# Pooneh Nazari

European Southern Observatory Headquarters
Karl-Schwarzschild-Straße 2
85748, Garching, Germany

E-mail: Pooneh.Nazari@eso.org
LinkedIn: pooneh-nazari-b38b0983
Webpage: poonehnazari.github.io

## Professional Summary

Research and data scientist with 10+ years of experience in advanced data analysis, modeling, and scientific computing:

- Led large-scale data analysis projects using Python, resulting in 34+ peer-reviewed publications
- Developed and implemented sophisticated computational models and pipelines for data interpretation and analysis
- Led and contributed technical expertise to international collaborations across 10+ institutions
- Secured $250K+ in competitive research funding as Principal Investigator
- Delivered 30+ technical presentations at major institutions
- Engaged in European science policy through participation in high-level intergovernmental research forums (EIROforum) and interactions with policymakers

## Technical Skills

- Research Methods: Statistical modeling, Computational physics, Chemical modeling
- Programming and Tools: Python (10 years, advanced), Git (Intermediate), Bash (Intermediate), Fortran (Intermediate), HTML (Basic), R (Basic), MATLAB (Basic)
- Data Analysis: Large-scale data processing, statistical analysis, error analysis, spectral modeling, data visualization
- Modeling and Simulation: Radiative transfer simulations, hydrodynamical simulations, analytical modeling
- Project Management: Grant management, research team leadership, stakeholder communication, international collaboration

## Professional Positions

**Research Fellow and project lead** | European Southern Observatory 2024–Present

- Lead research initiatives in computational modeling and data analysis (1 first-author publication in the past year and 3 close to submission)
- Lead development of automated data analysis pipelines processing terabytes of astronomical data
- Collaborate with multiple international research teams
- Successfully secured and managed research grants totaling over $250,000
- Mentor junior researchers and organize technical training programs
- Serve on selection committees and review technical documentation

- Interact with science policymakers through attending EIROforum meetings

**Research Scientist** | Leiden University 2019–2024

- Led collaborative research projects resulting in 10 first-author publications in high-impact journals
- Developed innovative computational methods for analyzing complex physical systems
- Supervised and mentored graduate students and research assistants
- Designed and implemented large-scale data processing pipelines

**Research Associate** | St Andrews, Cambridge, and Harvard University 2015–2019

- Led multiple research projects across prestigious institutions in Europe and US
- Published findings in 5 scientific papers
- Built and maintained international research collaborations

## Education

**Leiden University** 2024
Ph.D. in Computational Astrophysics
Thesis: "Bridging the gap between physics and chemistry in early stages of star formation"

**University of Cambridge** 2019
MPhil in Computational Astrophysics

**University of St Andrews** 2017
B.Sc. in Physics (First Class Honours)

## Awards & Grants

Gruber Foundation Fellowship (2023-present)
ESO Research Fellowship (2023-present)
Multiple competitive research grants including one based at MIT, totaling $> \$250,000$

## Publications & Presentations summary

34 peer-reviewed publications (11 as lead author)
600+ citations, h-index: 15
31 technical presentations, including 12 invited talks at major institutions

## Selected publications

- **P. Nazari**, A. D. Sellek, and G. P. Rosotti, A&A (in press), 2025, (Technical aspects: Radiative transfer simulations, analytical evolutionary models, Python)
- **P. Nazari**, W. R. M. Rocha, A. E. Rubinstein, K. Slavicinska, et al., A&A, vol. 686, A71, 2024, See press release, (Technical aspects: James Webb Space Telescope data and error analysis, spectral fitting, Python)
- **P. Nazari**, J. D. Meijerhof, M. L. van Gelder, A. Ahmadi, et al., A&A, vol. 668, A109, 2022, (Technical aspects: Atacama Large Millimeter/submillimeter Array (ALMA) telescope large dataset analysis, statistical analysis and spectral modeling, error analysis, Python)
- **P. Nazari**, R. A. Booth, C. J. Clarke, G. P. Rosotti, et al., MNRAS, vol. 485, pp. 5914–5923, 2019, (Technical aspects: Hydrodynamical simulations, ALMA observing simulations, Python)