

### Publication in Preparation or Submitted

1. **Directly Determined Properties of HD 97658 from Interferometric Observations**  
T. Ellis, T. Boyajian, K. von Braun, **R. Ligi**, *et al.* AJ, in prep.
2. **The SPHERE infrared survey for exoplanets (SHINE). III. First constraints on the population of young giant exoplanets**  
A. Vigan, C. Fontanive, M. Meyer, [...], **R. Ligi**, *et al.* A&A, in revision.

### Publications in Peer Reviewed Journals

– 1st author papers and major contribution –

1. **Spatio-spectral encoding of fringes in optical long-baseline interferometry. Example of the 3T and 4T recombining mode of VEGA/CHARA**  
D. Mourard, Ph. Bérió, K. Perraut, **R. Ligi**, *et al.* 2011, A&A, 531, A110  
DOI : 10.1051/0004-6361/201116976
2. **The diameter of the CoRoT target HD 49933. Combining the 3D limb darkening, asteroseismology, and interferometry**  
L. Bigot, D. Mourard, Ph. Bérió, F. Thévenin, **R. Ligi**, *et al.* 2011, A&A, 534, L3  
DOI : 10.1051/0004-6361/201117349
3. **A new interferometric study of four exoplanet host stars :  $\theta$  Cygni, 14 Andromedae,  $\nu$  Andromedae and 42 Draconis**  
**R. Ligi**, D. Mourard, A.-M. Lagrange, *et al.* 2012, A&A, 545, A5  
DOI : 10.1051/0004-6361/201219467
4. **The operation of VEGA/CHARA : from the scientific idea to the final products**  
**R. Ligi**, D. Mourard, N. Nardetto & J.-M. Clausse 2013, Journal of Astronomical Instrumentation, 02, 1340003  
DOI : 10.1142/S2251171713400035
5. **Planet transit and stellar granulation detection with interferometry. Using the three-dimensional stellar atmosphere Stagger-grid simulations**  
A. Chiavassa, **R. Ligi**, Z. Magic, *et al.* 2014, A&A, 567, A115  
DOI : 10.1051/0004-6361/201323207
6. **Transiting exoplanets and magnetic spots characterized with optical interferometry.**  
**R. Ligi**, D. Mourard, A.-M. Lagrange, K. Perraut & A. Chiavassa 2015, A&A, 574, A69  
DOI : 10.1051/0004-6361/201424013
7. **Radii, masses, and ages of 18 bright stars using interferometry and new estimations of exoplanetary parameters**  
**R. Ligi**, O. Creevey, D. Mourard, *et al.* 2016, A&A, A586, A94  
DOI : 10.1051/0004-6361/201527054
8. **Asymmetries on red giant branch surfaces from CHARA/MIRC optical interferometry**  
A. Chiavassa, R. Norris, M. Montargès, **R. Ligi**, *et al.* 2017, A&A, 600, 2C  
DOI : 10.1051/0004-6361/201730438
9. **The Circumstellar Disk HD 169142 : Gas, Dust, and Planets Acting in Concert ?**  
A. Pohl, M. Benisty, P. Pinilla, [...], **R. Ligi**, *et al.* 2017, ApJ, 850, 52P  
DOI : 10.3847/1538-4357/aa94c2

10. **Investigation of the inner structures around HD 169142 with VLT/SPHERE**  
**R. Ligi**, A. Vigan, R. Gratton, *et al.* 2018, MNRAS, 473, 1774L  
 DOI : 10.1093/mnras/stx2318
11. **Mass, Radius, and Composition of the Transiting Planet 55 Cnc e :  
 Using Interferometry and Correlations**  
 A. Crida, **R. Ligi**, C. Dorn & Y. Lebreton 2018, ApJ, 860, 122  
 DOI : 10.3847/1538-4357/aabfe4
12. **Mass, Radius, and Composition of the Transiting Planet 55 Cnc e :  
 Using Interferometry and Correlations – A Quick Update**  
 A. Crida, **R. Ligi**, C. Dorn, F. Borsa & Y. Lebreton 2018, RNAAS, 2, 172  
 DOI : 10.3847/2515-5172/aaelf6
13. **The GJ 504 system revisited. Combining interferometric, radial velocity, and high  
 contrast imaging data**  
 M. Bonnefoy, K. Perraut, A.-M. Lagrange, [...], **R. Ligi**, *et al.* 2018, A&A, 618A, 63B  
 DOI : 10.1051/0004-6361/201832942
14. **K2 Targets Observed with SPHERE/VLT : An M4-7 Dwarf Companion Resolved  
 around EPIC 206011496**  
**R. Ligi**, O. Demangeon, S. Barros, *et al.* 2018, AJ, 156, 182L  
 DOI : 10.3847/1538-3881/aadc69
15. **K2-265 b : a transiting rocky super-Earth**  
 K. Lam, A. Santerne, S.G Sousa, [...], **R. Ligi**, *et al.* 2018, A&A, 620, 77L  
 DOI : 10.1051/0004-6361/201834073
16. **Blobs, spiral arms, and a possible planet around HD 169142**  
 R. Gratton, **R. Ligi**, E. Sissa *et al.* 2019, A&A, 623, A140  
 DOI : 10.1051/0004-6361/201834760
17. **Determining mass limits around HD 163296 through SPHERE direct imaging data**  
 D. Mesa, M. Langlois, A. Garufi, [...], **R. Ligi**, *et al.* 2019, MNRAS, 488, 37M  
 DOI : 10.1093/mnras/stz1662
18. **From the stellar properties of HD 219134 to the internal compositions of its transi-  
 ting exoplanets**  
**R. Ligi**, C. Dorn, A. Crida, *et al.* 2019, A&A, 631A, 92L  
 DOI : 10.1051/0004-6361/201936259

