

# Lionel J. Garcia

born in 1994 in France

[lgarcia@uliege.be](mailto:lgarcia@uliege.be)  [lgarcia](#)

## EDUCATION

<b>2019 - now</b> University of Liège Belgium	<b>PhD in Astronomy</b> Towards the detailed characterization of temperate telluric exoplanets <i>Supervisor: Michael Gillon under the SPECULOOS project</i>
<b>2016 - 2017</b> University of Bordeaux France	<b>MSc in Computer Science</b> IT - High performance computing and Image processing
<b>2014 - 2017</b> Institut d'Optique France	<b>MSc in Instrumentation</b> Photonics and Instrumentation
<b>2012 - 2014</b> University of Paris-Sud France	<b>Bs in Physics</b> Applied Physics

## POSITIONS

<b>2019 - Now</b> University of Liège Belgium	<b>Teaching assistant</b> Supervision of tutorial sessions at undergraduate and graduate levels (150h/year)
<b>2018 (1 year)</b> ESA-ESTEC Netherlands	<b>Young Graduate Trainee</b> Development of novel strategies to build better spacecraft precursor models
<b>2017 (6 months)</b> CERN Switzerland	<b>Technical Student</b> Characterization and prototyping of next-generation Beam Wire Scanners for the LHC injectors upgrade
<b>2016 (3 months)</b> ESA-ESTEC Netherlands	<b>Trainee</b> Development and validation of a CCD cosmic ray impact simulator against Gaia in-orbit data

## TEACHING

### University of Liège

2019 - now

#### **Mechanics 101** Tutorials - Undergraduate

From Newtonian mechanics to the study of solids motion

*Professor: Pierre Dauby*

#### **Mathematical modeling for the environment** Tutorials - Graduate

Dynamical modeling of populations in their environments

*Professor: Marilaure Grégoire*

#### **Astronomical observations** Tutorials and Lectures - Graduate

Telescope observations and applications to Astrophysics (including mentorship of student projects during a 1 week observing session at the Oukaimeden observatory, Morocco)

*Professor: Emmanuel Jehin*

## SKILLS

### Languages

English and French (fluent)

Spanish (intermediate)

### Programming

Python C++ C Julia

(JS, HTML, CSS) LaTeX git

## PUBLICATIONS

- 2021 **TRAPPIST-1h transmission spectrum: Knowing the star** in preparation  
[Garcia L. J.](#), Moran S., Rackham B. V. et al.
- 2021 **prose: Modular Astronomy in python** in preparation  
[Garcia L. J.](#) & the SPECULOOS team
- 2018 **Validation of a CCD cosmic ray event simulator against Gaia in-orbit data**  
[Garcia L.](#), Prod'homme T., Lucsanyi D. et al. *Proc. SPIE 10709*
- 2017 **Performance assessment of pre-series fast beam wire scanner prototypes for the upgrade of the CERN LHC injector complex**  
Sirvent J. L., [Garcia L.](#), Tassan-Viol J. et al. *Proc. IBIC2017*

and 9 other collaborations:

- 2021 **SPECULOOS: Ultracool dwarf transit survey**  
M. Gillon, E. Ducrot, F. J. Pozuelos et al. (including Garcia L. J.) *A&A*, 645 A120
- 2021 **Six transiting planets and a chain of Laplace resonances in TOI-178**  
Leleu, A., Alibert, Y., Hara, N. C. et al. (including Garcia L. J.) *arXiv:2101.09260*
- 2020 **Development of the SPECULOOS exoplanet search project**  
Sebastian, D., Pedersen, P. P., Murray, C. A. et al. (including Garcia L. J.) *Proc. SPIE* 11445
- 2020 **A super-Earth and a sub-Neptune orbiting the bright, quiet M3 dwarf TOI-1266**  
Demory, B. -O., Pozuelos, F. J., Gómez Maqueo Chew, Y. et al. (including Garcia L. J.) *A&A*, 642 A49
- 2020  **$\pi$  Earth: A 3.14 day Earth-sized Planet from K2's Kitchen Served Warm by the SPECULOOS Team**  
Niraula, Prajwal, Wit, Julien de, Rackham, Benjamin V. et al. (including Garcia L. J.) *AJ*, 160 172
- 2020 **GJ 273: on the formation, dynamical evolution, and habitability of a planetary system hosted by an M dwarf at 3.75 parsec**  
Pozuelos, Francisco J., Suárez, Juan C., de Elía, Gonzalo C. et al. (including Garcia L. J.) *A&A*, 641 A23
- 2020 **The SPECULOOS Project: New targets to hunt planets of Ultra-cool dwarfs.**  
Sebastian, Daniel, Gillon, Michael, Ducrot, Elsa et al. (including Garcia L. J.) *EPSC*, 337
- 2020 **Complex Modulation of Rapidly Rotating Young M Dwarfs: Adding Pieces to the Puzzle**  
Günther, Maximilian N., Berardo, David A., Ducrot, Elsa et al. (including Garcia L. J.) *arXiv:2008.11681*
- 2020 **Photometry and performance of SPECULOOS-South**  
C A Murray, L Delrez, P P Pedersen, et al. (including Garcia L. J.) *MNRAS*, 495 2446-2457

## POSTERS

- 2021 **TRAPPIST-1h transmission spectrum: Knowing the star**  
Garcia L. J., Moran S., Rackham B. V. et al. *SAG21 symposium (online)*
- 2019 **specphot: a suite for SPECULOOS data analysis**  
Garcia L. J. & the SPECULOOS team *TRAPPIST-1 conference (Liège, Belgium)*

## SCHOOLS

- 2019 **Evry Schatzman school: Star-planets interactions**  
*Aussois, France*

## MISCELLANEOUS

Long distance running - Hiking - Illustration - open-source dev