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I am currently **AURA Scientist**, member of the long-term **Research Staff** at **STScI. High Contrast & High Angular Resolution** specialist, I am **Instrument Scientist** for **JWST/NIRCam** and the **Coronagraphs Working Group Lead** as well as **Liaison** for the **Roman Coronagraph**. I enjoy **supervising, teaching & outreach** activities and to **engage the public**, especially young audiences. Following the **development of instruments** and bringing them into **efficient operations** is my forte.

## Research Interests

- ✧ **Planets & Star Formation:** Exoplanets, Brown Dwarfs, Protoplanetary & Debris Disks
- ✧ **High Contrast Imaging, Spectroscopy, Polarimetry: Adaptive Optics & Coronagraphy**
- ✧ **Astronomical Instrumentation & Observing Techniques/Strategies:** Ground & Space

## Education

2005	<b>Ph.D in Physics &amp; Astrophysics</b>	Université Claude Bernard Lyon 1 <a href="#">↗</a>
2001	<b>Master's Degree in Astrophysics</b> <i>D.E.A Astrophysique et Milieux Dilués</i>	Université Grenoble Alpes <a href="#">↗</a>
2000	<b>Master of Science in Instrumentation Physics</b>	University of Utah <a href="#">↗</a>
1998	<b>University Technical Diploma</b> <a href="#">↗</a> <i>D.U.T Mesures Physiques (Physics/Metrology)</i>	Université de Savoie Mont-Blanc <a href="#">↗</a>

## Professional & Research Appointments

08/2017- Present	<b>Space Telescope Science Institute (STScI)</b> <a href="#">↗</a> <b>Instruments Division: 8 years, 2 months</b>	(Full) <b>Scientist</b> since June 2023
Functional	<ul style="list-style-type: none"> <li>⇨ <b>JWST Coronagraphs Working Group Lead</b></li> <li>⇨ <b>JWST/NIRCam Instrument Scientist</b></li> <li>⇨ <b>JWST/NIRCam Coronagraphy Lead</b> (Commissioning, Operations, User Support, Front/Back End, etc.)</li> <li>⇨ <b>Roman Coronagraph Expert &amp; Liaison</b> to all stakeholders Project Team (NASA/JPL), Community Participation Program, SSC (IPAC)</li> </ul>	<b>STScI Scientist III</b> since October 2020
Research	⇨ <b>Member of the Senior Research Staff</b> 20% (nominal) to 30% (with "buy back") research fraction	<b>Support Scientist</b> since August 2017
2015 - Present	<i>Institut de Planétologie et Astrophysique de Grenoble</i> (IPAG) <a href="#">↗</a>	<b>Affiliate Researcher</b> 10 years
2009 - 2017	<b>European Southern Observatory (ESO)</b> <a href="#">↗</a> Directorate of Operations & Science	<b>Operations Staff Astronomer</b> 8 years

## Professional & Research Appointments (cont.)

2008 - 2009	<b>Instituto Politécnico Nacional (IPN, Mexico)</b> ➤ <i>Profesor Titular A</i> ➤, <i>Escuela Superior de Física y Matemáticas</i>	<b>Assistant Professor</b> 1 year
2006 - 2008	<b>Instituto de Astronomía (UNAM Mexico)</b> ➤ <i>Investigador Post-doctoral, becario UNAM</i> ➤, <i>Instrumentation Department</i>	<b>Postdoc Researcher</b> 2 years
2001 - 2005	<b>Centre de Recherche Astronomique de Lyon (CRAL)</b> ➤ <i>Doctorant, boursier MENRT</i>	<b>PhD Student</b> 4 years
2001	<b>Institut de Planétologie et d'Astrophysique de Grenoble (IPAG)</b> ➤ <i>Stagiaire</i> at IONIC team, in collaboration with the CEA/LETI	<b>Intern</b> 4 months
1999 - 2000	<b>University of Utah Physics Department, USA</b> ➤ <i>RA, Graduate RA</i> at HiRes Collaboration	<b>Research Assistant</b> 1 year, 6 months

