

Jasmine M. Khalil

Master's Student - UniBo | Space and Astronomy Freelance Writer | [Portfolio](#)

[Website](#) | [✉ jasmineaif66@yahoo.com](mailto:jasmineaif66@yahoo.com) | [☎ +201126894188](tel:+201126894188) | [ORCID](#) | Cairo, Egypt

EDUCATION

- MSc in Astrophysics and Cosmology - **Bologna University, Italy** 2024 - 2026
- Qualifying Program in Astronomy, Space Science and Meteorology - **Cairo University, Giza, Egypt**. Grade: **Very Good**. 2021 - 2022
- BEng. Electronics and Electrical Communications - **Ain Shams University, Cairo, Egypt**. Grade: **Good**. Graduation Project: "Water Quality Analyzer, A MEMS-based device". Grade: **Excellent**. [Dissertation](#) 2014 - 2019

RESEARCH EXPERIENCE

The MPIA Summer Internship - Max Planck Institute for Astronomy- Heidelberg - Germany

- *Under the supervision of Dr. Francesco Zagaria and Dr. Alice Somigliana:* June 2026 - July 2026
 - Cleaning and producing images of class 0/I protoplanetary disks using ALMA data.
 - Modeling and analyzing class 0/I disk parameters and comparing them to class II

ASPIRE Astrophysics Summer Research Program - University of Amsterdam, Remotely

- *Under the supervision of Dr. Jan Van Roestel:* Jul 2023 - Dec 2023
 - Analysing data from the Zwicky Transient Facility to detect AM CVn binary systems
 - Studying the properties of AM CVn systems discovered and delivering the findings in a letter

Research Student - Cairo University, Giza, Egypt

- *Under the supervision of Dr. Al-Shaimaa Hassanin - Prof. Nahed Hassanin Lab for Solar Physics:* Aug 2022 - Dec 2023
 - Performing exploratory data analysis (EDA) using Python and the SunPy library.
- *Under the supervision of Prof. Alaa Ali:* July 2022 - Jan 2023
 - Searching for and characterizing wide multiple star systems at the center of planetary nebulae using the latest Gaia DR3
 - Applying the necessary photometry and astrometry analysis using the VOSA Analyzer

Undergraduate Researcher - Ain Shams University, Cairo, Egypt 2018 - 2019

- *Under the supervision of Prof. Daaa Khalil and Dr. Yasser M. Sabry:*
 - **MEMS Separation Devices:** Contributed to designing Micro Electrical Mechanical Systems to separate $1\mu\text{m}$ to $10\mu\text{m}$ plastic particles using L-edit & Comsol MultiPhysics softwares as part of my graduation project in the Optics Lab.

- **Plastic detection in Water:** Worked on detecting both plastic sheets and microplastic particles in water using Fourier Transform Infrared (FTIR) spectroscopy as part of my graduation project in the Optics Lab.

PAPERS/LETTERS PUBLISHED OR UNDER PREPARATION

- Ali, A., **J. M. Khalil**, Mindil, A.: "*Detection of wide binary and multiple nuclei of planetary nebulae using the Gaia DR3.*"
Published in the **Astrophysics and Space Science Journal**, [arxiv](#)
- **J. M. Khalil**, J. van Roestel, et al.: "*Four new eclipsing accreting ultracompact white dwarf binaries found with the Zwicky Transient Facility*"
Published in **Astronomy & Astrophysics Journal**, [aanda](#)

TECHNICAL SKILLS

- **Fluent Programming Languages:** Python (**Libraries & Environments:** AstroPy, astrobase, SciPy, SunPy, NumPy, Pandas, Matplotlib, Jupyter Notebook, Google Colab), L^AT_EX
- **Experience with:** HTML, CSS, MATLAB, CASA, TOPCAT, SAOImageDS9, C++, L-Edit, Comsol MultiPhysics, Eagle PCB Designer, Ansys Designer RF

WORKSHOPS & SUMMER SCHOOLS

- **The International School for Young Astronomers (ISYA - IAU)** Algeria, 2024
Framework: theoretical lectures in the morning and afternoon, group projects in the evening.
Length: 3 weeks.
- **The 3rd Advanced School for Astrophysics - Kattamia Observatory** Egypt, Sep 2023
- **African Astronomical Society (AfAS) Hackathon** South Africa, 2023
- **Sagan Exoplanet Summer Hybrid Workshop on "Exoplanet Science in the Gaia Era"**
Hosted by the NASA Exoplanet Science Institute at Caltech, CA. [Certificate.](#) Remotely, 2022
- **Introduction to Astronomy Research**, [GitHub](#) Remotely, 2022

PRESENTATIONS & POSTERS

- **Searching for AM CVn stars using ZTF data**
 - Presentation for the ASPIRE program Online, Aug 2023
 - Poster for The Arab Advanced School for Astrophysics (ArAS) Egypt, Sep 2023
- **Four new eclipsing accreting ultracompact white dwarf binaries found with the Zwicky Transient Facility** SA, IAU-GA 2024

CONFERENCES

- **2024 IAU General Assembly - South Africa**

SOCIETY MEMBERSHIPS

- African Network for Women in Astronomy (AFNWA) Aug 2024-current

VOLUNTEERING & OUTREACH

- **Founder of Astronomers 4 Palestine** **2026**
A non-profit organization of astronomers coming together to help rebuild the education system in Gaza through online lessons and mentoring in Astronomy & Astrophysics. Learn more, [here](#).
- **Stardust magazine (Astronomy Club, Ain Shams University, Cairo, Egypt)**
 - **Editor-In-Chief:** Led a team of writers & editors to publish the third issue 2019
 - **Writer & Editor:** Contributed as a writer & editor to produce the second issue 2018