

# Johan MAZOYER

**Interêts de recherche :** Instrumentation Optique, Imagerie Directe et Coronagraphie, Observation et Caractérisation de Systèmes Extrasolaires, Disques de Débris

## 1 EXPÉRIENCES PROFESSIONNELLES

Chargé de recherche CNRS – <b>LESIA/Observatoire de Paris</b> (France)	Depuis 2020
Sagan Fellow – <b>Jet Propulsion Laboratory</b> (Pasadena, CA)	2018 - 2019
Post-doctorant – <b>Johns Hopkins University</b> (Baltimore, MD)	2016 - 2018
Post-doctorant – <b>Space Telescope Science Institute</b> (Baltimore, MD)	2014 - 2016
Doctorant – <b>LESIA/Observatoire de Paris</b> (France)	2011 - 2014

## 2 FORMATION

<b>Doctorat – Université Paris Diderot</b> <i>Astronomie et Astrophysique</i>	Paris, France Septembre 2014
<b>Master 2 – Université Paul Sabatier</b> <i>Astrophysique, Science de l'Espace, Planétologie</i>	Toulouse, France Septembre 2011
<b>Diplôme d'ingénieur – ISAE Supaero</b> <i>Systèmes Spatiaux et Techniques d'Imageries Spatiales</i>	Toulouse, France Septembre 2011
<b>Diplôme d'ingénieur – Ecole polytechnique</b> <i>Systèmes Embarqués (électronique et informatique)</i>	Palaiseau, France Septembre 2011

## 3 BOURSES & PRIX

Carl Sagan Fellowship ( <b>NASA Hubble Fellowship Program</b> ) – 3 ans	2018
Couverture du journal <b>Astronomy &amp; Astrophysics</b> ( <b>Volume 564</b> )	2014
Meilleure présentation, conférence des chercheurs du CNES (JC2)	2013
Bourse doctorale du CNES – 3 ans	2011
Bourse d'étude de l'Ecole polytechnique – 4 ans	2007

## 4 DIFFUSION DES SCIENCES

### Podcast Science

J'anime chaque semaine **PodcastScience.fm**, émission scientifique hebdomadaire de radio (podcast) d'une heure et demie à 3h. Le podcast produit des émissions sur tous les domaines scientifiques et je réalise tous les contenus relatifs à la physique et à l'astrophysique.

### Conférences grand public

CERN (Genève) et Palais de la découverte (Paris)



## 5 ENSEIGNEMENT ET ENCADREMENTS

---

### Co-encadrement de doctorants

- **Lucie Leboulleux** (thèse soutenue en Décembre 2018)
- **Kevin Fogarty** (thèse soutenue en Août 2017)

### Qualification aux fonctions de maître de conférences dans la section 34 2015

#### Université Paris Diderot – Paris 7 2013 & 2014

- 32h de vacation (électronique pour L3 cursus ingénieur)

#### Université Paris Descartes – Paris 5 2011 & 2012

- 72h de vacation (hydrodynamique pour L1 cursus médecine)

### La Main à la pâte – Académie de Perpignan 2007 – 2008

- Stage de première année de l'Ecole polytechnique (8 mois) où j'ai enseigné les sciences en primaire à temps plein. Les mercredis étaient consacrés à la formation des professeurs des écoles à l'enseignement des sciences.

## 6 PRISES DE RESPONSABILITÉS POUR LA COMMUNAUTÉ

---

### Organisation de conférences et ateliers

- Science Organizing Comitee et organisateur de la conference **National Capital Area Disks** (Baltimore, MD, Oct. 2018). [Site internet](#)
- Science Organizing Comitee et co-organisateur de l'atelier **Optimal Optical Coronagraphs** (Leiden, NL, Sep. 2017). [Site internet](#)
- *Science Organizing Comitee* de l'atelier **High Contrast Imaging from Space** (Baltimore, MD, US, Nov 2016). [Site internet](#)
- Co-organisateur de l'atelier **La très haute dynamique** (Paris, Fr, Oct. 2012)

