

# Johan MAZOYER

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

## 1 EXPÉRIENCES PROFESSIONNELLES

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Chargé de recherche CNRS – <b>LESIA/Observatoire de Paris</b> (France)	Début 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

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

## 3 BOURSES & PRIX

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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

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### 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

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### 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

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### 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*.

## 7 PUBLICATIONS EN PREMIER AUTEUR

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7. **Mazoyer, J.**, Pueyo, L., N'Diaye, M., Fogarty, K., Zimmerman, N., Soummer, R., Shaklan, S. and Norman, C., “*Active Correction of Aperture Discontinuities-Optimized Stroke Minimization. II. Optimization for Future Missions,*” The Astronomical Journal 155, 8, 19 pages (2018).  
Link : <http://adsabs.harvard.edu/abs/2018AJ....155....8M>
6. **Mazoyer, J.**, Pueyo, L., N'Diaye, M., Fogarty, K., Zimmerman, N., Leboulleux, L., St. Laurent, K. E., Soummer, R., Shaklan, S. and Norman, C., “*Active Correction of Aperture Discontinuities-Optimized Stroke Minimization. I. A New Adaptive Interaction Matrix Algorithm,*” The Astronomical Journal 155, 7, 13 pages (2018).  
Link : <http://adsabs.harvard.edu/abs/2018AJ....155....7M>
5. **Mazoyer, J.**, Boccaletti, A., Choquet, É., Perrin, M. D., Pueyo, L., Augereau, J.-C., Lagrange, A.-M., Debes, J. and Wolff, S. G., “*A Symmetric Inner Cavity in the HD 141569A Circumstellar Disk,*” The Astrophysical Journal 818(2), 150, 8 pages (2016).  
Link : <http://adsabs.harvard.edu/abs/2016ApJ...818..150M>
4. **Mazoyer, J.**, Pueyo, L., Norman, C., N'Diaye, M., van der Marel, R. P. and Soummer, R., “*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, 8 pp (2016).  
Link : <http://adsabs.harvard.edu/abs/2016JATIS...2a1008M>
3. **Mazoyer, J.**, Boccaletti, A., Augereau, J.-C., Lagrange, A.-M., Galicher, R. and Baudoz, P., “*Is the HD 15115 inner disk really asymmetrical ?,*” Astronomy and Astrophysics 569, A29, 9 pages (2014).  
Link : <http://adsabs.harvard.edu/abs/2014A%26A...569A..29M>
2. **Mazoyer, J.**, Baudoz, P., Galicher, R. and Rousset, G., “*High-contrast imaging in polychromatic light with the self-coherent camera,*” Astronomy and Astrophysics 564, L1, 4 pages (2014).  
**Publié en couverture du numéro d’Astronomy & Astrophysics d’Avril 2014**  
Link : <http://adsabs.harvard.edu/abs/2014A%26A...564L...1M>
1. **Mazoyer, J.**, Baudoz, P., Galicher, R., Mas, M. and Rousset, G., “*Estimation and correction of wavefront aberrations using the self-coherent camera : laboratory results,*” Astronomy and Astrophysics 557, 9, 13 pages (2013).  
Link : <http://adsabs.harvard.edu/abs/2013A%26A...557A...9M>

## 8 AUTRES PUBLICATIONS

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15. Bhowmik, T., Boccaletti, A., Thébault, P., Kral, Q., **Mazoyer, J.** et al., “Spatially resolved spectroscopy of the debris disk HD 32297 : Further evidence of small dust grains” accepted in Astronomy and Astrophysics (2019).  
Link : <https://ui.adsabs.harvard.edu/abs/2019arXiv190808511B/abstract>
14. Ren, B.; Choquet, É.; Perrin, M. D.; Duchêne, G. et al., “An Exo-Kuiper Belt and An Extended Halo around HD 191089 in Scattered Light” The Astrophysical Journal 882, 64, 24 pp pages(2019).  
Link : <https://ui.adsabs.harvard.edu/abs/2019arXiv190800066R/abstract>
13. Stark, C. C., Belikov, R., Bolcar, M. R., Cady, E., Crill, B. P., Ertel, S., Groff, T., Hildebrandt, S., Krist, J., Lisman, P. D., **Mazoyer, J.** et al. “ExoEarth yield landscape for future direct imaging space telescopes” Journal of Astronomical Telescopes, Instruments, and Systems, Volume 5, id. 024009 (2019).  
Link : <https://ui.adsabs.harvard.edu/abs/2019JATIS...5b4009S/abstract>