## Selected Publications as Lead Author

2025	Balmer, W; Kammerer, J.; Pueyo, L.; Perrin, M.; <b>Girard, J.</b> et al, 2025, AJ, 169, 4, 209 <u>...NIRCam Bar Coronagraphy Reveals CO2 in the HR 8799 and 51 Eri Exoplanets' Atmospheres</u>
2022	<b>Girard, J.</b> ; Leisenring, J.; Kammerer, J. et al, 2022, SPIE, 121803Q <u>JWST/NIRCam coronagraphy: commissioning and first on-sky results</u>
2021	Turnbull, M. C.; Zimmerman, N.; <b>Girard, J.</b> et al, 2021, JATIS, 7, id. 021218 <u>Community exoplanet imaging data challenge for Roman CGI and starshade rendezvous</u>
2020	Millar-Blanchaer, M.; <b>Girard, J.</b> ; Karalidi, T. et al, 2020, ApJ, 894, 1, 42, 25. <u>Detection of Polarization due to Cloud Bands in the Nearby Luhman 16 Brown Dwarf Binary</u>
2019	Haffert, S. et al. <b>incl. Girard, J.</b> Nature Astronomy (June 3 2019) <u>Two accreting proto-planets around the young star PDS 70</u>
2018	<b>Girard, J.</b> ; Blair, W.; Brooks, B. et al, 2018, SPIE, 0698, 3V <u>Making good use of JWST's coronagraphs: tools and strategies from a user's perspective</u>
-	Pantoja, B.; Jenkins, J. S.; <b>Girard, J.</b> et al, 2018, MNRAS, 479, 4958 <u>SAFARI-I. A SPHERE discovery of a super metal-rich M-dwarf companion to the star HD 86006</u>
2017	de Boer, J.; <b>Girard, J.</b> ; Canovas, H. et al, 2017, MNRAS, 466, 7 <u>BP Piscium: its flaring disc imaged with SPHERE/ZIMPOL</u>
2013	Delorme, P. ; Gagné, J; <b>Girard, J.</b> et al, 2013, A&A, 553, L5, 5 <u>Direct-imaging discovery of a 12-14 M<sub>Jup</sub> object orbiting a young binary system of very low-mass stars</u>
2011	Bouy, H; <b>Girard, J.</b> et al, 2011, Astronomy & Astrophysics, 526, A55, 2011. <u>Adaptive optics observations of the T10 ultracool dwarf UGPS J072227.51-054031.2</u>
2010	Quanz, S.; Meyer, M.; Kenworthy, M.; <b>Girard, J.</b> ; et al, 2010, ApJ, 722, 49 <u>1st Results from VLT NACO Apodizing Phase Plate: 4 μm Images of The Exoplanet β Pictoris b</u>
-	<b>Girard, J.</b> ; Kasper, M.; Quanz, S. et al, 2010, SPIE, 7736, 2N <u>Status and new operation modes of the versatile VLT/NaCo</u>