### Publications in Peer Reviewed Journals

– Minor contribution –

1. **Chromosphere of K giant stars. Geometrical extent and spatial structure detection**  
 Ph. Bérrio, T. Merle, F. Thévenin, [...], **R. Ligi**, *et al.* 2011, A&A, 535, A59  
 DOI : 10.1051/0004-6361/201117479
2. **A high angular and spectral resolution view into the hidden companion of  $\epsilon$  Aurigae**  
 D. Mourard, P. Harmanec, R. Stencel, [...], **R. Ligi**, *et al.* 2012, A&A, 544, A91  
 DOI : 10.1051/0004-6361/201219218
3. **Spectrally resolved interferometric observations of  $\alpha$  Cephei and physical modeling  
 of fast rotating stars**  
 O. Delaa, J. Zorec, A. Domiciano de Souza, [...], **R. Ligi**, *et al.* 2013, A&A, 555, A100  
 DOI : 10.1051/0004-6361/201220689
4. **Improving the surface brightness-color relation for early-type stars using optical  
 interferometry**

- M. Challouf, N. Nardetto, D. Mourard, [...], **R. Ligi**, *et al.* 2014, A&A, 570, A104  
DOI : 10.1051/0004-6361/201423772
5. **Spectral and spatial imaging of the Be+sdO binary  $\phi$  Persei**  
D. Mourard, J. D. Monnier, A. Meilland, [...], **R. Ligi**, *et al.* 2015, A&A, 577, A51  
DOI : 10.1051/0004-6361/201425141
  6. **VEGA/CHARA interferometric observations of Cepheids. I A resolved structure around the proto-type classical Cepheid  $\delta$  Cep in the visible spectral range**  
N. Nardetto, A. Mérand, D. Mourard, [...], **R. Ligi**, *et al.* 2016, A&A, 593, A45.  
DOI : 10.1051/0004-6361/201528005
  7. **A disk wind in AB Aurigae traced with H $\alpha$  interferometry**  
K. Perraut, C. Dougados, G.H.R.A. Lima, M. Benisty, D. Mourard, **R. Ligi**, *et al.* 2016, A&A, 596, A17.  
DOI : 10.1051/0004-6361/201628931
  8. **Resolving the Planet-hosting Inner Regions of the LkCa 15 Disk**  
C. Thalmann, M. Janson, A. Garufi, [...], **R. Ligi**, *et al.* 2016, ApJL, 828, L17  
DOI : 10.3847/2041-8205/828/2/L17
  9. **Flattening and surface-brightness of the fast-rotating star  $\delta$  Persei with the visible VEGA/CHARA interferometer**  
M. Challouf, N. Nardetto, A. Domiciano da Souza, [...], **R. Ligi**, *et al.* 2017, A&A, 604A, 51C  
DOI : 10.1051/0004-6361/201629934
  10. **Discovery of a warm, dusty giant planet around HIP 65426**  
G. Chauvin, S. Desidera, A.-M. Lagrange, [...], **R. Ligi**, *et al.* 2017, A&A, 605L, 9C  
DOI : 10.1051/0004-6361/201731152
  11. **Precise masses for the transiting planetary system HD 106315 with HARPS**  
S. C. C. Barros, H. Gosselin, J. Lillo-Box, [...], **R. Ligi**, *et al.* 2017, A&A, 608A, 25B  
DOI : 10.1051/0004-6361/201731276
  12. **Orbiting a binary. SPHERE characterisation of the HD 284149 system**  
M. Bonavita, V. D’Orazi, D. Mesa, [...], **R. Ligi**, *et al.* 2017, A&A, 608A, 106B  
DOI : 10.1051/0004-6361/201731003
  13. **Dynamical models to explain observations with SPHERE in planetary systems with double debris belts**  
C. Lazzoni, S. Desidera, F. Marzari, [...], **R. Ligi**, *et al.* 2018, A&A, 611, 43L  
DOI : 10.1051/0004-6361/201731426
  14. **An Earth-sized exoplanet with a Mercury-like composition**  
A. Santerne, B. Brugger, D. J. Armstrong, [...], **R. Ligi**, *et al.* 2018, Nature Astronomy, 2, 393S  
DOI : 10.1038/s41550-018-0420-5
  15. **First scattered light detection of a nearly edge on circumstellar disk around the T Tauri star RY Lup**  
M. Langlois, A. Pohl, A.-M. Lagrange, [...], **R. Ligi**, *et al.* 2018, A&A, 614, 88L  
DOI : 10.1051/0004-6361/201731624
  16. **Discovery of a brown dwarf companion to the star HIP 64892**  
A. Cheetham, M. Bonnefoy, S. Desidera, [...], **R. Ligi**, *et al.* 2018, A&A, 615, 160C  
DOI : 10.1051/0004-6361/201832650
  17. **VLT/SPHERE astrometric confirmation and orbital analysis of the brown dwarf companion HR 2562 B**  
A.-L. Maire, L. Rodet, C. Lazzoni, [...], **R. Ligi**, *et al.* 2018, A&A, 615, 177M  
DOI : 10.1051/0004-6361/201732476