12. Engler, N., Boccaletti, A., Schmid, H.M., Milli, J., Augereau, J.-C., **Mazoyer, J.**, Maire, A.-L., et al., "Investigating the presence of two belts in the HD 15115 system" *Astronomy and Astrophysics* 622, A192, 22 pages (2019).  
Link : <https://ui.adsabs.harvard.edu/abs/2019A%26A...622A.192E/abstract>
11. Leboulleux, L., Sauvage, J.-F., Pueyo, L., Fusco, T., Soummer, R., **Mazoyer, J.**, et al. , "Pair-based Analytical model for Segmented Telescopes Imaging from Space (PASTIS) for sensitivity analysis," *Journal of Astronomical Telescopes, Instruments, and Systems*, 4(3), 035002, 14 pages (2018).  
Link : <http://adsabs.harvard.edu/abs/2018JATIS...4c5002L>
10. Esposito et al. "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, 2, 16 pages (2018).  
Link : <http://adsabs.harvard.edu/abs/2018AJ....156...47E>
9. Poteet, C. A., Chen, C. H., Hines, D. C., Perrin, M. D., Debes, J. H., Pueyo, L., Schneider, G., **Mazoyer, J.**, and Kolokolova, L. "Space-Based Coronagraphic Imaging Polarimetry of the TW Hydrae Disk : Shedding New Light on Self-Shadowing Effects," *The Astronomical Journal* 860, 115, 14 pages (2018).  
Link : <http://adsabs.harvard.edu/abs/2018ApJ...860..115P>
8. Jensen-Clem, R., Mawet, D., Gomez Gonzalez, C. A., Absil, O., Belikov, R., Currie, T., Kenworthy, M. A., Marois, C., **Mazoyer, J.**, Ruane, G., Tanner, A. and Cantalloube, F., "A New Standard for Assessing the Performance of High Contrast Imaging Systems," *The Astronomical Journal* 155, 19, 8 pages (2018).  
Link : <http://adsabs.harvard.edu/abs/2018AJ....155...19J>
7. Fogarty, K., Pueyo, L., **Mazoyer, J.** and N'Diaye, M., "Polynomial Apodizers for Centrally Obscured Vortex Coronagraphs," *The Astronomical Journal* 154, 240, 18 pages (2017).  
Link : <http://adsabs.harvard.edu/abs/2017AJ....154..240F>
6. Perrot, C., Boccaletti, A., Pantin, E., Augereau, J.-C., Lagrange, A.-M., Galicher, R., Maire, A.-L., **Mazoyer, J.** et al., "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, 9 pages (2016).  
Link : <http://adsabs.harvard.edu/abs/2016A%26A...590L...7P>
5. Delorme, J. R., Galicher, R., Baudoz, P., Rousset, G., **Mazoyer, J.** and Dupuis, O., "Focal plane wavefront sensor achromatization : The multireference self-coherent camera," *Astronomy and Astrophysics* 588, A136, 14 pages (2016).  
Link : <http://adsabs.harvard.edu/abs/2016A%26A...588A.136D>
4. Debes, J. H., Ygouf, M., Choquet, E., Hines, D. C., Perrin, M. D., Golimowski, D. A., Lajoie, C.-P., **Mazoyer, J.**, Pueyo, L., Soummer, R. and van der Marel, R., "WFIRST-AFTA coronagraphic operations : lessons learned from the HST and the JWST," *Journal of Astronomical Telescopes, Instruments, and Systems* 2(1), 011010, 14 pages (2016).  
Link : <http://adsabs.harvard.edu/abs/2016JATIS...2a1010D>
3. Choquet, É., Perrin, M. D., Chen, C. H., Soummer, R., Pueyo, L., Hagan, J. B., Gofas-Salas, E., Rajan, A., Golimowski, D. A., Hines, D. C., Schneider, G., **Mazoyer, J.**, et al., "First Images of Debris Disks around TWA 7, TWA 25, HD 35650, and HD 377," *The Astrophysical Journal Letters* 817, L2, 6 pages (2016).  
Link : <http://adsabs.harvard.edu/abs/2016ApJ...817L...2C>
2. Wiens, R. C., Maurice, S., Lasue, J., Forni, O., Anderson, R. B., Clegg, S., Bender, S., Blaney, D., Barraclough, B. L., Cousin, A., Deflores, L., Delapp, D., Dyar, M. D., Fabre, C., Gasnault, O., Lanza, N., **Mazoyer, J.**, et al., "Pre-flight calibration and initial data processing for the ChemCam laser-induced breakdown spectroscopy instrument on the Mar. Science Laboratory

rover,” *Spectrochimica Acta Part B : Atomic Spectroscopy* 82, 1–27, 27 pages (2013).

