

## APPOINTMENT

---

### **SETI Institute / NASA Ames Research Center**

Data Scientist

Dec 2024 - Present

- Data Scientist for the NASA’s TESS mission at the Science Processing Operations center (SPOC) at NASA’s Ames Research Center.

### **Caltech/IPAC**

Project Scientist for Center for Science Engagement

Aug 2024 - Nov 2024

Postdoctoral Research Associate

Jul 2021 - Jun 2024

## EDUCATION

---

### **University of California, Riverside**

Sep 2015 - Jun 2021

Ph.D. in Physics and Astronomy

- Thesis Title: *“Mapping Spatially Resolved Star Formation, Metallicity and Dust Across Galaxy Populations Over Cosmic Time”*

### **Sharif University of Technology, Tehran, Iran**

2010–2015

B.S. Major in Physics

Minor in Economics

## COMPUTER SKILLS

---

- **Programming Languages and Data Analysis Software:** Python, IRAF/ PyRAF
- **Extensive experience implementing Machine Learning Algorithms in Python**
- **Version Control and Collaboration Tools:** Git, GitHub, Confluence

## FELLOWSHIPS, HONORS AND AWARDS

---

- **Carnegie - UCR Graduate Research Fellowship** Apr 2019–Jun 2021
  - Fellowship to perform part of thesis research in collaboration with Carnegie Observatories’ astronomers
- **Dissertation Year Program Award, UC Riverside (Declined)** Spring 2021
- **FAMOUS Travel Grant** Jan 2020
  - Grant from American Astronomical Society to attend and present at AAS annual meeting
- **GSA Travel Award** Nov 2019
  - Conference travel grant from Graduate Student Association of University of California, Riverside
- **Dean’s Distinguished Fellowship Award, UC Riverside** 2015–2016
- **Bronze Medal, National Astronomy and Astrophysics Olympiad** Summer 2009

## OBSERVING PROPOSALS AND EXPERIENCES

---

- **Proposal Co-Investigator**, James Webb Space Telescope - GO 4903 (Cycle 3, NIRCAM & NIRSPEC)
  - Early Quiescent Galaxies Under the Magnifying Glass

- **Proposal Co-Investigator**, James Webb Space Telescope - GO 4761 (Cycle 3, MIRI)
  - A Deep Look into PAHs: Resolved PAH and Fine-Structure Emission in  $z=1$  Main-Sequence Galaxies
- **Proposal Co-Investigator**, James Webb Space Telescope - GO 2345 (Cycle 1, NIRCAM & NIRSPEC)
  - Resolved Studies of a Unique Lensed Quiescent Galaxy at  $z=2$ : Testing Models of Assembly History, Quenching, and IMF Variations
- **Observing Nights**, DEIMOS Imaging Spectrograph at W.M. KECK Observatories: 1 night in 2016 & 2 nights of remote observing in 2020

## TEACHING AND MENTORING EXPERIENCES

---

- **Research Mentor for NASA Neurodiversity Network (N3) internship program** Summer 2023 & 2024
  - Mentoring neurodiverse senior high school students to perform a summer-long project remotely
- **Research Mentor for Caltech Hybrid Summer Research Connection program** Summer 2022
  - Mentoring senior high school students from underserved communities
- Teaching Assistant, **Introductory Astronomy Courses**, UC Riverside 5 Quarters between 2016-2021
- **Instructor**, General Physics Labs, UC Riverside 6 Quarters between 2016-2019
- Teaching Assistant, graduate course on “**Applied Machine learning**”, UC Riverside Summer 2018
- Teaching Assistant, “Macroeconomics”, Sharif University of Technology Winter 2015
- High School Teacher, Astronomy K-12 Research Projects & Olympiad, Farzanegan High School 2010 - 2015

## PROFESSIONAL SERVICES AND PUBLIC OUTREACH

---

- **Served on NASA Proposal Review Panels**
- **Scientific Referee for Astrophysical Journal and Monthly Notices of the Royal Astronomical Society (MNRAS).**
- **Lead Organizer of “Explore Caltech”.** Fall 2024
  - An open house event that attracted over a thousand community members to Caltech, showcasing ongoing scientific research and fostering public engagement with science.
- **US-Euclid Meeting Chair** Jun 2022 –Jun 2024
  - Responsible for organizing and documenting monthly meetings for US members of the Euclid Consortium
- **Governing Board Member of the Caltech Postdoctoral Association** Oct 2023 –Jun 2024
- **Member of the IPAC/Caltech Committee on Inclusion and Diversity** Oct 2022 –Jun 2024
- **Virtual Volunteer, Nepris Inc.** 2016–2020
  - Presenting virtual astronomy sessions for K-12 students
- **Volunteer Organizer, Carnegie Summer Student Internship Program** Summer 2020
  - Organizing weekly student journal clubs and a scientific visualization workshop
- **Organizing Committee, Osterbrock Sierra Conference** Summer 2019
  - Organizing an inter-campus conference for graduate students in astronomy among UC campuses
- **Organizing Committee, UC Riverside Science Communication Workshop** Spring 2019

