Shapley, A. E.; Freeman, W. R.; Siana, B.; Coil, A. L.; Mobasher, B.; Price, S. H.; Sanders, R. L.; Shivaiei, 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.; Shivaiei, 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.; Shivaiei, 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.; Shivaiei, I.; Price, S. H.; de Groot, L.*
The Astrophysical Journal, Volume 799, Issue 2, article id. 138, 11 pp. (2015)

PRESENTATIONS

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 – Present
Dept. of Physics and Astronomy, University of California, Riverside
- AWIS-UCR Outreach Committee 2015 – Present
Association for Women in Science (AWIS) - UCR Chapter
- UCR Astronomy Department Outreach Group 2014 – Present
Dept. of Physics and Astronomy, University of California, Riverside
- Co-founder and Author of www.staryab.com 2014 – Present
[Staryab](http://www.staryab.com) 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