

ROXANNE LIGI

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Born 5th February 1987

Nationality : French

**AstroFit2/Marie Skłodowska-Curie
Fellow**

INAF-Osservatorio Astronomico di Brera

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Professional Experience

- June 2017 - May 2020** Post-doctorate Marie Skłodowska-Curie/AstroFit2, **INAF-OAB**
Coll. with Ennio Poretti : *Combining interferometry and asteroseismology : a new insight on exoplanet characterization (INTASTE)*
- Sept. 2015 - May 2017** Post-doctorate **CNES, LAM, Marseille**
Coll. with Arthur Vigan : *Validation and characterization of CoRoT and Kepler/K2 exoplanetary candidates with SPHERE*
- Nov. 2013 - Aug. 2015** Post-doctorate **OCA, Nice**
- Oct. 2010 - Oct. 2013** **Doctorate, OCA, Nice**
Thesis supervisor : Denis Mourard.
Defended the 20th of Nov. 2013, grade « Très Honorable ».
Determination of the fundamental parameters of exoplanets host star with optical interférometry.

Education

- 2010-2013** Doctorate in Sciences of the Universe, **OCA/UNSA**
- 2009-2010** Master 2nd yr in Research in Sciences, Technology and Health, **Univ. Paris-Sud XI**
Mention Earth and Universe Sciences, Speciality Planetology
- 2008-2009** Master 1st yr in Fundamental Physics, Erasmus exchange, **University of Bristol, U.K.**
- 2005-2008** Licence in Sciences, Technology and Health, **Université Bordeaux 1**
Speciality Physics and Ingenierings

Scientific Interests

- Astrophysical Objects** Exoplanets and their stellar hosts • Young stars • Bright stars (spectral types F to M) • Stars with transiting exoplanets (TESS, CHEOPS, PLATO, CoRoT, *K2/Kepler* targets)
- Main Objectives** Precise and accurate determination of stellar parameters • Detection and validation of exoplanets • Improvement of empirical laws • Effects of stellar activity on stellar and planetary characterisation
- Observational methods** Optical and visible interferometry (CHARA, VLTI) • High resolution imaging (SPHERE/VLT) • Asteroseismology • Spectrometry (HARPS-N)

Summary of Publications

- **Publications in peer-reviewed journals** : 52, among which 7 as 1st author and 4 as 2nd author.
- **Publications in preparation** : 1
- **Proceedings** : 17, among which 11 as 1st author.
- **Book chapter** : 1 (in the VLTI School Book, 2014.)

- **Press release** : 1 press release Media INAF (Gratton, Ligi *et al.* 2019).
- **Other publication** : 1 (*Science cases for a visible interferometer*, Stee *et al.* 2017)
- **Catalogues** : 9 (1 as 1st author).

Teaching and Outreach Communications

- **Qualification** for Associate professor teaching obtained in 2017.
- **Teaching** : Lectures/tutorials in Mathematics for engineer, level Licence 3rd year in Sciences for engineering (20 hours, first semester 2016-2017), Aix-Marseille Université.
- **Co-supervision** of a *Laurea thesis* student since april 2019.
- **Guide** for the Observatory of Nice public tours from 2011 to 2013.
- **"Fête de la science"** 2014, 2019 : activity for school pupils and general public.
- **Seminar** for secondary school pupils (level 3^{eme}), OCA, 2013.
- **Nice Physics Camp** 2019 : meeting with undergraduate students.
- Outreach conferences and involvement in the organisation of « **la Nuit Coupoles Ouvertes** » (celebration of Astronomy taking place every two years at the plateau de Calern) since 2011.
- **Pint of Science** forseen in May 2020 (postponed to September).

Responsibilities

- **Member of the SPICA/CHARA Scientific Group** (*Stellar Parameters and Images with a Co-phased Array*) and **Responsible for the Exoplanets Hosts Stars** Work Package.
- **Member** of several PLATO Work Packages (Stellar Physics, Exoplanets, Complementary Science).
- **Member** of the GAPS consortium (*Global Architecture of Planetary Systems*) since 2017 (observations at TNG).
- **Member** of the SPHERE consortium since 2015 (observations and data reduction, responsible of target analysis).
- **Member** of the VEGA/CHARA group since 2010 (observations and data reduction, preparations of observing runs) .
- **Member** of the SOC for the PLATO "Follow-up" workshop (IPAG, May 2015).
- **Member** of the SOC of the VLTI School 2020.
- **Chair and organisation** of a session at the SF2A Conference 2018 : "*Characterisation of stars and planets : promises of the future*".
- **Referee** for MNRAS.
- **Member** of the Seminar Organizing Committee at LAM (2015-2017).
- **Participation** to the ESO DPR experiment in 2018 (review of 8 proposals).
- **Member** of the CHARA TAC 2014 (*Time Allocation Committee*).
- **Representative** of doctorate students at the Scientific Council of Fizeau laboratory (2010-2011).