Link : <http://adsabs.harvard.edu/abs/2013AcSpe..82....1W>

1. Cousin, A., Forni, O., Maurice, S., Gasnault, O., Fabre, C., Sautter, V., Wiens, R. C. and Mazoyer, J., “Laser induced breakdown spectroscopy library for the Martian environment,” *Spectrochimica Acta* 66, 805–814, 10 pages (2011).

Link : <http://adsabs.harvard.edu/abs/2011AcSpe..66..805C>

## 9 “WHITE PAPERS” POUR LE DECADAL SURVEY 2020

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- Mazoyer, J. et al., “High-Contrast Testbeds for Future Space-Based Direct Imaging Exoplanet Missions” (2019).

Link : <https://ui.adsabs.harvard.edu/abs/2019arXiv190709508M/abstract>

## 10 THESE – Université Paris Diderot

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- Mazoyer, J., “Haut contraste pour l’imagerie directe d’exoplanètes et de disques : de la self-coherent camera à l’analyse de données NICI,” Thesis manuscript (219 pages, French), **defended in Sep. 2014**.

Link : <http://adsabs.harvard.edu/abs/2014PhDT.....497M>

## 11 ACTES DE CONFÉRENCES EN PREMIER AUTEUR

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8. Mazoyer, J. and Pueyo, L., “*Fundamental limits to high-contrast wavefront control*,” Proceedings of the SPIE 10400, 1040014, 18 pages (2017).

Liens : <http://adsabs.harvard.edu/abs/2017SPIE10400E..14M>

7. Mazoyer, J., Pueyo, L., N’Diaye, M., Fogarty, K., Leboulleux, L., Egerton, S. and Norman, C., “*Capabilities of ACAD-OSM, an active method for the correction of aperture discontinuities*,” Proceedings of the SPIE 10400, 104000G, 13 pages (2017).

Liens : <http://dx.doi.org/10.1117/12.2273070>

6. Mazoyer, J., Pueyo, L., N’Diaye, M., Mawet, D., Soummer, R. and Norman, C., “*Correcting for the effects of pupil discontinuities with the ACAD method*,” Proceedings of the SPIE 9904, 99044T, 12 pages (2016).

Link : <http://adsabs.harvard.edu/abs/2016SPIE.9904E..4TM>

5. Mazoyer, J., Pueyo, L., Norman, C., N’Diaye, M., Mawet, D., Soummer, R., Perrin, M., Choquet, É. and Carlotti, A., “*Active correction of aperture discontinuities (ACAD) for space telescope pupils : a parametric analysis*,” Proceedings of the SPIE 9605, 96050M, 13 pages (2015).

Link : <http://adsabs.harvard.edu/abs/2015SPIE.9605E..0MM>

4. Mazoyer, J., Galicher, R., Baudoz, P., Lanzoni, P., Zamkotsian, F. and Rousset, G., “*Deformable mirror interferometric analysis for the direct imagery of exoplanets*,” Proceedings of the SPIE 9148, 914846, 11 pages (2014).

Link : <http://adsabs.harvard.edu/abs/2014SPIE.9148E..46M>

3. Mazoyer, J., Galicher, R., Baudoz, P. and Rousset, G., “*Speckle correction in polychromatic light with the self-coherent camera for the direct detection of exoplanets*,” Proceedings of the SPIE 8864, 88640N, 9 pages (2013).

2. Mazoyer, J., Baudoz, P., Galicher, R. and Rousset, G., “*Direct detection of exoplanets in polychromatic light with a Self-coherent camera*,” Proceedings of the Third AO4ELT Conference, 97, 8 pages (2013). Link : <http://adsabs.harvard.edu/abs/2013SPIE.8864E..0NM>



1. **Mazoyer, J.**, Baudoz, P., Mas, M., Rousset, G. and Galicher, R., “*Experimental parametric study of the self-coherent camera*,” Proceedings of the SPIE 8442, 844250, 10 pages (2012).  
Link : <http://adsabs.harvard.edu/abs/2012SPIE.8442E..50M>