### Autres investissements

- Participation au **Telescope Allocation Committee** d'Hubble (2 semaines, Mai 2016).
- Membre du Study Analysis Groups (SAGs) #19 de l'**Exoplanet Exploration Program Analysis Group** (ExoPAG). Le SAG numéro 19 regroupe des chercheurs pour définir de nouvelles métriques d'évaluation et de comparaison des méthodes de détection d'exoplanètes (Jensen Clem et al. 2017).
- Organisation du séminaire **"Exoplanet, Star and Planet Formation"** au STScI (2016 - 2018). Ce séminaire invite des chercheurs d'autres organismes chaque semaine au STScI.
- Développement du **site internet du banc optique THD** de Meudon en Août 2014, dans l'objectif de faire connaître ses caractéristiques à l'international pour créer de nouvelles collaborations.
- Membre de l'IAU depuis 2019
- **Peer-review** pour le *Astronomical Journal*, *A&A*, *MNRAS*, *PASP* et *Journal of Astronomical Telescopes, Instruments, and Systems*.

# Liste des publications

## 1 ARTICLES MAJEURS

---

9. **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](#), 7 citations
8. **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
7. 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
5. **Mazoyer, J.** ; Boccaletti, A. ; Choquet, É. et al. (2016), *A Symmetric Inner Cavity in the HD 141569A Circumstellar Disk*, The Astrophysical Journal, 818, 150, [ADS Link](#), 9 citations
4. **Mazoyer, J.** ; Boccaletti, A. ; Augereau, J. -C. et al. (2014), *Is the HD 15115 inner disk really asymmetrical ?*, Astronomy and Astrophysics, 569, A29, [ADS Link](#), 28 citations
3. **Mazoyer, J.** (2014), *High-Contrast Direct Imaging Of Exoplanets And Circumstellar Disks : From The Self-Coherent Camera To Nici Data Analysis*, Ph.D. Thesis, [ADS Link](#), 2 citations
2. **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](#), 23 citations
1. **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](#), 23 citations

## 2 AUTRES ARTICLES

---

15. Bhowmik, T. et al. (2019), *Spatially resolved spectroscopy of the debris disk HD 32297. Further evidence of small dust grains*, Astronomy and Astrophysics, 630, A85, [ADS Link](#), 1 citation
14. Ren, B. et al. (2019), *An Exo-Kuiper Belt with an Extended Halo around HD 191089 in Scattered Light*, The Astrophysical Journal, 882, 64, [ADS Link](#)
13. Stark, C. C. et al. (2019), *ExoEarth yield landscape for future direct imaging space telescopes*, Journal of Astronomical Telescopes, Instruments, and Systems, 5, 024009, [ADS Link](#)
12. Engler, N. et al. (2019), *Investigating the presence of two belts in the HD 15115 system*, Astronomy and Astrophysics, 622, A192, [ADS Link](#), 5 citations
11. Esposito, T. M. et al. (2018), *Direct Imaging of the HD 35841 Debris Disk : A Polarized Dust Ring from Gemini Planet Imager and an Outer Halo from HST/STIS*, The Astronomical Journal, 156, 47, [ADS Link](#), 2 citations
10. Leboulleux, L. et al. (2018), *Pair-based Analytical model for Segmented Telescopes Imaging from Space for sensitivity analysis*, Journal of Astronomical Telescopes, Instruments, and Systems, 4, 035002, [ADS Link](#), 2 citations
9. Poteet, C. A. et al. (2018), *Space-based Coronagraphic Imaging Polarimetry of the TW Hydrae Disk : Shedding New Light on Self-shadowing Effects*, The Astrophysical Journal, 860, 115, [ADS Link](#), 3 citations
8. Jensen-Clem, R. et al. (2018), *A New Standard for Assessing the Performance of High Contrast Imaging Systems*, The Astronomical Journal, 155, 19, [ADS Link](#), 12 citations