Observations and Telescope Time

- **VEGA/CHARA - PI Ligi**
8 accepted proposals (consortium, 2010-2015) + 5 NOAO proposals in open time : *Determination of exoplanets hosts stars parameters through the measurement of their angular diameter*.
Regular observer ("service" mode) and responsible of observing runs since 2010.
- **MIRC/CHARA - PI Chiavassa**
Observing run (3 nights) for NOAO open time, July 2016 : *Detecting the granulation pattern on red giant stars HD197989, HD124294, and HD161096*.
- **AMBER/VLTI - F. Massi**
Observing run (4 half-nights), April 2012, Runs 089.C-0216 (A, B, D, E, F) : *Resolving the hot gas surrounding HerbigAeBe stars : accretion or ejection?*

- **SPHERE/VLT - PI Ligi**

Runs 98.C- 0779(A) et 99.C-0.279(A) (23h obtained, service mode) : *Validation of the K2 smallest exoplanetary candidates with VLT/SPHERE.*

- **SPHERE/VLT - PI Beuzit**

Observing run (4 nights), November 2016, for the GTO SHINE (Large Program, 200 nights over 2 yrs) : *SPHERE-NIRSUR : The Near-Infrared Survey for Exoplanets.*

- **HARPS/TNG, GIANO/TNG and GIARPS/TNG - PI Micela**

5 nights (Decembre 2018) + 7 nights (September 2019) for the GTO GAPS (Large Program, 34 nights/semestre) : *The origin of planetary systems diversity.*

Scientific Seminars

1. **Invited seminar** at Institute of Spatial Astrophysics (IAS), June 2014.
2. **Seminar** at Institute of Planetology and Astrophysics of Grenoble (IPAG), January 2016.
3. **Seminar** au Laboratory of Astrophysics of Bordeaux (LAB), February 2016.
4. **Seminar** TOP team, Observatory of the Côte d'Azur (OCA), Nice, July 2017.
5. **Invited seminar** at Observatory of the Côte d'Azur (OCA), Nice, February 2018.
6. **Invited seminar** at University of Tokyo, Japan, April 2018.
7. **Invited seminar** at Institute of Astrophysics of the Canaries (IAC), La Palma, Spain, November 2018.
8. **Invited seminar** at University of Zurich, Switzerland, December 2018.
9. **Seminar** at INAF-Osservatorio Astronomico di Brera, Merate, June 2019.
10. **Seminar** at Institute of Research in Astrophysics and Planetology (IRAP), Toulouse, December 2019.
11. **Seminar** at Institute of Spatial Studies and Instrumentation in Astrophysics (LESIA), Meudon, January 2020.
12. **Invited seminar** at INAF-Osservatorio Astronomico di Padova, forseen in February 2020 (postponed to fall 2020).

National and International Conferences

1. **Poster** CoRot Symposium, Marseille, France, June 2011.
2. **Oral presentation** VEGA Meetings, Nice, France, each year since 2011.
3. **Oral presentation** CHARA Meeting, Atlanta, USA, February 2012.
4. **Oral presentation** SF2A 2012, Nice, France, June 2012.
5. **Oral presentation** SPIE 2012, Amsterdam, the Netherlands, July 2012.
6. **Oral presentation** CHARA Meeting, Flagstaff, USA, March 2013.
7. **Oral presentation** SF2A 2013, Montpellier, France, June 2013.
8. **Oral presentation** IAU 302, Biarritz, France, August 2013.
9. PNPS prospective meeting, Besançon, France, February 2014.
10. **Oral presentation** SF2A 2014, Paris, France, June 2014.
11. **Oral presentation** CoRoT3-KASC7, Toulouse, France, July 2014.
12. PLATO Science Meeting, Taormina, Italy, December 2014.
13. **Oral presentation** PLATO Follow-up Meeting, Grenoble, France, May 2015.

14. **Oral presentation** CHARA Meeting, Nice, France, March 2016.
15. **Oral presentation** K2 Meeting, Porto, Portugal, May 2016.
16. **Poster** "CNES Days", Toulouse, France, October 2016.
17. **Oral presentation** SPHERE Meeting, Padova, Italy, October 2016.
18. **Oral presentation** SF2A 2017, Paris, France, June 2017.
19. TASC3/KASC10 Workshop, Birmingham, UK, July 2017.
20. HAR School, Roscoff, France, September 2017.
21. **Oral presentation** Interferometry & Asteroseismology Workshop, Nice, France, October 2017.
22. **Oral presentation** SPHERE Meeting, Nice, France, October 2017.
23. GAPS Meeting, Milano, Italy, November 2017.
24. **Oral presentation** CHARA Meeting, Paris, France, March 2018.
25. PNPS prospective meeting, March 2018 Montpellier.
26. GAPS Meeting, Cagliari, Italy, May 2018.
27. **Oral presentation** PLATO Science Meeting, Milazzo, Italy, May 2018.
28. **Oral presentation (invited)** SF2A 2018, Bordeaux, France, July 2018.
29. SPHERE Workshop, Amsterdam, the Netherlands, October 2018.
30. **Leading discussion** SPICA/CHARA Workshop, Nice, France, January 2019.
31. **Oral presentation** PLATO Limb-Darkening Workshop, Granada, Spain, February 2019.
32. PLATO/ARIEL Synergy Workshop, Bordeaux, France, 2019.
33. **Oral presentation** SF2A 2019, Nice, France, May 2019.
34. **Oral presentation** ASES3, Vietri-sul-Mare, Italy, May 2019.
35. **Oral presentation** EWASS 2019, Lyon, France, June 2019.
36. **Poster** Extreme Solar System IV, Reykjavik, Iceland, August 2019.
37. **Oral presentation** GAPS Meeting, Catania, Italy, December 2019.
38. Exosystèmes, Paris, France, Janvier 2020.
39. **Oral presentation (invited)** Workshop "The Sharpest Eyes on the Sky : A 2020 vision for high-angular resolution astronomy", forseen in April 2020 (postponed to October 2020).

Other

Languages	French : mother tong ; English : fluent ; Italian : learning ; Spanish, : basics
Sports and hobbies	skiing, photography, traveling, hiking, ...