

ANDREA CHIAVASSA

BORN JANUARY 8TH 1979 IN ITALY

Laboratoire Lagrange, UMR 7293, Observatoire de la Côte d'Azur, Bd de l'Observatoire,
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Current position

- **Observatoire de la Côte d'Azur—France**
Laboratoire Lagrange
 - *since september 2012*: permanent position at CNRS
 - *Scientific interests*: Multidimensional Radiative Transfer, Multidimensional Radiative Hydrodynamics, Stellar surface convection, Planetary atmosphere physics, Spectroscopy, Interferometry

Background

- **University of Montpellier II—France**
Groupe de Recherche en Astronomie et Astrophysique du Languedoc (GRAAL)
 - *October 2004 to June 2008*: PhD, "Atmospheric dynamic of red supergiant stars" under the supervision of Pr. B. Plez
- **University of Turin, Italy—University of Grenoble I, France**
Università degli Studi di Torino and Laboratoire d'Astrophysique de Grenoble (LAOG)
 - *2002-2004* : "Laurea in Astrofisica e Fisica Cosmica" (equivalent to master degree in Astrophysics)
 - *1999-2002*: "Laurea in Fisica" (equivalent to bachelor degree in Physics)
- *1998* : "Maturità" - (final High School certificate, equivalent to the General Certificate of Education, Advanced Level)

Research experience

- **Fellowship (october 2010 - august 2012)—Institut d'Astronomie et d'Astrophysique**
Belgium
 - 3D modelling of cool stars - Gaia predictions and spectroscopic analysis of peculiar stars with Pr. Alain Jorissen
- **Fellowship (september 2008 - september 2010)—Max Planck Institute for Astrophysics**
Germany
 - Research topic: 3D modelling of convection in stellar atmosphere of cool stars. Interferometric and spectroscopic observables for red supergiant, K-giant and AGB stars with Pr. Martin Asplund
- **PhD student (october 2004 - June 2008)—University of Montpellier II**
GRAAL, Montpellier, France
 - Development of a LTE-3D radiative transfer code for radiation hydrodynamics simulations that includes billions of molecular and atomic lines for a detailed treatment
 - Computation of spectroscopic observables for comparison to observations in terms of line profiles, asymmetries and shifts at different wavelengths and large range high resolution spectra: constrain of the atmospheric dynamics

- Computation of interferometric observables for comparison to observations: constrain of the surface structure size of the convective pattern
- **University of Turin - LAOG**—Italy, France
Universita' degli Studi di Torino et Laboratoire d'Astrophysique de Grenoble (LAOG), France
 - Master degree final project ("Laurea in Astrofisica e Fisica Cosmica") at the Laboratoire d'Astrophysique de Grenoble (LAOG), France, under the supervision of Cecilia Ceccarelli (2004, 8 months) -
The 90-110 μm dust feature in low to intermediate mass protostars
 - Bachelor final project ("Laurea in Fisica") at the University of Turin under the supervision of Gianni Navarra (Mars - June 2002) -
Study of the high voltage circuit of photomultipliers of Pierre Auger's Observatory

Scientific and administrative responsibilities

- 2016 - 2021: Member of the Comité National de la Recherche Scientifique - Section 17
- 2013 - Member of the Science Team of HIRES@EELT consortium
- 2014 - Member of PLATO ESA space mission
- 2011 - Member of Gaia ESA space mission
- 2014 - 2016: Member of the Commission Permanente de Ressources Humaines en section 34 at the University of Nice
- 2013 - 2016: In charge for the organisation of the seminar at Lagrange Laboratory