## Areas of Expertise & Skills

<i>JWST</i>	<ul style="list-style-type: none"> <li>⇨ Manager of 2 <b>Proposal Preparation Tools</b> (Simulations &amp; Visibility for Coronagraphy)</li> <li>⇨ <b>Exposure Time Calculator</b> requirements, sprints &amp; tests (Coronagraphy)</li> <li>⇨ <b>Pipeline</b> requirements, tests &amp; improvements (Coronagraphy)</li> <li>⇨ <b>Commissioning &amp; Operations</b> Rehearsals for NIRC<i>am</i></li> <li>⇨ <b>PI of the 3 Commissioning &amp; 3 Calibration Programs</b> for NIRC<i>am</i> Coronagraphs</li> <li>⇨ <b>Documentation Lead</b> for JWST High Contrast Imaging (including NIRISS/AMI)</li> </ul>
<i>Observing &amp; Operations</i>	<ul style="list-style-type: none"> <li>⇨ Large (&gt;900 nights) Science Operations experience at the <b>VLT</b>, Lick, SPM, CFHT, OHP</li> <li>⇨ <b>Commissioning &amp; Tests</b> of modes/instruments (AO/coronagraphs/LGS upgrades)</li> <li>⇨ Instruments <b>Calibrations Plans</b>, Procedures &amp; <b>Manuals</b> (NACO, SPHERE)</li> <li>⇨ Participation in proposals, strategy making and carrying out observations (countless)</li> <li>⇨ Expert: NACO ("guru"), SPHERE, HAWKI &amp; SINFONI</li> <li>⇨ Certified: VIMOS, X-SHOOTER, CRIRES, MUSE, VISIR, KMOS &amp; FORS2</li> </ul>
<i>Instrumentation</i>	<ul style="list-style-type: none"> <li>⇨ High Level requirement definitions, system engineering / error budget</li> <li>⇨ Adaptive Optics, Image quality improvement (phase diversity) and assessment</li> <li>⇨ Optics (basic design, alignments, waveguides), Fourier analysis, basics of control and electronics, detector characterisation, trouble-shooting, etc.</li> </ul>
<i>Computing</i>	<ul style="list-style-type: none"> <li>⇨ Familiar with UNIX/Linux/OSX/Windows, L<sup>A</sup>T<sub>E</sub>X, some knowledge in C, html, etc.</li> <li>⇨ Conversent with interpreted languages (Python, Yorick, IDL): data analysis, plotting</li> </ul>
<i>Teaching</i>	<ul style="list-style-type: none"> <li>⇨ 4×4h of JWST Master Class on High Contrast Imaging (STScI and Caltech, USA)</li> <li>⇨ 216h of Optics Th/Labs (IPN/ESFM, Mexico), 64h of Computer Labs (UCBL, France)</li> <li>⇨ Taught AO for several Postgraduate Programs &amp; Schools (Total of 12h)</li> <li>⇨ Coordinated the 1<sup>st</sup> internal AO Training for ESO/LPO Engineers &amp; Astronomers (16h)</li> </ul>
<i>Supervizing Students</i>	<ul style="list-style-type: none"> <li>⇨ <b>2 PhD students</b> (Jos de Boer, Leiden-2018, Blake Pantoja, U.Chile-2019)</li> <li>⇨ 6 Master's (currently Rohan Kane), 6 Bachelor's &amp; 2 high school students in engineering &amp; astronomy</li> </ul>
<i>Project management &amp; Leadership</i>	<ul style="list-style-type: none"> <li>⇨ Coordination of a JWST Working Group with ~30 internal &amp; external stakeholders</li> <li>⇨ Lead of the Roman Exoplanet Imaging Data Challenge (~ 10 people)</li> <li>⇨ Coordination of Instrument Operations Teams of VLT instruments (~ 15-20 people)</li> <li>⇨ Several PM trainings completed while at ESO &amp; STScI</li> <li>⇨ PI/coI-ship of several funded/awarded projects (instrumentation/astronomy)</li> </ul>
<i>"Soft" skills</i>	<ul style="list-style-type: none"> <li>⇨ Team player, leader/motivator, great cross-disciplinary/organigram communication skills</li> </ul>
<i>Language Proficiency</i>	<ul style="list-style-type: none"> <li>⇨ <b>French:</b> mother tongue</li> <li>⇨ <b>English:</b> fluent</li> <li>⇨ <b>German:</b> limited (high school)</li> <li>⇨ <b>Spanish:</b> fluent</li> <li>⇨ <b>Portuguese:</b> limited (Br)</li> </ul>