## PROFESSIONAL DEVELOPMENT PROGRAMS

---

- **The Professional Development Program (PDP)** Spring-Summer 2024
  - A program organized by *Institute for Scientist & Engineer Educators at UC Santa Cruz* focusing on training in professional skills, including science education, mentoring, project management, collaboration, and communication
- **Leadership Development Certificate Program**, Caltech & Claremont Graduate University Spring 2022
- **University Teaching Certificate Program**, University of California, Riverside Fall 2020 - Spring 2021
  - Instructional training and certification program in university-level teaching
- **ComSciCon-AIP**, College Park, MD Sep 2019
  - Communicating Science Conference organized by American Center for Physics
- **TMT Future Leaders Workshop**, Hilo, HI & Santa Cruz, CA Dec 2016 & Aug 2017
  - Workshop held by Thirty Meter Telescope International Observatory aiming to prepare TMT Future Science and Technology Leaders

## PUBLICATIONS (UPDATED DEC 2024)

---

### First Author

1. **Marziye Jafariyazani**, Andrew B. Newman, Sirio Belli, Bahram Mobasher, Richard S. Ellis, Andreas L. Faisst: “*Chemical Abundances of Early Quiescent Galaxies: New Observations and Modelling Impacts*”, Submitted to the The Astrophysical Journal, eprint arXiv:2406.03549
2. **Marziye Jafariyazani**, Daniel Masters, Andreas L. Faisst, Harry I. Teplitz, Olivier Ilbert: “*Predicting the Spectroscopic Features of Galaxies by Applying Manifold Learning on Their Broad-Band Colors: Proof of Concept and Potential Applications for Euclid, Roman, and Rubin LSST*”, The Astrophysical Journal, Volume 967, Issue 1 (2024)
3. **Marziye Jafariyazani**, Andrew B. Newman, Bahram Mobasher, Sirio Belli, Richard S. Ellis, Shannon G. Patel: “*Resolved Multi-element Stellar Chemical Abundances in the Brightest Quiescent Galaxy at  $z \sim 2$* ”, The Astrophysical Journal Letters, Volume 897, Issue 2 (2020)
4. **Marziye Jafariyazani**, Bahram Mobasher, Shoubaneh Hemmati, Tara Fetherolf, Ali Ahmad Khostovan, Nima Chartab: “*Spatially resolved properties of galaxies from CANDELS+MUSE: radial extinction profile and insights on quenching*”, The Astrophysical Journal, Volume 887, Issue 2 (2019)

### Contributing Author

1. Sogol Sanjaripour, Shoubaneh Hemmati, Bahram Mobasher, Gabriela Canalizo, Barry Barish, Irene Shivaie, Alison L. Coil, Nima Chartab, **Marziye Jafariyazani**, Naveen A. Reddy, Mojegan Azadi : “*Application of Manifold Learning to Selection of Different Galaxy Populations and Scaling Relation Analysis*”, Submitted to the The Astrophysical Journal, eprint arXiv: 2410.07354
2. Euclid Collaboration: “*Euclid. I. Overview of the Euclid mission*”, Submitted as part of the AA special issue “Euclid on Sky” (2024), eprint arXiv: 2405.13491
3. Pacifici, Iyer, Mobasher, da Cunha, Acquaviva, Burgarella, Rivera, Carnall, Chang, Chartab, Cooke, Fairhurst, Kartaltepe, Leja, Ilek, Salmon, Torelli, Vidal-Garcia, Boquien, Brammer, Brown, Capak, Chevallard, Circosta, Croton, Davidzon, Dickinson, Duncan, Faber, Ferguson, Fontana, Guo, Haeussler, Hemmati, **Jafariyazani**, Kassin, Larson, Lee, Mantha, Marchi, Nayyeri, Newman, Pandya, Pforr, Reddy, Sanders, Shah, Shahidi, Stevans, Triani, Tyler, Vanderhoof, Vega, Wang, and Weston: “*The Art of Measuring Physical Parameters in Galaxies: a Critical Assessment of Spectral Energy Distribution Fitting Techniques*”, The Astrophysical Journal, Volume 944, Issue 2 (2023)

4. Shoubaneh Hemmati, Bahram Mobasher, Hooshang Nayyeri, Abtin Shahidi, Behnam Darvish, Nima Chartab, **Marziye Jafariyazani**, Zahra Sattari: *“Bridging between the integrated and resolved main sequence of star formation”*, The Astrophysical Journal Letters, Volume 896, Issue 1 (2020)
5. Nima Chartab, Bahram Mobasher, Behnam Darvish, Steve Finkelstein, Yicheng Guo, Dritan Kodra, Kyoung-Soo Lee, Jeffrey A. Newman, Camilla Pacifici, Casey Papovich, Zahra Sattari, Abtin Shahidi, Mark E. Dickinson, Sandra M. Faber, Henry C. Ferguson, Mauro Giavalisco, **Marziye Jafariyazani**: *“Large Scale Structures in the CANDELS Fields: The Role of the Environment in Star Formation Activity”*, The Astrophysical Journal, Volume 890, Issue 1 (2020)
6. Ali Ahmad Khostovan, David Sobral, Bahram Mobasher, Jorryt Matthee, Rachel K. Cochrane, Nima Chartab, **Marziye Jafariyazani**, Ana Paulino-Afonso, Sergio Santos, Joao Calhau: *“The clustering of typical Ly $\alpha$  emitters from  $z \sim 2.5 - 6$ : host halo masses depend on Ly $\alpha$  and UV luminosities”*, Monthly Notices of the Royal Astronomical Society, Volume 489, Issue 1 (2019)