Scientific referred publications - Full career

- The overall publication list contains (update August 2018) 50 Referred papers (15 as first author) - 2867 citations and H index = 23 - 47 Proceedings papers - 6 press release and 2 television film/documentary. The referred publication list:
- **In 2018:**
 - Heading Gaia to measure atmospheric dynamics in AGB stars
A. Chiavassa, B. Freytag, M. Shultheis, *Astronomy & Astrophysics*, in press, arXiv: 1802.06086
 - The Stagger-grid: A grid of 3D stellar atmosphere models VII. Synthetic stellar spectra and broad-band photometry
A. Chiavassa, L. Casagrande, R. Collet, Z. Magic, L. Bigot, F. Thévenin, M. Asplund, *Astronomy & Astrophysics*, 611, A11
 - The GALAH Survey: Accurate Radial Velocities and Library of Observed Stellar Template Spectra
T. Zwitter, J. Kos, **A. Chiavassa**, et al., *MNRAS*, in press, arXiv: 1804.06344
 - VLTI-GRAVITY measurements of cool evolved stars: I. Variable photosphere and extended atmosphere of the Mira star R Peg
M. Wittkowski, G. Rau, **A. Chiavassa**, et al., *Astronomy & Astrophysics*, 613, L1
 - The convective photosphere of the red supergiant CE Tau. I. VLTI/PIONIER H-band interferometric imaging
M. Montargès, R. Norris, **A. Chiavassa**, B. Tessore, A. L'Abbe, F. Baron, *Astronomy & Astrophysics*, 614, A12
 - Evolution of the magnetic field of Betelgeuse from 2009 - 2017
P. Mathias, M. Aurière, A. López Ariste, P. Petit, B. Tessore, E. Josselin, A. L'Abbe, J. Morin, G. Wade, F. Herpin, **A. Chiavassa**, et al. *Astronomy & Astrophysics*, 615, A116
 - Accurate effective temperatures of the metal-poor benchmark stars HD 140283, HD 122563 and HD 103095 from CHARA interferometry
I. Karovicova, T. R. White, T. Nordlander, et al. *MNRAS*, 475, L81
 - Gaia Data Release 2: Observational Hertzsprung-Russell diagrams
Gaia Collaboration, *Astronomy & Astrophysics*, in press, arXiv:1804.09378
 - Gaia Data Release 2: Kinematics of globular clusters and dwarf galaxies around the Milky Way
Gaia Collaboration, *Astronomy & Astrophysics*, in press, arXiv:1804.09381
- **In 2017:**
 - Measuring stellar granulation during transiting planets
A. Chiavassa, F. Selsis, A. Caldas, J. Leconte, P. Von Paris, P. Bordé et al., *Astronomy & Astrophysics*, Volume 597, id.A94
 - Asymmetries on red giant branch surfaces from CHARA/MIRC optical interferometry
A. Chiavassa, R. Norris, M. Montargès, R. Ligi, L. Fossati, L. Bigot et al., *Astronomy & Astrophysics*, Volume 600, id.L2
 - The convective surface of the red supergiant Antares. VLTI/PIONIER interferometry in the near infrared
M. Montargès, **A. Chiavassa**, P. Kervella, S. T. Ridgway, G. Perrin, J.-B. Le Bouquin, S. Lacour, *Astronomy & Astrophysics*, Volume 605, id.A108
 - Large granulation cells on the surface of the giant star π 1 Gruis
C. Paladini, F. Baron, A. Jorissen, J.-B. Le Bouquin, B. Freytag, S. Van Eck, M. Wittkowski, J. Hron, **A. Chiavassa**, et al. *Nature*, doi:10.1038
 - Tomography of cool giant and supergiant star atmospheres. I. Validation of the method
K. Kravchenko, S. Van Eck, **A. Chiavassa**, A. Jorissen, B. Freytag, B. Plez, *Astronomy & Astrophysics*, 610, A29
 - The mass function of GX 339-4 from spectroscopic observations of its donor star
M. Heida, P.G. Jonker, M.A.P. Torres, **A. Chiavassa**, *Astrophysical Journal*, Volume 846, id.132