## Community Service & Committees

<i>Journal Referee</i>	Astrophysics & Instrumentation Journals: ApJ, AJ A&A, RevMex (2011 - Present)
<i>Grant Reviewer</i>	NASA APRA, NASA XRP, NSF Exoplanets, CONICYT/ALMA Fund (Confidential)
<i>Telescope Time Allocation</i>	Gemini CNTAC - National Time Allocation Committee (2014 - 2016)
<i>Thesis Committees</i>	PhD Defense (Reviewer) - Charles Goulas - Paris Observatory / LIRA, France (2025) PhD Defense (Advisor) - Blake Pantoja - Univ. de Chile, Chile (2019) PhD Defense (Examiner) - Mathias Nowak - Paris Observatory, France (2019) PhD Defense (Advisor) - Jozua de Boer - Leiden Observatory, Netherlands (2018) PhD Defense (Reviewer) - Jose Luis Aviles Urbiola - INAOE, Mexico (2010)
<i>Conferences</i>	STScI Spring Symposium on Exoplanets: SOC member and Session Chair (2021) Chesapeake Bay Area Exoplanet Meetings ( <b>CHEXO</b> ): SOC member (2018- Present) Exoplanets, Stars and Planet Formation seminars: organizer (STScI, JHU, 2018- )
<i>&amp; Workshops</i>	ALMA/ESO Workshop: <u>Resolving planet formation in the era of ALMA and extreme AO</u> SOC & LOC Member (2016)
<i>Organizer/Chair</i>	<u>High CONTRast Imaging &amp; Spectroscopy</u> : Chair (ESO/Chile, 2012)
<i>at STScI</i>	<b>Executive Committee of the Science Staff</b> : Elected member (2023 - ) <b>Executive Committee of the Science Staff</b> : Elected member (2020 - 2022) <b>Research Support Advisory Committee</b> : Discretionary Funds (2020 - 2022) Postdoc Mentoring Program: Mentor (2019 - ) of 3 Postdocs STScI Fellowships Committee (2019, 2022, 2023) AURA Tenure Track Exoplanet Positions: Conducted Interviews for Roman (2019)
<i>at ESO</i>	Science Operations "Adaptive Optics Group" (AOG) Coordinator (2009 - 2017) Panel member for various projects reviews (SPHERE PAE, ERIS Phase A, AOF) Observatory Reviews and one ESO Overview: Participant / Speaker (2010 - 2016)
<i>Community Engagement</i>	<b>Roman Exoplanet Imaging Data Challenge</b> : Coordinator (2018 - 2021) Python notebooks & simulations, videos of 4 tutorial events in US & Japan

## Professional Memberships

<i>Societies</i>	<b>IAU</b> : International Astronomical Union Individual Member (2011 - present) <b>AAS</b> : American Astronomical Society Full Member(2017 - present) <b>SPIE</b> : International Society for Optical Engineering (2008 - 2011) <b>SF2A</b> ( <i>Société Française d'Astronomie et Astrophysique</i> ) (2001 - 2005)
<i>Networking</i>	STScI Exoplanets, Star & Planet Formation✈ Seminars: organizer (2019-present) STScI Extrasolar Planetary Systems Imaging Group: co-Lead (2017-present) STScI Star and Planet Formation: member (2018-present) ESO/Chile "Direct Imaging Group: co-founder and active member (2012-2017) <b>Adaptive Optics</b> facebook group✈: Founder/Admin (2013 - present)

## Honors, Awards & Grants

2015 - Present	<b>Affiliate Researcher</b> (IPAG, Grenoble)
2025-2027	<b>Principal Investigator</b> NASA single source grant (\$USD 127k, pending) to work on the Roman Coronagraph Calibration & Commissioning
2023-2026	<b>Co-Investigator</b> NASA ROSES grant (\$USD 87k) to work (buy-back) as Project Team Member for the Roman Coronagraph Community Participation Program
2024	<b>Outstanding Researcher</b> "Green Card" (EB1B) Petition Approved (USCIS)
2023	<b>AURA Outstanding Achievement Award</b> (JWST Commissioning Team)
2018 - 2020	<b>Science Evaluation Top Performer</b> (STScI)
2023 , 2024	<b>Functional Surpassing Expectations</b> (STScI)
2018 , 2019	<b>Functional Outstanding Performer</b> (STScI)
2018 - 2020	<b>DDRF-JDF Grant PI</b> (STScI): \$USD 44,325
2018, 2023	<b>Bonus award</b> (STScI): \$USD 2,500, \$USD 2,300
2022 - Present	<b>US Principal Investigator</b> for JWST Cycle 2 (1 program, \$USD 87k), Cycle 3 (2 programs, \$USD 72k), Cycle 4 (1 program, \$USD 87k, pending)
2013 - 2022	<b>Principal Investigator</b> for ESO VLT(I) programs: ~ 157h of 8.2m telescope (equivalent to ~ €400-650k worth in operational cost)
2015-2016	<b>1-year ESO PhD Studentship (for Blake Pantoja ~ €21,000</b>
2014	<u>ESO DGDF Grant PI</u> : €2600 (Science Leave)
2013-2014	<b>2-year ESO PhD Studentship (for Jos de Boer ~ €45,000</b>
2012	<b>Exceptional Performance Award</b> (ESO) <u>ESO DGDF Grant PI</u> : €4600 (Student Internship + overseas travel)
2009	<b>SNI Nivel I</b> (Mexico's <i>Sistema Nacional de Investigadores</i> )
2009	<u>ICyTDF Grant co-I</u> : \$MXN 550k /\$USD 40k (robotize the OAN 84cm telescope)
2006-2008	<u>Beca postdoctoral</u> (Postdoc UNAM Fellowship) (UNAM, Mexico)
1999-2000	<u>Graduate Research Assistantship</u> (University of Utah, USA)
2001-2004	<u>Bourse d'Études Doctorales M.E.N.R.T</u> (French Government)
1998-1999	<u>Bourse d'Étude de la Région Rhône-Aples</u> (French Government)