7. Fogarty, K. et al. (2017), *Polynomial Apodizers for Centrally Obscured Vortex Coronagraphs*, The Astronomical Journal, 154, 240, [ADS Link](#), 6 citations
6. Perrot, C. et al. (2016), *Discovery of concentric broken rings at sub-arcsec separations in the HD 141569A gas-rich, debris disk with VLT/SPHERE*, Astronomy and Astrophysics, 590, L7, [ADS Link](#), 18 citations
5. Delorme, J. R. et al. (2016), *Focal plane wavefront sensor achromatization : The multireference self-coherent camera*, Astronomy and Astrophysics, 588, A136, [ADS Link](#), 9 citations
4. Choquet, É. et al. (2016), *First Images of Debris Disks around TWA 7, TWA 25, HD 35650, and HD 377*, The Astrophysical Journal, 817, L2, [ADS Link](#), 39 citations
3. Debes, J. H. et al. (2016), *Wide-Field Infrared Survey Telescope-Astrophysics Focused Telescope Assets coronagraphic operations : lessons learned from the Hubble Space Telescope and the James Webb Space Telescope*, Journal of Astronomical Telescopes, Instruments, and Systems, 2, 011010, [ADS Link](#), 9 citations
2. Wiens, R. C. et al. (2013), *Pre-flight calibration and initial data processing for the ChemCam laser-induced breakdown spectroscopy instrument on the Mars Science Laboratory rover*, Spectrochimica Acta, 82, 1, [ADS Link](#), 117 citations
1. Cousin, A. et al. (2011), *Laser induced breakdown spectroscopy library for the Martian environment*, Spectrochimica Acta, 66, 805, [ADS Link](#), 39 citations

### 3 ACTES DE CONFÉRENCE MAJEURS

---

19. Fogarty, K. ; **Mazoyer, J.** ; St. Laurent, K. et al. (2018), *Optimal deformable mirror and pupil apodization combinations for apodized pupil Lyot coronagraphs with obstructed pupils*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106981J, [ADS Link](#)
18. Ruane, G. ; Riggs, A. ; **Mazoyer, J.** et al. (2018), *Review of high-contrast imaging systems for current and future ground- and space-based telescopes I : coronagraph design methods and optical performance metrics*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106982S, [ADS Link](#)
17. **Mazoyer, J.** ; Pueyo, L. ; N'Diaye, M. et al. (2017), *Capabilities of ACAD-OSM, an active method for the correction of aperture discontinuities*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10400, 104000G, [ADS Link](#), 2 citations
16. **Mazoyer, J.** ; Pueyo, L. (2017), *Fundamental limits to high-contrast wavefront control*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10400, 1040014, [ADS Link](#), 1 citation
15. Leboulleux, L. ; N'Diaye, M. ; **Mazoyer, J.** et al. (2017), *Comparison of wavefront control algorithms and first results on the high-contrast imager for complex aperture telescopes (HiCAT) testbed*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10562, 105622Z, [ADS Link](#)
14. Fogarty, K. ; Pueyo, L. ; **Mazoyer, J.** et al. (2017), *Tip/tilt optimizations for polynomial apodized vortex coronagraphs on obscured telescope pupils*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10400, 104000T, [ADS Link](#), 2 citations
13. **Mazoyer, J.** ; Pueyo, L. ; N'Diaye, M. et al. (2016), *Correcting for the effects of pupil discontinuities with the ACAD method*, Space Telescopes and Instrumentation 2016 : Optical, Infrared, and Millimeter Wave, 9904, 99044T, [ADS Link](#)
12. **Mazoyer, J.** ; Pueyo, L. ; Norman, C. et al. (2015), *Active correction of aperture discontinuities (ACAD) for space telescope pupils : a parametric analysis*, Techniques and Instrumentation for Detection of Exoplanets VII, 9605, 96050M, [ADS Link](#), 8 citations
11. N'Diaye, M. ; **Mazoyer, J.** ; Choquet, É. et al. (2015), *High-contrast imager for complex aperture telescopes (HiCAT) : 3. first lab results with wavefront control*, Techniques and Instrumentation for Detection of Exoplanets VII, 9605, 96050I, [ADS Link](#), 7 citations