- Multi-epoch VLTI-PIONIER imaging of the supergiant V766 Cen: Image of the close companion in front of the primary
M. Wittkowski, F. J. Abellan, B. Arroyo-Torres, **A. Chiavassa**, et al. *Astronomy & Astrophysics*, Volume 606, id.L1
- Gaia Data Release 1. Testing the parallaxes with local Cepheids and RR Lyrae stars
Gaia Collaboration, *Astronomy & Astrophysics*, Volume 605, id.A79
- Gaia Data Release 1. Open cluster astrometry: performance, limitations, and future prospects
Gaia Collaboration, *Astronomy & Astrophysics*, Volume 601, id.A19
- **In 2016:**
 - Near-infrared spectro-interferometry of Mira variables and comparisons to 1D dynamic model atmospheres and 3D convection simulations
M. Wittkowski, **A. Chiavassa**, B. Freytag, M. Scholz, S. Hoefner, I. Karovicova, P. A. Whitelock, *Astronomy & Astrophysics*, Volume 587, id.A12
 - VLTI/AMBER spectro-interferometry of the late-type supergiants V766 Cen (=HR 5171 A), sigma Oph, BM Sco, and HD 206859
M. Wittkowski, B. Arroyo-Torres, J. M. Marcaide, F. J. Abellan, **A. Chiavassa**, J. C. Guirado, *Astronomy & Astrophysics*, Volume 597, id.A9
 - The close circumstellar environment of Betelgeuse. IV. VLTI/PIONIER interferometric monitoring of the photosphere
M. Montargès, P. Kervella, G. Perrin, **A. Chiavassa**, et al., *Astronomy & Astrophysics*, Volume 588, id.A130
 - The close circumstellar environment of Betelgeuse - III. SPHERE/ZIMPOL visible polarimetry of the inner envelope and photospheres
P. Kervella, E. Lagadec, M. Montargès, S. T. Ridgway, **A. Chiavassa**, X. Haubois, H.-M. Schmid, M. Langlois, A. Gallenne, G. Perrin, *Astronomy & Astrophysics*, Volume 585, id.A28
 - Discovery of a complex linearly polarized spectrum of Betelgeuse dominated by depolarization of the continuum
Aurière, M., Ariste LÚpez, A., Mathias, P., Lèbre, A., Josselin, E., Montargès, M., Petit, P., **A. Chiavassa**, et al. 2016, *Astronomy & Astrophysics*, Volume 591, id.A119
 - Gaia Data Release 1. Summary of the astrometric, photometric, and survey properties
Gaia Collaboration, *Astronomy & Astrophysics*, *Astronomy & Astrophysics*, Volume 595, id.A2
 - The Gaia Mission
Gaia Collaboration, T. Prusti et al. , *Astronomy & Astrophysics*, *Astronomy & Astrophysics*, Volume 595, id.A1
- **In 2015:**
 - A new view on exoplanet transits: Transit of Venus described using three-dimensional solar atmosphere Stagger-grid simulations
A. Chiavassa, C. Pere, M. Faurobert, G. Ricort, P. Tanga, Z. Magic, R. Collet, M. Asplund, *Astronomy & Astrophysics*, Volume 576, id.A13
 - The Stagger-grid: A grid of 3D stellar atmosphere models - IV. Limb darkening coefficients
Z. Magic, **A. Chiavassa**, R. Collet, M. Asplund, *Astronomy & Astrophysics*, Volume 573, id.A90
 - What causes the large extensions of red-supergiant atmospheres? Comparisons of interferometric observations with 1-D hydrostatic, 3-D convection, and 1-D pulsating model atmospheres
B. Arroyo-Torres, M. Wittkowski, **A. Chiavassa**, M. Scholz, B. Freytag, J. M. Marcaide, P. H. Hauschildt, P. R. Wood, F. J. Abellan, *Astronomy & Astrophysics*, Volume 575, id.A50
 - Benchmark stars for Gaia: fundamental properties of the Population II star HD140283 from interferometric, spectroscopic and photometric data
O. Creevey, F. ThÖvenin, P. Berio, U. Heiter, K. von Braun, D. Mourard, L. Bigot, T. S. Boyajian, P. Kervella, P. Morel, B. Pichon, **A. Chiavassa**, et al., *Astronomy & Astrophysics*, Volume 575, id.A26