## Science Communication & Outreach: Selected Appearances

<i>Selected</i>	<i>Conferencia Magistral IEMS</i> for an underserved community (Mexico, Octubre 2023)
<i>Outreach Talks</i>	<i>UNAM &amp; UAM</i> : 2 conferences in Spanish for the general public (Mexico, April 2022) <i>Baltimore City Schools "Career Day"</i> 3 Talks for 6th graders (Baltimore, 2019) ⇨ " <i>What does an astronomer do? From Ground to Space</i> " (English, 30 min) <i>Planetario de Playa del Carmen "SAYAB"</i> Invited Talk (Mexico, Jan 2016) ⇨ " <i>800 noches en el desierto de Atácama</i> " (Spanish, 50 min) <i>Gemini South's AstroDay</i> Public Talk (Chile, Jan 2010) ⇨ " <i>Hoy, 2010 la astronomía, en Chile</i> " (Spanish, 40 min) <i>Lycée Franco-Mexicano</i> Public Talk (Mexico, 2009) <i>Museo de la Luz</i> Invited Talk (Mexico, 2009) & many schools (Mexico, 2008-2009) ⇨ " <i>Hoy, la astronomía, en Mexico</i> " (Spanish/French, 40 min)
<i>Events</i>	⇨ <i>First Noche de las Estrellas</i> 🚀: National Committee Member (Mexico: 2009) ⇨ <b>CosmoWiki</b> Initiator with A. Farah Simón (Platform to link Amateur & Pro astronomers)
<i>Production</i>	⇨ <i>Ella es Astrónoma</i> 🚀 Photo Exhibition for the <b>She's an Astronomer</b> 🚀 IAU Corner Stone Project (2009, International Year of Astronomy): Curator (Photographer: Robin Cerutti)
<i>Television/Radio</i>	⇨ <i>Des Nouveaux Mondes Par Milliers</i> (EOL Prod, Science&Vie TV, 52' Documentary, 2015) ⇨ <i>Radio France International</i> (RFI) Interview (French, C. Martin, 2015) ⇨ <i>Globo News</i> : mainstream News (Brazil, 9' Subject, N., 2014) ⇨ <i>Journal de 20h de France 2</i> : mainstream News (France, 4' Subject, N. Chateauneuf, 2013) ⇨ <i>Tele13 en Terreno: Chile y el mayor telescopio del Mundo</i> : (Chile, 6' Subject, M. Puigrrredón, 2013) ⇨ <i>World Space Week Podcast</i> 🚀 (New-Zealand, H. Mogosanu, 2011)
<i>Press</i>	⇨ <i>Radio France International</i> (RFI) & <i>The Good Life</i> Articles (French, C. Martin, 2015) ⇨ Appearance in Book Chapter "The Milky Way" (English, Gary Fildes, 2016)
<i>Social</i>	<b>Cosmic Diary</b> blog hosted by the SETI Institute🚀 Scientist/contributor (2012-2015) <b>ESO Photo Ambassador</b> 🚀 (2012-Present)

