

Johan MAZOYER

Research Interests: Optical Instrumentation, Direct Imaging & Coronagraphy, Observation & Characterization of Extrasolar Systems, Debris Disks

1 RESEARCH POSITIONS

CNRS Scientist – LESIA/Paris Observatory (France)	Since 2020
Sagan Fellow – Jet Propulsion Laboratory (Pasadena, CA)	2018 - 2019
Postdoc – Space Telescope Science Institute (Baltimore, MD)	2014 - 2018
Graduate Student – LESIA/Paris Observatory (France)	2011 - 2014

2 EDUCATION

PhD – Astronomy & Astrophysics – Université Paris Diderot (France) <i>Thesis: High-Contrast Direct Imaging Of Exoplanets And Circumstellar Disks</i>	09/2014
Master degree – Astrophysics – Université Paul Sabatier (Toulouse, France) <i>Thesis: Influence of Mars atmosphere on the ChemCam abundance detection limits</i>	09/2011
Master degree – Space Engineering – ISAE Supaero (Toulouse, France)	09/2011
Bachelor – Computer Science – Ecole polytechnique (Paris, France)	09/2010

3 GRANTS & AWARDS

Franco-Chilean Collaboration Program Ecosud with <i>Universidad de Chile</i> – 3 yrs	2020
Carl Sagan Fellowship (NASA Hubble Fellowship Program) – 3 yrs	2018
Cover of Astronomy & Astrophysics Journal (Volume 564)	2014
CNES Doctoral Research Fellowship (French space agency) – 3 yrs	2011

4 MENTORING

Postdocs	
Vito Squicciarini (LESIA) co-advisor with A.-M. Lagrange	Since 2022
Iva Laginja (LESIA): CNES post-doctoral Fellow	Since 2022
PhDs	
Yann Guttierrez (LESIA) co-advisor with L. Mugnier	Since 2022
Sophia Stasevic (LESIA) co-advisor with A.-M. Lagrange and J. Milli	Since 2021
Justin Hom (ASU) co-advisor with J. Patience	Since 2018
Undergrad Interns	
Clara Puerto-Sanchez (LESIA)	Since 2022
Benjamin Roman (LESIA)	2021

5 TEACHING

Observatoire de Paris Master Class:

- Instrumentation for Astronomy
- Detection of Exoplanets (collab. Anne-Marie Lagrange)

6 PROFESSIONAL ACTIVITIES & SERVICE

Conference and Workshop Organizer:

- Organizer and SOC: **National Capital Area Disks** workshop (Baltimore, MD, Oct. 2018) - [website](#)
- Organizer and SOC: **Optimal Optical Coronagraphs** workshop (Leiden, NL, Sep. 2017) - [website](#)
- SOC: **High Contrast Imaging from Space** (Baltimore, MD, Nov. 2016) - [website](#)

Other Services:

- **SPHERE+**: Responsible Focal Plane Wavefront Sensor WP
- Science Community of CNRS/INSU's High Angular Resolution Working Group (**CS-ASHRA**)
- Habitable Exoplanet Observatory (**HabEx**): **Contributing Scientist**
- Large UV Optical Infrared Surveyor (**LUVOIR**): **Contributing Scientist**
- NASA Exoplanet Exploration Program Analysis Group (ExoPAG) member of the **Study Analysis Groups (SAGs) #19** (Theory and Rigorous Contrast Metrics).
- **Referee** for publications in the *AJ*, *A&A*, *MNRAS*, *PASP* and *JATIS*.

7 OUTREACH

Podcast Science: I am running [PodcastScience.fm](#), a **general science program**, airing every Wednesdays, in french. This podcast is listened by 10'000 to 30'000 listeners. Podcast Science received the Golden blog award for best scientific blog in 2012.

Public talks: including at CERN (Switzerland) & several times at Palais de la découverte (Paris)

8 SELECTED PUBLICATIONS (34 refereed publications, 7 in first author)

1. Chen, C. ; **Mazoyer, J.** ; Poteet, C. A., et al. (2020), *Multi-Band GPI Imaging of the HR 4796A Debris Disk*, The Astrophysical Journal, 898, 55, [ADS Link](#)
2. **Mazoyer, J.** ; Baudoz, P. ; Belikov, R. et al. (2019), *High-Contrast Testbeds for Future Space-Based Direct Imaging Exoplanet Missions*, Bulletin of the American Astronomical Society, 51, 101, [ADS Link](#)
3. **Mazoyer, J.** ; Pueyo, L. ; N'Diaye, M. et al. (2018), *Active Correction of Aperture Discontinuities-Optimized Stroke Minimization. II. Optimization for Future Missions*, The Astronomical Journal, 155, 8, [ADS Link](#)
4. **Mazoyer, J.** ; Pueyo, L. ; N'Diaye, M. et al. (2018), *Active Correction of Aperture Discontinuities-Optimized Stroke Minimization. I. A New Adaptive Interaction Matrix Algorithm*, The Astronomical Journal, 155, 7, [ADS Link](#), 6 citations
5. Fogarty, K. ; Pueyo, L. ; **Mazoyer, J.** et al. (2017), *Polynomial Apodizers for Centrally Obscured Vortex Coronagraphs*, The Astronomical Journal, 154, 240, [ADS Link](#), 6 citations
6. **Mazoyer, J.** ; Pueyo, L. ; Norman, C. et al. (2016), *Active compensation of aperture discontinuities for WFIRST-AFTA: analytical and numerical comparison of propagation methods and preliminary results with a WFIRST-AFTA-like pupil*, Journal of Astronomical Telescopes, Instruments, and Systems, 2, 011008, [ADS Link](#), 7 citations
7. **Mazoyer, J.** ; Baudoz, P. ; Galicher, R. et al. (2014), *High-contrast imaging in polychromatic light with the self-coherent camera*, Astronomy and Astrophysics, 564, L1, [ADS Link](#)
8. **Mazoyer, J.** ; Baudoz, P. ; Galicher, R. et al. (2013), *Estimation and correction of wavefront aberrations using the self-coherent camera: laboratory results*, Astronomy and Astrophysics, 557, A9, [ADS Link](#)