10. **Mazoyer, J.** ; Boccaletti, A. ; Augereau, J. -C. et al. (2014), *Is the HD 15115 circumstellar disk really asymmetrical ?*, Thirty years of Beta Pic and Debris Disks Studies, 47, [ADS Link](#)
9. **Mazoyer, J.** ; Galicher, R. ; Baudoz, P. et al. (2014), *Deformable mirror interferometric analysis for the direct imagery of exoplanets*, Adaptive Optics Systems IV, 9148, 914846, [ADS Link](#), 1 citation
8. **Mazoyer, J.** ; Baudoz, P. ; Galicher, R. et al. (2013), *Direct detection of exoplanets in polychromatic light with a Self-coherent camera*, Proceedings of the Third AO4ELT Conference, 97, [ADS Link](#)
7. Baudoz, P. ; **Mazoyer, J.** ; Galicher, R. (2013), *Laboratory tests of planet signal extraction in high contrast images*, Proceedings of the Third AO4ELT Conference, 109, [ADS Link](#), 1 citation
6. **Mazoyer, J.** ; Galicher, R. ; Baudoz, P. et al. (2013), *Speckle correction in polychromatic light with the self-coherent camera for the direct detection of exoplanets*, Techniques and Instrumentation for Detection of Exoplanets VI, 8864, 88640N, [ADS Link](#), 1 citation
5. Galicher, R. ; **Mazoyer, J.** ; Baudoz, P. et al. (2013), *High-contrast imaging with a self-coherent camera*, Techniques and Instrumentation for Detection of Exoplanets VI, 8864, 88640M, [ADS Link](#)
4. Baudoz, P. ; **Mazoyer, J.** ; Mas, M. et al. (2012), *Dark hole and planet detection : laboratory results using the self-coherent camera*, Ground-based and Airborne Instrumentation for Astronomy IV, 8446, 84468C, [ADS Link](#), 8 citations
3. Mas, M. ; Baudoz, P. ; **Mazoyer, J.** et al. (2012), *Experimental results on wavefront correction using the self-coherent camera*, Ground-based and Airborne Instrumentation for Astronomy IV, 8446, 844689, [ADS Link](#), 4 citations
2. **Mazoyer, J.** ; Baudoz, P. ; Mas, M. et al. (2012), *Experimental parametric study of the self-coherent camera*, Space Telescopes and Instrumentation 2012 : Optical, Infrared, and Millimeter Wave, 8442, 844250, [ADS Link](#), 2 citations
1. Gasnault, O. ; **Mazoyer, J.** ; Cousin, A. et al. (2012), *Deciphering Sample and Atmospheric Oxygen Contents with ChemCam on Mars*, Lunar and Planetary Science Conference, 2888, [ADS Link](#), 1 citation

## 4 AUTRES ACTES DE CONFÉRENCE

---

22. Fogarty, K. et al. (2018), *Optimal deformable mirror and pupil apodization combinations for apodized pupil Lyot coronagraphs with obstructed pupils*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106981J, [ADS Link](#)
21. Ruane, G. et al. (2018), *Review of high-contrast imaging systems for current and future ground- and space-based telescopes I : coronagraph design methods and optical performance metrics*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106982S, [ADS Link](#)
20. N'Diaye, M. et al. (2018), *Apodized Pupil Lyot coronagraphs with arbitrary aperture telescopes : novel designs using hybrid focal plane masks*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106986A, [ADS Link](#)
19. Soummer, R. et al. (2018), *High-contrast imager for complex aperture telescopes (HiCAT) : 5. first results with segmented-aperture coronagraph and wavefront control*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106981O, [ADS Link](#)
18. Snik, F. et al. (2018), *Review of high-contrast imaging systems for current and future ground-based and space-based telescopes III : technology opportunities and pathways*, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation III, 10706, 107062L, [ADS Link](#)
17. St. Laurent, K. et al. (2018), *Apodized pupil Lyot coronagraphs designs for future segmented space telescopes*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106982W, [ADS Link](#)