- Departure from centrosymmetry of red giants and supergiants measured with VLTI/AMBER
P. Cruzalèbes, A. Jorissen, **A. Chiavassa**, C. Paladini, Y. Rabbia, A. Spang, *MNRAS*, Volume 446, p. 3277
- **In 2014:**
 - Planet transit and stellar granulation detection with interferometry
A. Chiavassa, R. Ligi, Z. Magic, R. Collet, M. Asplund, D. Mourard, *Astronomy & Astrophysics*, Volume 567, id.A115
 - Properties of the CO and H₂O MOLsphere of the red supergiant Betelgeuse from VLTI/AMBER observations
M. Montargès, P. Kervella, G. Perrin, K. Ohnaka, **A. Chiavassa**, S. T. Ridgway, S. Lacour, *Astronomy & Astrophysics*, Volume 572, id.A17
 - Measuring deviation from centrosymmetry for a source brightness distribution observed by spectro-interferometry
P. Cruzalèbes, A. Jorissen, Y. Rabbia, **A. Chiavassa**, et al., *MNRAS*, Volume 443, p. 3550
 - On the characterization of transiting exoplanets and magnetic spots with optical interferometry
R. Ligi, D. Mourard, A.-M. Lagrange, K. Perraut, **A. Chiavassa**, *Astronomy & Astrophysics*, Volume 574, id.A69
 - An edge-on translucent dust disk around the nearest AGB star, L2 Puppis
P. Kervella, M. Montargès, S. T. Ridgway, G. Perrin, O. Chesneau, S. Lacour, **A. Chiavassa**, et al., *Astronomy & Astrophysics*, Volume 564, id.A88
- **In 2013:**
 - The Stagger-grid: A Grid of 3D Stellar Atmosphere Models - I. Methods and General Properties
Z. Magic, R. Collet, M. Asplund, R. Trampedach, W. Hayek, **A. Chiavassa**, R. F. Stein, A. Nordlund, *Astronomy & Astrophysics*, Volume 557, id.A26
 - Fundamental parameters of 16 late-type stars derived from their angular diameter measured with VLTI/AMBER
P. Cruzalèbes, A. Jorissen, Y. Rabbia, S. Sacuto, **A. Chiavassa**, et al., *MNRAS*, Volume 434, p. 437
 - SPIDAST: a new modular software to process spectro-interferometric measurements
P. Cruzalèbes, Y. Rabbia, A. Jorissen, A. Spang, S. Sacuto, E. Pasquato, **A. Chiavassa** et al., *MNRAS*, Volume 432, p. 1658
 - The temperatures of red supergiants
B. Davies, R.-P. Kudritzki, B. Plez, S. Trager, A. Lancon, Z. Gazak, M. Bergemann, C. Evans, **A. Chiavassa**, *Astrophysical Journal*, Volume 767, id.3
- **In 2012:**
 - Three-dimensional interferometric, spectrometric, and planetary views of Procyon
A. Chiavassa, L. Bigot, P. Kervella, A. Matter, B. Lopez, R. Collet, Z. Magic, M. Asplund, *Astronomy & Astrophysics*, Volume 540, id.A5
 - Fundamental properties of the Population II fiducial stars HD 122563 and Gmb 1830 from CHARA interferometric observations
O. L. Creevey, F. ThÖvenin, T. S. Boyajian, P. Kervella, **A. Chiavassa**, et al., *Astronomy & Astrophysics*, Volume 545, id.A17
 - Imaging the heart of astrophysical objects with optical long-baseline interferometry
J.-P. Berger, F. Malbet, F. Baron, **A. Chiavassa** et al., *Astronomy & Astrophysics Annual Review*, Volume 20, id.53