18. **Resolving faint structures in the debris disk around TWA 7. Tentative detections of an outer belt, a spiral arm, and a dusty cloud**  
J. Olofsson, R. G. van Holstein, A. Boccaletti, [...], **R. Ligi**, *et al.* 2018, A&A, 617, 109O  
DOI : 10.1051/0004-6361/201832583
19. **Orbital and atmospheric characterization of the planet within the gap of the PDS 70 transition disk**  
A. Müller, M. Keppler, Th. Henning, [...], **R. Ligi**, *et al.* 2018, A&A, 617, 2L  
DOI : 10.1051/0004-6361/201833584
20. **Dynamical masses of M-dwarf binaries in young moving groups.**  
**I. The case of TWA 22 and GJ 2060**  
L. Rodet, M. Bonnefoy, S. Durkan, [...], **R. Ligi**, *et al.* 2018, A&A, 618, 23R  
DOI : 10.1051/0004-6361/201832924
21. **High-contrast study of the candidate planets and protoplanetary disk around HD 100546**  
E. Sissa, R. Gratton, A. Garufi, [...], **R. Ligi**, *et al.* 2018, A&A, 619, 160S  
DOI : 10.1051/0004-6361/201732332
22. **Post conjunction detection of  $\beta$  Pictoris b with VLT/SPHERE**  
A.-M. Lagrange, A. Boccaletti, M. Langlois, [...], **R. Ligi**, *et al.* 2019, A&A, 621, L8  
DOI : 10.1051/0004-6361/201834302
23. **Exploring the R CrA environment with SPHERE. Discovery of a new stellar companion**  
D. Mesa, M. Bonnefoy, R. Gratton, [...], **R. Ligi**, *et al.* 2019, A&A, 624, 4M  
DOI : 10.1051/0004-6361/201834682
24. **Constraining the properties of HD 206893 B. A combination of radial velocity, direct imaging, and astrometry data**  
A. Grandjean, A.-M. Lagrange, H. Beust, [...], **R. Ligi**, *et al.* 2019, A&A, 627, 9G  
DOI : 10.1051/0004-6361/201935044
25. **Constraining the properties of HD 206893 B. A combination of radial velocity, direct imaging, and astrometry data (Corrigendum)**  
A. Grandjean, A.-M. Lagrange, H. Beust, [...], **R. Ligi**, *et al.* 2019, A&A, 629, 1G  
DOI : 10.1051/0004-6361/201935044e
26. **The GAPS Programme with HARPS-N at TNG. XIX. Atmospheric Rossiter-McLaughlin effect and improved parameters of KELT-9b**  
F. Borsa, M. Rainer, A. S. Bonomo, [...], **R. Ligi**, *et al.* 2019, A&A, 631, 34B  
DOI : 10.1051/0004-6361/201935718
27. **VLT/SPHERE exploration of the young multiplanetary system PDS70**  
D. Mesa, M. Keppler, F. Cantalloube, [...], **R. Ligi**, *et al.* 2019, A&A, 632, 25M  
DOI : 10.1051/0004-6361/201936764
28. **Visible and near-infrared spectro-interferometric analysis of the edge-on Be star  $\alpha$  Aquarii**  
E. S. G de Almeida, A. Meilland, a. Domiciano de Souza, [...], **R. Ligi**, *et al.* 2020, A&A, 636, 110A  
DOI : 10.1051/0004-6361/201936039
29. **Searching for the near infrared counterpart of Proxima  $c$  using multi-epoch high-contrast SPHERE data at VLT**  
R. Gratton, A. Zurlo, H. le coroller, [...], **R. Ligi**, *et al.* A&A, 638A, 120G  
DOI : 10.1051/0004-6361/202037594