16. Jovanovic, N. et al. (2018), *Review of high-contrast imaging systems for current and future ground-based and space-based telescopes : Part II. Common path wavefront sensing/control and coherent differential imaging*, Adaptive Optics Systems VI, 10703, 107031U, [ADS Link](#), 2 citations
15. Leboulleux, L. et al. (2018), *Sensitivity analysis for high-contrast imaging with segmented space telescopes*, Space Telescopes and Instrumentation 2018 : Optical, Infrared, and Millimeter Wave, 10698, 106986H, [ADS Link](#)
14. Leboulleux, L. et al. (2017), *Comparison of wavefront control algorithms and first results on the high-contrast imager for complex aperture telescopes (hicat) testbed*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10562, 105622Z, [ADS Link](#)
13. Fogarty, K. et al. (2017), *Tip/tilt optimizations for polynomial apodized vortex coronagraphs on obscured telescope pupils*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10400, 104000T, [ADS Link](#), 2 citations
12. Egron, S. et al. (2017), *James Webb Space Telescope optical simulation testbed IV : linear control alignment of the primary segmented mirror*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10398, 1039811, [ADS Link](#)
11. Pueyo, L. et al. (2017), *The LUVOIR architecture "A" coronagraph instrument*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10398, 103980F, [ADS Link](#), 5 citations
10. Leboulleux, L. et al. (2016), *High-contrast imager for Complex Aperture Telescopes (HiCAT). 4. Status and wavefront control development*, Space Telescopes and Instrumentation 2016 : Optical, Infrared, and Millimeter Wave, 9904, 99043C, [ADS Link](#)
9. N'Diaye, M. et al. (2015), *High-contrast imager for complex aperture telescopes (HiCAT) : 3. first lab results with wavefront control*, Techniques and Instrumentation for Detection of Exoplanets VII, 9605, 96050I, [ADS Link](#), 7 citations
8. Galicher, R. et al. (2014), *High contrast imaging on the THD bench : progress and upgrades*, Space Telescopes and Instrumentation 2014 : Optical, Infrared, and Millimeter Wave, 9143, 91435A, [ADS Link](#), 1 citation
7. Delorme, J. R. et al. (2014), *High-contrast imaging in wide spectral band with a self-coherent camera and achromatic coronagraphs*, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation, 9151, 91515Q, [ADS Link](#), 1 citation
6. Galicher, R. et al. (2013), *Focal Plane Wavefront Sensing with a self-coherent camera*, Proceedings of the Third AO4ELT Conference, 123, [ADS Link](#)
5. Baudoz, P. et al. (2013), *Laboratory tests of planet signal extraction in high contrast images*, Proceedings of the Third AO4ELT Conference, 109, [ADS Link](#), 1 citation
4. Galicher, R. et al. (2013), *High-contrast imaging with a self-coherent camera*, Techniques and Instrumentation for Detection of Exoplanets VI, 8864, 88640M, [ADS Link](#)
3. Baudoz, P. et al. (2012), *Dark hole and planet detection : laboratory results using the self-coherent camera*, Ground-based and Airborne Instrumentation for Astronomy IV, 8446, 84468C, [ADS Link](#), 8 citations
2. Mas, M. et al. (2012), *Experimental results on wavefront correction using the self-coherent camera*, Ground-based and Airborne Instrumentation for Astronomy IV, 8446, 844689, [ADS Link](#), 4 citations
1. Gasnault, O. et al. (2012), *Deciphering Sample and Atmospheric Oxygen Contents with Chem-Cam on Mars*, Lunar and Planetary Science Conference, 2888, [ADS Link](#), 1 citation

## 5 ASTRO2020 DECADAL SURVEY

---

## Mission Concept Reports

- The LUVOIR Team (2019) *The LUVOIR Mission Concept Study Final Report* (Additional Contributing Scientist), [NASA GSFC Link](#)
- HabEx Study Team (2019) *The HabEx Mission Concept Study Final Report* (Additional Contributing Scientist), [NASA JPL Link](#)

