

Ahmed Mahjoub, Ph.D.

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Professional Overview

Planetary scientist with over 15 years of experience advancing community focused planetary science through laboratory simulations, spectroscopy, and mission-supporting research. My work supports compositional and chemical interpretation for missions such as Rosetta and New Horizons, and contributes laboratory datasets broadly used by the planetary science community. I have served as a reviewer and panelist for major NASA programs, supported early-career researchers through mentorship, and contributed to promotion of planetary science focused on public and students. I bring a strong record of collaborative leadership, service, and commitment to the scientific advance of the DPS community.

Education

Ph.D., Physics, University Paris-11, Orsay (2010)

Master's Degree, Molecular Physical Chemistry, University Paris-11 (2006)

Bachelor's Degree, Physics, University of Tunis (2005)

Professional Appointments

Scientist III, Jet Propulsion Laboratory (2023–Present)

Affiliate Scientist, JPL (2019–2023)

Senior Scientist, Space Science Institute (2018–2023)

Service to the Planetary Science Community**NASA & Funding Agency Service**

- Reviewer for NASA ROSES programs: Solar System Workings, PDART, Early Career Award, NPP; panelist for multiple NASA NPP and ROSES review panels: Solar System Workings, PDART, Early Career Award, EW.
- Reviewer for French National Agency of Science: 2019-2023.

Scientific Journal Service

- Reviewer for: *Nature Astronomy*, *Nature Communications*, *Planetary Science Journal*, *Planetary and Space Science*, *The Astrophysical Journal*, *Icarus*.

Education, Outreach, and Promotion of Planetary Science

- Grand Award Judge, Astrophysics, Intel Science Fair, Los Angeles (2017).
- Judge, Chemistry, California State Science Fair (2017).
- Invited seminars delivered for student-organized groups at UCLA (2025) and UCL (2024), promoting current research in sulfur and organic chemistry in small bodies.
- Media Engagement: interview with local media in Tunisia to promote planetary science and astrophysics among young students.

- Organizing exchange program between universities in Tunisia and universities in France for Master and Bachelor students. Provide opportunities for Tunisian students to perform internship in laboratories in France.

Mentoring and Community Development

- Supervision of postdocs, undergraduate researchers, and summer students (2012–2025) in laboratory simulations of planetary materials and spectroscopy.
- Mentoring topics include outer solar system ices, cometary materials, Titan atmospheric aerosols, and spectroscopy related to mission science.

Selected Leadership in Research (as PI)

- PI on six major NASA grants, including EW (2025), PDAR (2023), SSW (2022), DDAP (2021), and RDAP-Science PI (2019), totaling several million in funded planetary science research.
- Co-I on multiple JPL R&TD awards supporting instrumentation development and laboratory capabilities.

Awards Recognizing Scientific Excellence

- **Voyager Award**, Jet Propulsion Laboratory (2018).
- **UVSQ Scientific Award of Excellence** (2011).
- **Paris-11 Excellence Fellowship** (2006).

Summary of Fit for DPS Committee

- Long-standing engagement with NASA and journal review processes supports fair and thorough evaluation of community research.
- Strong record of mentoring, student outreach, and science communication, including invited student-led seminars.
- Established leadership in laboratory planetary science producing community datasets widely used by DPS members.
- Committed to strengthening inclusivity, transparency, and scientific excellence across the DPS community.

Candidate Statement – Ahmed Mahjoub

I am honored to be nominated for the DPS Committee. My engagement with DPS began early in my career, and over the years the annual DPS meeting has become an essential venue for sharing results from my laboratory simulations and for staying connected with the planetary science community. As my career has developed, this community has shaped not only my scientific direction but also my sense of responsibility toward service, mentorship, and collaboration.

My research focuses on laboratory simulations of planetary and small-body environments, particularly organic and organosulfur chemistry, spectroscopy of irradiated ices, and the physical properties of Titan's liquid hydrocarbon surfaces. These studies have supported the interpretation of spacecraft data from missions such as *Rosetta* and *New Horizons* and contributed to understanding the formation of complex organics and volatile species relevant to comets, asteroids, and sample-return materials. Through collaborations across the United States and internationally, I have worked at the interface of astrochemistry, spectroscopy, and mission science, helping to connect laboratory insights with observational and spacecraft datasets.

Service to the community has been a consistent part of my professional life. I have mentored postdoctoral researchers, undergraduate students, and summer interns working on Titan aerosols, cometary materials, and irradiation-driven ice chemistry. I regularly review manuscripts for journals including *Nature Astronomy*, *Nature Communications*, *Planetary Science Journal*, *Planetary and Space Science*, *ApJ*, and *Icarus*, and I have served on multiple NASA ROSES review panels such as SSW, PDART, the Early Career Award, NPP, and other program evaluations. These efforts have given me a clear understanding of how community priorities and scientific standards evolve, and how important equitable, transparent processes are to the prosperity of our field.

I also value contributions that promote planetary science to broader audiences. Serving as a judge for the Intel Science Fair and California State Science Fair allowed me to encourage young scientists interested in planetary and space sciences. Invited seminars at UCLA and UCL, especially those organized by students, gave me opportunities to share current research and strengthen connections across institutions and generations of researchers.

If elected to the DPS Committee, I hope to deepen my understanding of the community's priorities and challenges, contribute to the planning of DPS activities, and support early-career scientists as they navigate the field. I am particularly interested in strengthening the role of laboratory and astrochemistry research within DPS, and in promoting collaboration across laboratory, observational, and mission-focused approaches. With my background at the intersection of experiments, spectroscopy, and spacecraft data analysis, I aim to help broaden communication across these sub-communities and ensure all perspectives are well represented.

It would be a privilege to serve the DPS community in this role.