- **In 2011:**

- Radiative hydrodynamics simulations of red supergiant stars. IV gray versus non-gray opacities
A. Chiavassa, B. Freytag, T. Masseron, B. Plez, *Astronomy & Astrophysics*, Volume 535, id.A22
- Radiative hydrodynamics simulations of red supergiant stars. III. Spectro-photocentric variability, photometric variability, and consequences on Gaia measurements
A. Chiavassa, E. Pasquato, A. Jorissen, S. Sacuto, C. Babusiaux, B. Freytag, H.-G. Ludwig, P. Cruzalebes, Y. Rabbia, A. Spang, and O. Chesneau, *Astronomy & Astrophysics*, Volume 528, id.A120
- 3D hydrodynamical model atmospheres: a tool to correct radial velocities and parallaxes for Gaia
A. Chiavassa, L. Bigot, F. Thévenin, R. Collet, G. Jasiewicz, Z. Magic, M. Asplund, *Journal of Physics: Conference Series*, Volume 328, id.012012
- The close circumstellar environment of Betelgeuse - II. Diffraction-limited spectro-imaging from 7.76 to 19.50 μm with VLT/VISIR
P. Kervella, G. Perrin, **A. Chiavassa**, S. T. Ridgway, J. Cami, X. Haubois and T. Verhoelst, *Astronomy & Astrophysics*, Volume 531, id.A117

- **In 2010:**

- Three-dimensional hydrodynamical simulations of red giant stars: semi-global models for the interpretation of interferometric observations
A. Chiavassa, R. Collet, L. Casagrande, and M. Asplund, *Astronomy & Astrophysics*, Volume 524, id.A93
- Radiative hydrodynamics simulations of red supergiant stars: II. simulations of convection on Betelgeuse match interferometric observations
A. Chiavassa, X. Haubois, J. S. Young et al., *Astronomy & Astrophysics*, Volume 515, id.A12
- VLTI/AMBER spectro-interferometric imaging of VX Sgr's inhomogeneous outer atmosphere
A. Chiavassa, S. Lacour, F. Millour, et al., *Astronomy & Astrophysics*, Volume 511, id.A51

- **In 2009:**

- Radiative hydrodynamics simulations of red supergiant stars: I. interpretation of interferometric observations
A. Chiavassa, B. Plez, E. Josselin, B. Freytag, *Astronomy & Astrophysics*, Volume 506, p.1351

- **In 2005:**

- The 90-110 micron dust feature in low to intermediate mass protostars: calcite?
A. Chiavassa, C. Ceccarelli, A.G.G.M. Tielens, E. Caux, S. Maret, *Astronomy & Astrophysics*, Volume 432, p.547

Scientific Communications

- **Invited talks conferences and workshops:**

- *July 2016*: Conference European Astronomical Society - Evolved stars at high angular resolution (Athens, Greece).
- *May 2016*: FNRS Contact Group FNRS (Bruxelles, Belgium).
- *July 2014*: Conference Why Galaxies Care About AGB Stars - A closer look in space and time (Vienna, Austria).
- *June 2014*: ESTER workshop (Toulouse, France).
- *May 2011*: Conference at Collège de France (Paris, France).
- *May 2009*: Workshop on Interferometry Imaging WII09 (Goutelas, France).
- *July 2007*: Conference of the French Astrophysical Society (SF2A, Grenoble, France).