## 12 AUTRES ACTES DE CONFÉRENCES

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22. Fogarty, K., **Mazoyer, J.**, Laurent, K. S., Soummer, R., N’Diaye, M., Stark, C. and Pueyo, L., “*Optimal deformable mirror and pupil apodization combinations for apodized pupil Lyot coronagraphs with obstructed pupils*,” Proceedings of the SPIE 10698, 106981J, 19 pages (2018).
21. Ruane, G., Riggs, A., **Mazoyer, J.**, Por, E. H., N’Diaye, M., Huby, E., Baudoz, P., Galicher, R., Douglas, E., Knight, J., Carlomagno, B., Fogarty, K., Pueyo, L., Zimmerman, N., Absil, O., Beaulieu, M., Cady, E., Carlotti, A., Doelman, D., et al., “*Review of high-contrast imaging systems for current and future ground- and space-based telescopes I : coronagraph design methods and optical performance metrics*,” Proceedings of the SPIE 10698, 106982S, 20 pages (2018).
20. Jovanovic, N., Absil, O., Baudoz, P., Beaulieu, M., Bottom, M., Cady, E., Carlomagno, B., Carlotti, A., Doelman, D., Fogarty, K., Galicher, R., Guyon, O., Haffert, S., Huby, E., Jewell, J., Keller, C., Kenworthy, M. A., Knight, J., Kühn, J., Kelsey, M., **Mazoyer, J.**, et al., “*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*,” Proceedings of the SPIE 10703, 107031U, 19 pages (2018).
19. Laurent, K. S., Fogarty, K., Zimmerman, N. T., N’Diaye, M., Stark, C. C., **Mazoyer, J.**, Sivaramakrishnan, A., Pueyo, L., Shaklan, S., Vanderbei, R. and Soummer, R., “*Apodized pupil Lyot coronagraphs designs for future segmented space telescopes*,” Proceedings of the SPIE 10698, 106982W, 18 pages (2018).
18. Lebouilleux, L., Pueyo, L., Sauvage, J.-F., Fusco, T., **Mazoyer, J.**, Sivaramakrishnan, A., N’Diaye, M. and Soummer, R., “*Sensitivity analysis for high-contrast imaging with segmented space telescopes*,” Proceedings of the SPIE 10698, 106986H, 16 pages (2018).
17. N’Diaye, M., Fogarty, K., Soummer, R., Carlotti, A., Dohlen, K., **Mazoyer, J.**, Pueyo, L., Laurent, K. S. and Zimmerman, N., “*Apodized Pupil Lyot coronagraphs with arbitrary aperture telescopes : novel designs using hybrid focal plane masks*,” Proceedings of the SPIE 10698, 106986A, 11 pages (2018).
16. Snik, F., Absil, O., Baudoz, P., Beaulieu, M., Bendek, E., Cady, E., Carlomagno, B., Carlotti, A., Cvetojevic, N., Doelman, D., Fogarty, K., Galicher, R., Guyon, O., Haffert, S., Huby, E., Jewell, J., Jovanovic, N., Keller, C., Kenworthy, M. A., Knight, J., Kuhn, J., **Mazoyer, J.** et al., “*Review of high-contrast imaging systems for current and future ground-based and space-based telescopes III : technology opportunities and pathways*,” Proceedings of the SPIE 10706, 107062L, 16 pages (2018).
15. Soummer, R., Brady, G. R., Brooks, K., Comeau, T., Choquet, É., Dillon, T., Egron, S., Gontrum, R., Hagopian, J., Luginja, I., Lebouilleux, L., Perrin, M. D., Petrone, P., Pueyo, L., **Mazoyer, J.**, N’Diaye, M., Riggs, A. J. E., Shiri, R., Sivaramakrishnan, A., et al., “*High-contrast imager for complex aperture telescopes (HiCAT) : 5. first results with segmented-aperture coronagraph and wavefront control*,” Proceedings of the SPIE 10698, 106981O, 16 pages (2018).
14. Pueyo, L., Zimmerman, N., Bolcar, M., Groff, T., Stark, C., Ruane, G., Jewell, J., Soummer, R., St. Laurent, K., Wang, J., Redding, D., **Mazoyer, J.**, Fogarty, K., Juanola-Parramon, R., Domagal-Goldman, S., Roberge, A., Guyon, O. and Mandell, A., “*The LUVVOIR architecture ‘A’ coronagraph instrument*,” Proceedings of the SPIE 0398, 103980F, 20 pages (2017).
13. Fogarty, K., Pueyo, L., **Mazoyer, J.** and N’Diaye, M., “*Polynomial apodized vortex coronagraphs for obscured telescope pupils*,” Proceedings of the SPIE 10400, 104000T, International Society for Optics and Photonics, 17 pages (2017).