## Talks, Seminars & Coloquia

- 2025 | **AAS: NASA Hyperwall Talk** (National Harbor, USA)  
The Roman Coronagraph
- **AAS: Contributed Talk** (National Harbor, USA)  
Ground & Space Synergies in Direct Imaging Studies of Exoplanets
  - **NIRCam Celebration: Invited Talk** (BioSphere/University of Arizona, USA)  
Detecting New Objects with Self-Referencing Surveys
- 2024 | **AAS: Contributed Talk** (National Harbor, USA)  
Coronagraphy with JWST: an update
- 2022 | **SPIE: Invited Plenary Talk** (Montreal, Canada)  
JWST: Early results & Instruments / NIRCam: Commissioning, Performance, EROs
- 2021 | **Spring Symposium on Exoplanets** (online): Contributed Talk (STScI)  
Results of the Roman Exoplanet Imaging Data Challenge
- 2020 | **Online Roman Lecture Series: Invited** (co-Hosted by JPL & STScI)  
The Roman Exoplanet Imaging Data Challenge  
also presented at Exoplanets III (online), Roman FSWG (Flatiron Inst, NY, USA) and SPIE (online)
- **SPIE Adaptive Optics Systems VII: Contributed Talk**  
Planet formation with all flavors of adaptive optics
- 2019 | **AMNH: Invited Talk** (New York, USA)  
Imaging Gap Carving Planets
- **Caltech: Contributed Talk** (Pasadena, USA)  
The 2019 WFIRST Exoplanet Imaging Data Challenge
  - **AO4ELT: Contributed Talk** (Quebec City, Canada)  
Original Use of MUSE's LTAO To Image Accreting Planets
- 2018 | **STScI: TIPS Talk Instruments Division** (Baltimore, USA)  
JWST/NIRCam Coronagraphy
- **Leiden Observatory: Lunch Talk** (Leiden, Netherlands)
- 2017 | **Caltech: JWST Proposal Planning Workshop** (Pasadena, USA)  
Preparing a proposal with JWST Coronagraphy
- **EXOCLIPSE: Contributed Talk** (Boise, USA)  
Reaching a good contrast at small angles: high pace reference differential imaging
- 2017 | **LAM: Invited Review Colloquium** (Marseille, France)  
VLT(I) Adaptive Optics Review: Science Machines from NACO to SPHERE & beyond
- **ESO Calibration Workshop: Contributed Talks** (Santiago, Chile)  
Adaptive Optics Metrics & QC Scheme  
SPHERE : Spectro-Polarimetric High-Contrast Exoplanet Research

## Talks, Seminars & Coloquia (cont.)

- 2016 **Caltech:** Exoplanet Group Meeting Talk (Pasadena, USA)
- **TMT HQ:** General Seminar (Pasadena, USA)  
Ground based high contrast exploration of exoplanets & their formation site
  - **Leiden Observatory: Colloquium,** (Leiden, Netherlands)  
Exoplanet Exploration from the Ground
- 2015 **ESO HQ** ESO Adaptive Optics Prospective Meeting (Garching, Germany)  
The VLT AO Systems & LGS
- **IPAG** Exoplanets Group's Seminar (Grenoble, France)  
High contrast & Interferometric pathfinder search around Luhman 16AB
  - **ESO Overview** Talk Paranal stories, small actions, big outcome! (Chile / Germany)
- 2014 **IA-UNAM Instituto de Astronomía: Invited Coloquium** (D.F., Mexico)  
High Contrast & High Angular Resolution Astronomy: Past, Present, Future
- **Santander International Summer School: 2 Invited Lectures** (Santiago, Chile)  
The VLT Adaptive Optics Systems & LGS  
The Adaptive Optics "zoo": SCAO, GLAO, MCAO, XAO, LTAO, MOAO...
  - **SPIE Adaptive Optics Systems IV:** Contributed Talk (Montreal, Canada)  
NACO, an on-going history: scientific demand & astrometric calibration through the years
- 2014 **STScI:** High Contrast Group Meeting Talk (STScI, USA)  
Direct imaging and interferometric followup of our closest low-mass stellar neighbors
- **CALAN U. de Chile** Star Formation Group: **Invited Seminar** (Santiago, Chile)  
Star & Planet Formation at High Contrast, from the Ground
- 2013 **ETH** Institute of Astronomy: **Invited Talk** (Zurich, Switzerland)  
High Contrast & High Angular Resolution Astronomy: Past, Present, Future
- Joint **ALMA/ESO** Workshop, (Santiago, Chile)  
UT4 "Yepun": Past, Present & Future an Adaptive Adventure
- 2012 **SPIE Adaptive Optics Systems III:** Contributed Talk (Amsterdam, Netherlands)  
Image Quality & High Contrast Improvement on VLT/NACO
- **ESO Observatory Review: Invited Talk,** (Paranal Observatory, Chile)  
AGPM 4-micron "vortex" Coronagraph on VLT/NACO: SPHERE before SPHERE
  - **AURA/Gemini/CTIO: Invited Coloquium** (La Serena, Chile)  
Improvement on VLT/NACO and AO activities on Paranal
- 2011 **IA-UNAM Instituto de Astronomía:** Instrumentation Seminar (D. F., Mexico)  
HAR techniques at the VLT: direct detection of exoplanets
- 2010 **ESO Chile Instrument Scientist Talk,** (Santiago, Chile)  
NACO, VLT/UT4 AO-fed NIR Imager & Spectrometer and more