- **Contributed talks/posters in conferences and workshops:**

- *October 2018*: High Resolution Spectroscopy for Exoplanet atmospheres (HoRSE) (Nice, France)
- *August 2018*: IAU-General Assembly - FM 12 "Calibration and Standardization Issues in UV-VIS-IR Astronomy" (Vienna, Austria)
- *August 2018*: IAU-General Assembly - IAUS 343 "Why Galaxies Care About AGB Stars" (Vienna, Austria)
- *March 2018*: Colloque de Perspective PNPS (Montpellier, France)
- *October 2017*: Workshop "Asteroseismology and Interferometry" (Nice, France).
- *July 2017*: Workshop "5th CHEOPS Science Workshop and the ESA Open Time Workshop" (Graz, Austria).
- *January 2017*: Workshop "Troisième Atelier PLATO/FRANCE" (Montpellier, France).
- *July 2016*: Conference "European Astronomical Society, The effects of solar and stellar magnetic activity on planets" (Athens, Greece).
- *April 2016*: Conference "International Venus Conference 2016" (Oxford, UK).
- *October 2015*: Workshop "Exoplanetary Atmospheres and Habitability Thermodynamics, Disequilibrium and Evolution focus group" (Nice, France).
- *July 2015*: Conference "Pathways towards habitable planets" (Bern, France).
- *June 2015*: Conference "From Super-Earths to Brown Dwarfs: Who's who?" (IAP, Paris, France).
- *June 2015*: Conference "Physics of Evolved Stars, a conference dedicated to the memory of Olivier Chesneau" (Nice, France).
- *November 2012*: Conference "Betelgeuse workshop" (Paris, France).
- *October 2011*: Conference "Ten years of VLTI: from first fringes to core science" (ESO, Garching).
- *June 2011*: GREAT-ESF Stellar Atmospheres in the Gaia Era Workshop (Bruxelles, Belgium).
- *April 2011*: Red giants: modelisation and observations (Montpellier, France).
- *June 2010*: Conference of the French Astrophysical Society (SF2A, Marseille, France).
- *Mars 2010* : Workshop on "The Origin and Fate of the Sun: Evolution of Solar-mass Stars Observed with High Angular Resolution" (ESO, Garching).
- *May 2007*: Workshop on "Perspectives in Radiative Transfer and Interferometry" (Château de Pizay, France).
- *June 2006*: Conference of the French Astrophysical Society (SF2A, Paris, France).
- *June 2006*: CO5BOLD Workshop 2006 (Freiburg, Germany).

- *May 2005*: 3rd GRETA Workshop on "Radiative Transfer and Applications to Very Large Telescopes" (Fréjus, France).
- **Invited seminar talks:**
 - *June 2017* : IPAG of Grenoble.
 - *November 2014* : LAB of Bordeaux.
 - *June 2014* : Arcetri in Florence.
 - *February 2014* : ESO.
 - *February 2012* : IRAP of Toulouse.
 - *February 2011* : LUPM of Montpellier.
 - *January 2011* : Observatoire Royale de Belgique.
 - *February 2010 and January 2012* : Observatoire of Paris.
 - *January 2010, February 2011, February 2012* : Observatoire de la côte d'azur, Nice.
 - *October 2008* : Infrared Astronomy Group, Max Planck Institute for Radioastronomy, Bonn, Allemagne.
 - *September 2007, April 2009, May 2012*: Institute of Astronomy, University of Vienna, Vienne, Autriche - AGB stars working group.
- **Other conferences**
 - *September 2018*: Colloque de Perspective PNP (Nice, France).
 - *July 2018*: Journées SF2A (Bordeaux, France).
 - *January 2018*: Workshop "Atelier PLATO/France" (Nice, France).
 - *March 2017*: First European Asymmetry Symposium (Nice, France).
 - *October 2017*: Asterinter-Workshop (Nice, France).
 - *April 2017*: IAU Gaia Symposium 330 (Nice, France).
 - *Juin 2011*: Gaia GREAT Plenary Meeting (Bruxelles, Belgium).
 - *Mai 2009*: Workshop "The Giant Branches" (Leiden, The Netherlands).
 - *Juillet 2007* : Ecole de physique stellaire de "Non-LTE line formation for trace elements in stellar atmospheres" (Nice, France).
 - *Décembre 2006* : School "Nucleosynthèse stellaire 50 ans après B2FH" (Aussois, France).
 - *Novembre 2006* : 14th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun (CS14, Pasadena, USA).
 - *Novembre 2005* : Workshop Physique stellaire avec ALMA (Montpellier, France).
 - *Mai 2005* : "Grand Challenge Problems in Computational Astrophysics : Workshop IV Transfer Phenomena" (Los Angeles, USA).
 - *Octobre 2004* : School de physique stellaire de "Stellar fluids dynamic and numerical simulations: From the Sun to Neutron Stars" (Aussois, France).
 - *Mars 2004* : School "Chronologie de la formation du Systeme Solaire, des grains présolaires aux objets de Kuiper" (Aussois, France).