12. Egron, S., Soummer, R., Lajoie, C.-P., Bonnefois, A., Long, J., Michau, V., Choquet, E., Ferrari, M., Leboulleux, L., Levecq, O., **Mazoyer, J.**, N'Diaye, M., Perrin, M., Petrone, P., Pueyo, L. and Sivaramakrishnan, A., “*James Webb Space Telescope optical simulation testbed IV : linear control alignment of the primary segmented mirror,*” Proceedings of the SPIE 0398, 1039811, 9 pages (2017).
11. Leboulleux, L., N'Diaye, M., **Mazoyer, J.**, Pueyo, L., Perrin, M., Egron, S., Choquet, E., Sauvage, J.-F., Fusco, T. and Soummer, R., “*Comparison of wavefront control algorithms and first results on the high-contrast imager for complex aperture telescopes (hicat) testbed,*” Proceedings of the SPIE 10562, 105622Z, International Conference on Space Optics (2017).
10. Leboulleux, L., N'Diaye, M., Riggs, A. J. E., Egron, S., **Mazoyer, J.**, Pueyo, L., Choquet, E., Perrin, M. D., Kasdin, J., Sauvage, J.-F., Fusco, T. and Soummer, R., “*High-contrast imager for Complex Aperture Telescopes (HiCAT). 4. Status and wavefront control development,*” Proceedings of the SPIE 9904, 99043C, 13 pages (2016).
9. N'Diaye, M., **Mazoyer, J.**, Choquet, É., Pueyo, L., Perrin, M. D., Egron, S., Leboulleux, L., Levecq, O., Carlotti, A., Long, C. A., Lajoie, R. and Soummer, R., “*High-contrast imager for complex aperture telescopes (HiCAT) : 3. first lab results with wavefront control,*” Proceedings of the SPIE 9605, 96050I, 12 pages (2015).
8. Galicher, R., Baudoz, P., Delorme, J. R., **Mazoyer, J.**, Rousset, G., Firminy, J., Boussaha, F., N'Diaye, M., Dohlen, K. and Caillat, A., “*High contrast imaging on the THD bench : progress and upgrades,*” Proceedings of the SPIE 9143, 91435A, 11 pages (2014).
7. Delorme, J. R., Galicher, R., Baudoz, P., Rousset, G., **Mazoyer, J.**, N'Diaye, M., Dohlen, K. and Caillat, A., “*High-contrast imaging in wide spectral band with a self-coherent camera and achromatic coronagraphs,*” Proceedings of the SPIE 9151, 91515Q, 12 pages (2014).
6. Galicher, R., **Mazoyer, J.**, Baudoz, P. and Rousset, G., “*High-contrast imaging with a self-coherent camera,*” Proceedings of the SPIE 8864, 88640M, 11 pages (2013).
5. Galicher, R., Delorme, J. R., Baudoz, P. and **Mazoyer, J.**, “*Focal Plane Wavefront Sensing with a self-coherent camera,*” Proceedings of the Third AO4ELT Conference, 123, 7 pages (2013).
4. Baudoz, P., **Mazoyer, J.** and Galicher, R., “*Laboratory tests of planet signal extraction in high contrast images,*” Proceedings of the Third AO4ELT Conference, 109, 8 pages (2013).
3. Mas, M., Baudoz, P., **Mazoyer, J.**, Galicher, R. and Rousset, G., “*Experimental results on wavefront correction using the self-coherent camera,*” Proceedings of the SPIE 8446, 844689, 12 pages (2012).
2. Baudoz, P., **Mazoyer, J.**, Mas, M., Galicher, R. and Rousset, G., “*Dark hole and planet detection : laboratory results using the self-coherent camera,*” Proceedings of the SPIE 8446, 84468C, 11 pages (2012).
1. Gasnault, O., **Mazoyer, J.**, Cousin, A., Meslin, P.-Y., Lasue, J., Lacour, J.-L., Ollila, A., Berger, G., Forni, O., Maurice, S., Wiens, R.-C., Clegg, S. and Blank, J., “*Deciphering Sample and Atmospheric Oxygen Contents with ChemCam on Mars,*” 43rd Lunar and Planetary Science Conference 43, 2888, 2 pages (2012).

## 13 PRÉSENTATIONS

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### 13.1 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**

### 13.2 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, Grapevine, 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**.



### 13.3 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

### 13.4 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**.