## Astro2020 White Papers

6. Mazoyer, J. et al. (2019), *High-Contrast Testbeds for Future Space-Based Direct Imaging Exoplanet Missions*, Bulletin of the American Astronomical Society, 51, 101, [ADS Link](#)
5. Pueyo, L. et al. (2019), *Wavefront Sensing and Control technologies for Exo-Earth imaging*, Bulletin of the American Astronomical Society, 51, 215, [ADS Link](#)
4. Shaklan, S. et al. (2019), *Status of Space-based Segmented-Aperture Coronagraphs for Characterizing Exo-Earths Around Sun-Like Stars*, Bulletin of the American Astronomical Society, 51, 211, [ADS Link](#)
3. Chen, C. et al. (2019), *Debris Disk Composition : A Diagnostic Tool for Planet Formation and Migration*, Bulletin of the American Astronomical Society, 51, 342, [ADS Link](#)
2. Debes, J. et al. (2019), *Cold Debris Disks as Strategic Targets for the 2020s*, Bulletin of the American Astronomical Society, 51, 566, [ADS Link](#)
1. Stark, C. et al. (2019), *Optimal Architectures and Survey Designs for Maximizing the Yields of Direct-Imaging Exoplanet Missions*, Bulletin of the American Astronomical Society, 51, 511, [ADS Link](#)

# Liste des présentations

## 1 PRÉSENTATIONS INVITÉES

---

9. “Active correction of aperture discontinuities and observation of circumstellar debris disks with GPI”, IPAC seminar, Pasadena, FR **Avr. 2019**
8. “High contrast imaging : from active correction to observation of circumstellar debris disks”, LESIA seminar, Meudon, FR **Mar. 2019**
7. “Wavefront control and sensing for the direct imaging of exoplanets”, JPL seminar, Pasadena, FR **Dec. 2018**
6. “High contrast imaging : from active correction to observation of circumstellar debris disks”, IPAG, Grenoble, FR **Mar. 2018**
5. “High contrast imaging : active correction of aperture discontinuities”, Carnegie DTM Astronomy Seminar, Washington, DC, USA **Fev. 2018**
4. “High contrast imaging : active correction of aperture discontinuities”, STScI/JHU CoolSci Talk Series, Baltimore, MD, USA **Fev. 2017**
3. “High contrast imaging : from active correction to observation of circumstellar debris disks”, IRAP seminar, Toulouse FR **Mar. 2017**
2. “Correction of aperture discontinuities for the direct imaging of exoplanets and circumstellar disks”, CRAL séminar, Lyon, FR **Sep. 2016**
1. “Active Correction of Aperture Discontinuities (ACAD) for Space Telescope Pupils : A parametrical analysis”, Vortex coronagraph workshop 2, Caltech, Pasadena, CA, US **Juil. 2016**

## 2 CONFÉRENCES ET ATELIERS INTERNATIONAUX

---

17. “The surprising scattering phase function of the HR 4796 debris disk ”, American Astronomical Society 233 conference, Seattle, CA, US **Jan. 2019**
16. “Current Limitations and Perspectives for Direct Imaging Instrumentation for Future Space-Based Telescopes”, Sagan/Michelson Fellows Symposium, Pasadena, CA, US **Nov. 2018**
15. “High-Contrast Imaging of the HR 4796 Debris Disk with the Gemini Planet Imager”, NCAD 7 conference, Baltimore, MD, US **Sep. 2018**
14. “Forward modeling techniques for spectra retrieval of circumstellar debris disks”, American Astronomical Society 231 conference, Washington, DC, US **Jan. 2018**
13. “Beam shaping coronagraphs”, OOC workshop, Leiden, NL **Sep. 2017**
12. “The HiCAT testbed”, OOC workshop, Leiden, NL **Sep. 2017**
11. “Capabilities of ACAD-OSM, an active method for the correction of aperture discontinuities”, SPIE Conference, San Diego, CA, US **Août 2017**
10. “Fundamental limits to high-contrast wavefront control”, SPIE Conference, San Diego, CA, US **Août 2017**
9. “A new active method to correct for the effects of complex apertures on coronagraph performance”, American Astronomical Society 229 conference, Grapewine, TX **Jan. 2017**
8. “Correcting for aperture discontinuities with deformable mirrors for futur space telescopes”, High Contrast Imaging in Space workshop, STScI, Baltimore, MD **Nov. 2016**
7. “Deep inside circumstellar disks investigating the NICI archive”, NCAD 6 conference, Carnegie DTM, Washington DC, US **Juil. 2016**
6. “Active correction of aperture discontinuities (ACAD) for space telescope pupils : a parametric analysis”. SPIE Conference, Techniques and Instrumentation for Detection of Exoplanets VII. San Diego, CA, US. **Août 2015.**