Referee/Reviewer

- *Agence Nationale de la Recherche*
- *Astronomy & Astrophysics*
- *The Astrophysical Journal*
- *Astronomical Society of Pacific*

Scientific Organizing Committee:

- September 2019, SOC for Ecole Evry Schatzman of PNPS: Interaction stellar-planet
- October 2018, Chair and SOC for the High Resolution Spectroscopy for Exoplanet atmospheres (HoRSE) - Nice, France
- October 2015, Chair and SOC for the Exoplanetary Atmospheres and Habitability Thermodynamics, Disequilibrium and Evolution focus group - Nice, France
- January 2014, SOC for VLTI PIONIER and community days - Grenoble, France
- September 2013, Chair and SOC for the VLTI school, High angular resolution for stellar astrophysics Stellar activity, surface dynamics, fundamental parameters, exoplanetary systems, pulsations - Barcelonnette, France
- November 2012, SOC for the Betelgeuse Workshop 2012 The Physics of Red Supergiants: Recent Advances and Open Questions - Paris, France

Press release:

- December 2017, Nature (doi:10.1038) and ESO/CNRS press release: <https://www.eso.org/public/images/eso1741a/?lang>
- June 2011, Astronomy & Astrophysics (2011, vol. 531, A117) and ESO press release: <http://www.eso.org/public/news/eso1121/>
- May 2010, Astronomy & Astrophysics Highlights: <http://www.aanda.org/content/view/576/282/lang,en/>
- March 2010, Institut national des sciences de l'Univers (CNRS): <http://www.insu.cnrs.fr/co/ama09/la-convection-de-beltegeuse-mise-en-evidence-par-observation-et-simulation>
- March 2010, Max Planck Insititute press release: http://www.mpa-garching.mpg.de/mpa/research/current_research/hl2010-3/hl2010-3-en.html
- November 2009, Astronomy & Astrophysics Highlights: <http://www.aanda.org/content/view/420/248/lang,en/>

Teaching and Diffusion of Scientific Knowledge

- Astrophysics: Master-MAUCA, Meteor, Nice, France - 20h
- Physics: Mechanics and Thermodynamics (university level 2011, Bruxelles, Belgium) - 36h
- Informatics: Word, Excel and Power Point (university level 2006, Montpellier, France) - 20h
- Astrophysics: Tutor 2005, Montpellier, France - 3h
- Astronomy in school - C2PU project with Italian high school. 15h per year 2015, 2016, 2017
- Participation to the animations for the Year of Physics 2005 (Montpellier, France), (high school and primary school) - 60 hours
- Participation to public animations of astronomy every years 3-4 public conferences

Students

- Ph.D student: Kateryna Kravchenko, co-supervision with University of Bruxelles, 2014-2018
- Masters students: Kateryna Kravchenko (2013-2014), Ilona Boian (2014-2015)

Visited Institutes:

- *February 2014, January 2015, and July 2017*: ESO, Garching
Collaboration with Dr M. Wittkowski
- *February 2011 and February 2012*: Observatoire de Nice, France
Collaboration with Dr L. Bigot
- *September 2007, April 2009, and May 2012*: Institute of Astronomy, University of Vienna, Vienna, Austria
Collaboration with Dr Josef Hron
- *November 2007 and March 2008*: Uppsala Astronomical Observatory, Uppsala, Sweden
Collaboration with Prof Bertrand Plez
- *November 2008*: Max-Planck-Institute for Radioastronomy, Bonn, Germany
Collaboration with the Infrared Astronomy Group lead by Pr. Gerd Weigelt
- *Mars 2007*: Paris Observatory, Meudon, France
Collaboration with Dr Hans-G. Ludwig
- *October 2006*: ENS Lyon, France
Collaboration with Dr B. Freytag

Languages

- Italian - native speaker
- French - excellent
- English - excellent
- Spanish and German - basic notions

Computer and Programming Skills

- **Operating systems administration:** Mac OS X, GNU/Linux, Windows
- **Programming:**
 - Fortran95, IDL, OpenDx, Shell Script, Python
 - Astronomical software: Supermongo, synthetic spectrum calculation, photosphere models calculations
- **Editing:** Latex, IWork, Word, Excel, Power Point