30. **K-Stacker, an algorithm to hack the orbital parameters of planets hidden in high-contrast imaging. First application to VLT/SPHERE multi-epoch observations**  
H. Le Coroller, M. Nowak, P. Delorme, [...], **R. Ligi**, *et al.* accepted in A&A, eprint arXiv :2004.12878
31. **Orbital and spectral characterization of the benchmark T-type brown dwarf HD 19467B**  
A.-L. Maire, K. Molaverdikhani, S. Desidera, [...], **R. Ligi**, *et al.* accepted in A&A, eprint arXiv :2005.10312.
32. **Closing the loop : revealing the physics of Asymptotic Giant Branch with Gaia measurement uncertainties**  
A. Chiavassa, K. Kravchenko, F. Millour, [...], **R. Ligi**, *et al.* accepted in A&A, eprint arXiv :2006.07318.
33. **Calibrating the surface brightness - color relation for late type red giants stars in the visible domain using VEGA/CHARA interferometric observations**  
N. Nardetto, A. Salsi, D. Mourard, [...], **R. Ligi**, *et al.* accepted in A&A, eprint arXiv :2006.16609.

#### Press Release

1. **Un protoplaneta fa capolino tra nubi di polvere ?**  
R. Gratton, **R. Ligi**, *et al.* 2019, Media INAF, Janvier 2019.  
<https://www.media.inaf.it/2019/01/24/protoplaneta-hd169142/>

#### Book Chapter

1. **Interferometric diagnostics for magnetic spots detection**  
**R. Ligi** 2014, contribution to the VLTI School book (Sept. 2013), EAS Publication Series : What the highest angular resolution can bring to stellar astrophysics ?, 69, 273-283  
DOI : 10.1051/eas/1569015

#### Proceedings

1. **Direct characterization of limb-darkening dedicated to transit measurements and asteroseismology**  
**R. Ligi** & D. Mourard 2011, in Proceeding of the 2<sup>nd</sup> CoRoT Symposium
2. **Study of exoplanets host stars with VEGA/CHARA**  
**R. Ligi**, D. Mourard, A.-M. Lagrange, K. Perraut & I. Tallon-Bosc, 2012, in Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 8445  
DOI : 10.1117/12.925503
3. **Performances, results, and prospects of the visible spectrograph VEGA on CHARA**  
D. Mourard, M. Challouf, **R. Ligi**, *et al.* 2012, in Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 8445  
DOI : 10.1117/12.925223
4. **Interferometric determination of exoplanet host stars' fundamental parameters :  $\theta$  Cygni, 14 Andromedae,  $v$  Andromedae and 42 Draconis**  
**R. Ligi**, D. Mourard, A.-M. Lagrange & K. Perraut, in SF2A-2012 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, Eds. S. Boissier, P. de Laverny, N. Nardetto, R. Samadi, D. Valls-Gabaud, & H. Wozniak, 199–205
5. **Programs and perspectives of visible long baseline interferometry VEGA/CHARA**  
D. Mourard, N. Nardetto, **R. Ligi** & K. Perraut 2013, in Advances in Solid State Physics, Vol. 31, Advances in Solid State Physics, ed. J. C. Suárez, R. Garrido, L. A. Balona, & J. Christensen-Dalsgaard, 155  
DOI : 10.1007/978-3-642-29630-7\_30