5. “THD bench : description and latest results”. Coronagraphs and Wavefront Control Workshop. Leiden, Netherlands, **Oct. 2014**.
4. “Direct detection of exoplanets in polychromatic light with a Self-coherent camera”. SPIE Conference, Techniques and Instrumentation for Detection of Exoplanets VI. San Diego, CA, US. **Août 2013**.
3. “Deformable mirror analysis for direct imagery of exoplanets”. Journées recherche et industrie de l’optique adaptative 6. Villetaneuse, France. **Juil. 2013**.
2. “Self-Coherent Camera : principe”, Workshop “Très haute Dynamique”. Meudon, France. **Sept. 2012**.
1. “La Self-Coherent Camera : estimation de front d’onde en plan focal pour la détection d’exoplanètes en imagerie directe”. Journées recherche et industrie de l’optique adaptative 5. Marseille, France. **Juil. 2012**.

### 3 SÉMINAIRES

---

13. NASA’s Goddard Space Flight Center seminar, MD, US. “A new active method to correct for the effects of complex apertures on coronagraph performance” **Jan. 2017**
12. ESO TMT seminar, Santiago, CL. “A new active method to correct for the effects of complex apertures on coronagraph performance” **Nov. 2016**
11. Séminaire de l’OCA, Nice, FR. “Correction of aperture discontinuities for the direct imaging of exoplanets and circumstellar disks” **Août 2016**
10. Space Telescope Science Institute post-doc Jamboree, MD, US. “Deep inside circumstellar disks : high-contrast instrumental techniques and archival data analysis” **Fév. 2016**.
9. Wine & Cheese seminar, Johns Hopkins University, MD, US. “Deep inside circumstellar disks : high-contrast instrumental techniques and archival data analysis” **Avr. 2015**.
8. LOOM Seminar, LAM, Marseille, France. “Deep inside circumstellar disks : high contrast instrumental techniques and data analysis using NICI”. **Mars 2015**.
7. STScI science coffee seminar, Baltimore, MD, US. “Deep inside circumstellar disks with the GEMINI/NICI coronagraphic instrument” **Jan. 2015**.
6. Astrium optical group seminar, Toulouse, France. “Self Coherent Camera and THD bench” **Oct. 2013**.
5. Séminaire Haute Résolution angulaire, LESIA, Obs. de Paris, France. “The self-coherent camera : speckle nulling in polychromatic light for the direct detection of exoplanets” **Oct. 2013**.
4. CNES optical group seminar, “Self Coherent Camera and THD bench”, Toulouse, France **Oct. 2013**.
3. Journées des jeunes chercheurs du CNES (JC2), Toulouse, France. “La Self-Coherent Camera : imagerie directe par coronagraphie pour la détection et l’analyse spectrale d’exoplanètes”, **Récompensée par le prix de la meilleure présentation Oct. 2013**.
2. Journées des thèses du LESIA, Obs de Paris, France. Deux présentations, en **Mars 2012** et **Avr. 2013**.
1. Conférence “Elbereth” des doctorants en astronomie et astrophysique d’Île-de-France, IAP, Paris, France. Trois présentations en **Déc. 2011, 2012 et 2013**.

+ 9 posters en conférences internationales

## 4 PRÉSENTATIONS GRAND PUBLIC

---

- “Extremely Large Telescopes : des cathédrales pour l’astronomie”. CERN, Genève, Suisse **Août 2014**.
- “Des œufs dans l’espace”. Palais de la découverte, Paris, France **Mai 2016**.
- “Excréments dans l’espace”. Palais de la découverte, Paris, France **Mai 2017**.