## Talks, Seminars & Coloquia (cont.)

2008	<b>INAOE Guillermo Haro Workshop</b> "Science with SASIR", (Puebla, Mexico) <u>Adaptive Optics Follow-ups &amp; Future AO facilities</u>
2007	<b>Keck Telescope Headquarters</b> (Waimea, Hawaii, USA) <u>Polychromatic approach to visible AO &amp; GUIELOA, Mexican AO system</u>
-	<b>CfAO: Center for Adaptive Optics</b> (Santa-Cruz, USA) <u>Full sky visible AO observations &amp; HAR panorama in Mexico</u>
-	<b>CRyA-UNAM</b> ( <i>Centro de Radioastronomía y Astrofísica</i> ) (Morelia, México)
2006	<i>Instituto de Astronomía</i> (IA-UNAM, Distrito Federal, Mexico)
-	<b>LNA</b> ( <i>Laboratorio Nacional de Astrofísica</i> <b>Invited Coloquium</b> (Itajuba, Brazil)
-	<b>Stockholm Observatory</b> Astronomy Department Seminar (Stockholm, Sweden) <u>Experimental progress towards full sky visible AO observations</u>

## Selected Press Releases & Announcements

2025	<a href="#">NASA's Webb Images Young, Giant Exoplanets, Detects Carbon Dioxide</a> (NASA Blogs, Time, etc.)
2025	<a href="#">JWST Coronagraphic Images of 14 Her c: a Cold Giant Planet in a Dynamically Hot, Multi-planet System</a> (Astrobiology.com)
2025	<a href="#">Follow-Up Exploration Of The TWA 7 Planet-Disk System With JWST NIR-Cam</a> (Astrobiology.com)
2022	<a href="#">NASA's Webb takes its first-ever direct image of distant world</a> (NASA Blogs, Time, etc.)
2021	<a href="#">Discovery of a disk around young super-Jupiter which may form moons</a> (SciTechDaily)
2020	<a href="#">Astronomers find Jupiter-like cloud bands on closest brown dwarf</a> (NASA/HUBBLESITE & STScI) <a href="#">Bands of Clouds Swirl Across Brown Dwarf's Surface</a> (Caltech)
2019	<a href="#">A pair of fledgling planets directly seen growing around a young star</a> (NASA/HUBBLESITE & STScI, Phys.org)
2018	<a href="#">First confirmed image of newborn planet caught with ESO's VLT</a> (ESO)
2015	<a href="#">Mysterious ripples found racing through planet-forming disc</a> (ESO)
2014	<a href="#">First light for SPHERE exoplanet imager</a> (ESO)
2013	<a href="#">The birth of a giant planet?</a> (ESO) <a href="#">Lightest exoplanet imaged so far?</a> (ESO) <a href="#">ALMA sheds light on planet-forming gas streams</a> (ESO & ALMA)
2011	<a href="#">Ten years of VLT adaptive optics</a> (ESO)
2010	<a href="#">New mode for VLT's NACO to image exoplanets</a> (ESO)