6. **Modeling transiting exoplanets and spots for interferometric studies**  
**R. Ligi**, D. Mourard, K. Perraut, *et al.* 2013, in IAU Symposium, Vol. 302, 202–205  
 DOI : 10.1017/S1743921314002087
7. **Impact of stellar activity on the determination of fundamental parameters with interferometry**  
**R. Ligi**, D. Mourard, A.-M. Lagrange, K. Perraut & A. Chiavassa, in SF2A-2014 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, Eds. J. Ballet, F. Martins, F. Bornaud, R. Monier & C. Reylé, 245-249
8. **Review and latest news from the VEGA/CHARA facility**  
 N. Nardetto, D. Mourard, K. Perraut, I. Tallon-Bosc, A. Meilland, P. Stee, **R. Ligi** *et al.* in SF2A-2014 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, Eds. J. Ballet, F. Martins, F. Bornaud, R. Monier & C. Reylé, 501-504
9. **Disentangling stellar activity from exoplanetary signals with interferometry**  
**R. Ligi**, D. Mourard, A.-M. Lagrange, K. Perraut & A. Chiavassa 2015, European Physical Journal Web of Conferences, 101, 05004  
 DOI : 10.1051/epjconf/201510105004
10. **Mass and radius of a transiting exoplanet : a Bayesian approach, with application to 55 Cnc e**  
 A. Crida & **R. Ligi**, in European Planetary Science Congress 2017, held 17-22 September, 2017 in Riga Latvia, id. EPSC2017-546.
11. **The system of HD169142 seen by SPHERE/VLT**  
**R. Ligi**, A. Vigan, R. Gratton, *et al.* 2017, in SF2A-2017 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, Eds. C. Reylé, P. Di Matteo, F. Herpin, É. Lagarde, A. Lancon F. Royer (eds), 337-341.
12. **The characterisation of exoplanetary systems with high angular resolution**  
**R. Ligi**, in SF2A-2018 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, P. Di Matteo, F. Billebaud, F. Herpin, N. Lagarde, J.-B. Marquette, A. Robin, O. Venot (eds), 479-483.
13. **Mass, Radius, and Composition of the Transiting Planet 55 Cnc e : Using Interferometry and Correlations**  
 A. Crida, **R. Ligi**, C. Dorn & Y. Lebreton, in SF2A-2018 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, P. Di Matteo, F. Billebaud, F. Herpin, N. Lagarde, J.-B. Marquette, A. Robin, O. Venot (eds), 485-488.
14. **Precise characterisation of the 55 Cnc and HD219134 transiting exoplanetary systems**  
**R. Ligi**, C. Dorn, Caroline, A. Crida & F. Borsa, in American Astronomical Society, Extreme Solar Systems 4, id. 319.11. Bulletin of the American Astronomical Society, Vol. 51, No. 6
15. **Atmospheric Rossiter-McLaughlin effect of KELT-9 b**  
 M. Rainer, F. Borsa, Francesco, A. Bonomo, [...] **R. Ligi**, *et al.* 2019, American Astronomical Society, Extreme Solar Systems 4, id. 326.35. Bulletin of the American Astronomical Society, Vol. 51, No. 6
16. **New estimates on Super-Earths HD 219134 b & c : Is planet b a magma ocean planet ?**  
**R. Ligi**, C. Dorn, & A. Crida, in EPSC-DPS Joint Meeting 2019, held 15-20 September 2019 in Geneva, Switzerland, id. EPSC-DPS2019-840
17. **From the star to the transiting exoplanets : Characterisation of the HD 219134 system**

**R. Ligi**, C. Dorn, A. Crida *et al.*, in SF2A 2019, SF2A-2019 : Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics. P. Di Matteo, O. Creevey, A. Crida, G. Kordopatis, J. Malzac, J.-B. Marquette, M. N'Diaye, O. Venot (eds), 2019, 441-445.

### Catalogues

1. VizieR Online Data Catalog :  $\epsilon$  Aur visibility measurements (Mourard+, 2012)
2. VizieR Online Data Catalog :  $\delta$  Cep VEGA/CHARA observing log (Nardetto+, 2016)
3. VizieR Online Data Catalog : Exoplanetary parameters for 18 bright stars (**Ligi**+, 2016)
4. VizieR Online Data Catalog : NIR spectrum of exoplanet HIP 65426b (Chauvin+, 2017)
5. VizieR Online Data Catalog : HD 284149 SPHERE/IFS spectrum (Bonavita+, 2017)
6. VizieR Online Data Catalog : R CrA SPHERE and SINFONI images (Mesa+, 2019)
7. VizieR Online Data Catalog : HD169142 SPHERE images (Gratton+, 2019)
8. VizieR Online Data Catalog : KELT-9b radial velocity curve (Borsa+ 2019)
9. VizieR Online Data Catalog : PDS70 VLT/SPHERE images (Mesa+, 2019)

### Other

1. **Science cases for a visible interferometer**  
Ph. Stee, F. Allard, M. Benisty, [...], **R. Ligi**, *et al.* 2017  
2017arXiv170302395S