## Supervising & Mentoring Students

2024 - Present	Summer and long-term Post-bac Intern Advisor <b>Rohan Kane:</b> <i>PSF Libraries with JWST/NIRCam Coronagraph Data (On-Going)</i>
2023 - 2024	Advisor of High-School "Ingenuity" Students <b>Lia Brown &amp; Noah McNally</b>
2015 - 2019	PhD co-Director with Dr James Jenkins (U. de Chile/ESO) <b>Blake Pantoja:</b> <i>From brown dwarfs to exoplanets, the missing link between radial velocity and direct imaging (Defended Sept 2019)</i>
2013 - 2017	PhD co-Director with Dr Christoph Keller (Leiden U./ESO) <b>Jozua de Boer:</b> <i>High Contrast Imaging of Protoplanetary Disks (Defended Jan 2018)</i>
2014 - 2015	Bachelor's Thesis co-Director with Dr Daphne Stam@tudelft.nl (T.U. Delft/ESO) <b>Rob van Holstein:</b> <i>Accurate high-contrast imaging polarimetry with SPHERE/IRDIS</i>
2013	Master's Project Director (T.U. Munich/ESO) <b>Elisabeth Brunner:</b> <i>Estimation of the atmospheric coherence time with FADE</i>
2012 - 2014	Master's Internship and sub-contract Mentor/Director(X-Polytechnique/PUC/ESO) <b>Martin Tourneboeuf:</b> <i>Development of an Image Quality assessment Tool, Strehl Meter</i>
2012	Master's Instrumentation project co-Director with Dr Dimitri Mawet (U. Liege/ESO) <b>Valentin Christiaens:</b> <i>Improving the NACO image quality (PSF) thanks NCPA compensation and via phase diversity</i>
2011	Undergraduate Co-mentor/Director with Dr. Petr Kabath (T.U. Munich/ESO) <b>Felix Rucker:</b> <i>Stellar variability survey in the OGLE2-TR-L9b field &amp; exoplanet transits</i>
2009	Undergraduate Student in Physics: mentor (ESFM-IPN, Mexico) <b>Jurij Mendoza Valencia:</b> <i>Roddier curvature technique and actives optics</i>
2004	Graduate Student Mentor, Master in Physical Engineering (INP Grenoble) <b>Xavier Rondeau:</b> <i>High Angular Resolution in Astronomy</i>
2004	Graduate Student Mentor, Master in Electrical Engineering (INSA Lyon) <b>Belkacem Aberache:</b> <i>Optimization of a pendular seismometer.</i>
2003	Graduate Student Mentor, Master in Electrical Engineering (INSA Lyon) <b>David Grenet:</b> <i>Study of a pendular seismometer to track telescope vibrations.</i>
2003	Undergraduate Student Mentor, Bachelor in Electrical Engineering (I.U.T Lyon) <b>Thierry Jacquemin:</b> <i>Positioning control of a pendular seismometer.</i>

# Science Collaborations

## Space Missions

**Nancy Grace Roman Telescope** ➤: Coronagraph Community Participation Program (CPP) **Project Team Member** (2023 -), **Science Investigation Team Member**, Data Challenge Lead ➤ (2019-2021, PI: Turnbull)  
**JWST Telescope Scientist GTO** ➤, Subject level member for Coronagraphy  
**JWST Early Science (ERS Prog 1386)** ➤  
 (PI: Hinkley, 2019 - Present)  
**JWST Strategic Project on Coronagraphy & Wavefront Sensing**  
 (PI: Ygouf, 2019 - Present)  
**LIFE: Large Interferometer For Exoplanets** ➤  
 (PI: Quanz, 2018 - Present)

## Ground based

**ExoGRAVITY**: Exoplanets with GRAVITY (PI: **Lacour**, ESO, 2019-Present)

## AO & Interferometry

**HIPPO**: NACO Filler Survey (PI: **Girard**, ESO, 40h, 2014-2020)

**NACO GTO**: Invited Member (PI: Launhardt, MPIA, 100 nights, 2015-2019)

## Exoplanets & Disks

↻ **ISPY Survey**: Exoplanets

**SPHERE GTO**: IPAG Affiliate Scientist (PI: Beuzit, IPAG, 300 nights, 2014-2020)

↻ **SHINE Survey**: Exoplanets

↻ **Disk Group**: Debris & Protoplanetary Disks

**SHARDDS Project**: External Collaborator (PI: J. Milli, Liège, 2014 - 2016)

**VORTEX Project** ➤: External Collaborator (PI: O. Absil, Liège, 2014 - 2016)

# Bibliography and Career Summary

25+ years of research & Technical work in a single chart. My publication record dramatically increased after 2010 transitioning to observational astronomy. View it interactively on [NASA/ADS](#) (192 accepted referred articles ➤, ≥ 13,900 citations, **H-index=64**) as of October 2025:

