

CURRICULUM VITAE

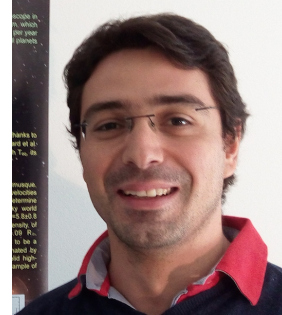
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Nationality: Italian

Date of birth: 20 December 1980



➤ **Education**

03/2009: PhD in Physics, summa cum laude, Università degli Studi di Catania, title: “*Detection of Earth-like planetary transits in the presence of stellar microvariability*”, supervisor Prof. Alessandro C. Lanzafame, assistant supervisor Dr. Antonino F. Lanza. Examination committee: Prof. N. D'Amico, Prof. G. Piotto, Prof. F. Zuccarello.

07/2005: Master's Degree in Physics, summa cum laude, Università degli Studi di Catania. Thesis title: “*Cyclic variability of the Sun as a star: analysis of the Total Irradiance as measured from satellites*”, supervisor Prof. Marcello Rodonò, assistant supervisor Dr. Antonino F. Lanza.

07/1999: High School Diploma, “Liceo Classico M. Cutelli”, Catania, with full marks.

➤ **Experience**

Since 12/2016: INAF (Istituto Nazionale di AstroFisica) staff researcher at the Osservatorio Astrofisico di Torino

02/2014-11/2016: FP7-SPACE ETAEARTH post-doc position at the INAF - Osservatorio Astrofisico di Torino to work on the characterization of terrestrial planetary systems with the *Kepler* space telescope and the HARPS-N spectrograph mounted on the Italian 3.6 m Telescopio Nazionale Galileo (TNG) in La Palma island.

02/2012 - 01/2014: INAF post-doc position at the Osservatorio Astrofisico di Torino for the planning, performance, and analysis of HARPS-N@TNG observations to search for low-mass planets and to characterize *Kepler* small-size planetary candidates, within the HARPS-N/GTO (Guaranteed Time Observations) and INAF/GAPS (Global Architecture of Planetary Systems) consortia.

01/2011 - 12/2011: CNES (Centre National d'Études Spatiales) postdoctoral fellowship at the Laboratoire d'Astrophysique de Marseille (France) to work on the data obtained by the CoRoT space telescope for the search and characterization of CoRoT planetary systems.

04/2009 - 12/2010: CNRS (Centre National de la Recherche Scientifique) post-doc position at the Laboratoire d'Astrophysique de Marseille as scientist responsible for the CoRoT Alarm Mode aimed at the early detection of planetary transits in the CoRoT N1-level data.

10/2008 - 03/2009: CNRS post-graduate position at the Laboratoire d'Astrophysique de Marseille to work on the analysis of CoRoT data.

06/2007 - 01/2008: Visiting the Institut d'Astrophysique Spatiale (Université Paris-Sud XI, Paris-Orsay, France) to work on transit detection techniques for the analysis of CoRoT data.

10/2005 – 11/2005: graduate student grant at INAF – Osservatorio Astrofisico di Catania for the development of models of the Total Solar Irradiance variations and their application to solar-type stars.

➤ **Main fields of research/interest:**

- Detection, characterization and properties of exoplanetary systems;
- Exoplanetary atmospheres;
- Planet occurrence rates;
- Magnetic activity of late-type stars;
- Star-planet interactions.

➤ **Scientific contribution**

- > 130 refereed journal papers and >15 non-refereed publications (conference proceedings) with > 4000 citations
- h-index = 35; m-index=2.7; g-index = 57
- > 50 talks at international or national conferences/workshops, scientific institutes, and universities.

➤ **Specific scientific responsibilities/tasks**

- scientist in charge of the Alarm Mode of the CoRoT space mission for the early detection of planetary transits in CoRoT N1-level data (2009-2010)
- member of the GAPS (Global Architecture of Planetary Systems) consortium with top-level and second-level Work Package responsibilities (2012-)
- member of the GAPS Science Team (10/2017-)
- GAPS Atmospheres NIR Project Scientist (10/2017-)
- member of the HARPS-N/GTO Consortium (2012-)
- member of the HARPS-N/GTO Target Selection Team to plan the radial-velocity follow up of *Kepler/K2* and *TESS* planetary candidates with HARPS-N (2015-)

➤ **Referee for peer-reviewed journals**

- Astronomy and Astrophysics
- Monthly Notices of the Royal Astronomical Society
- The Astronomical Journal (AAS Journals)
- Icarus

➤ **Other services**

- Panel Member of the ESO (European Southern Observatory) Observing Programs Committee (2019)
- External reviewer of OPTICON proposals
- External reviewer for the Royal Astronomical Society (RAS) Research Fellowships
- Member of the Scientific Organizing Committee of the EPRV (Extreme Precision Radial Velocity) IV Meeting (Grindelwald, 2019)
- responsible for the organization of seminars at INAF-OATo (01/2017 - 12/2018)

➤ **Awards**

Prize “Accueil de Chercheurs” € 3000 by the City of Marseille on 5 November 2009 for the quality of scientific work pursued as a foreign researcher in Marseille

➤ **Teaching and degree thesis supervision**

Since November 2013: supervisor of First Degree (Maria Chiara Maimone, Nicolò Cibrario, Samuele Bruna, Riccardo Stognone, Andrea Massa) and Master (Samuele Crespi, Rachele Bongiolatti) Theses

October-November 2010: tutoring of general Mathematics to undergraduate students of the Classes Préparatoires Polytech Marseille (France)

April 2006-May 2007: private tutoring of general Mathematics courses to undergraduate students of the University of Catania at the Camplus D'Aragona residence

➤ **Public outreach**

- Conferences and laboratories on exoplanets within the MasterClass of Astronomy and Astrophysics for high-secondary schools, Università di Torino (28 March 2019, 6 April 2018, 4 April 2017, 22 March 2016)
- Conferences on exoplanets at high-secondary schools in Torino (liceo scientifico Majorana, liceo scientifico Sant'Anna, liceo scientifico Istituto Sociale), Ventimiglia (liceo scientifico Aprosio) and Savignano (liceo scientifico Marie Curie)
- Laboratories on exoplanets at the Osservatorio Astrofisico di Torino and at high-secondary schools in Torino (liceo scientifico Avogadro, liceo scientifico Sant'Anna)

- Development of laboratories on exoplanets for high-school students, in collaboration with the Planetarium InfiniTo (see <https://ricerca.repubblica.it/repubblica/archivio/repubblica/2018/04/11/e-allalba-si-punta-il-telescopio-sul-sole55.html?ref=search>)
- Conference “Dalla Terra alla Luna: 50 anni dallo sbarco” (“From the Earth to the Moon: 50 years since the Moon landing”) for the high-school students of the liceo scientifico Sant'Anna (Torino, 29 March 2019)
- Contribution to the realization of the exhibition “Exoplanets: nuove terre inesplorate, l'antico mistero della vita” (“Exoplanets: new unexplored Earths, the old mystery of life”) in collaboration with the Euresis Association (<https://euresis.org/mostre/2018-exoplanets/>, see also https://corriereinnovazione.corriere.it/cards/cosa-sono-esopianeti-perche-potrebbero-nascondere-nuove-forme-vita/nuovi-orizzonti_principale.shtml) and related conference in Torino (Centro Culturale P.G. Frassati) on 4 May 2019
- Public lectures at the Planetarium InfiniTo of Turin:
 - “La storia del telescopio spaziale Kepler, il più grande cacciatore di esopianeti” (“The history of the Kepler telescope, the greatest exoplanet hunter”) 18 November 2018;
 - “Esopianeti, alla ricerca di un'altra Terra” (“Exoplanets, discovering an Earth twin”) , 17 October 2016
- Participation to the “Astronomy Variety Show” at the Planetarium InfiniTo of Turin (Pino Torinese, 7 October 2017)
- Moderator for the conference “Traveling to far worlds” (“In viaggio verso mondi lontani”) held by Prof. Michel Mayor in Turin (Cavallerizza Reale, 28 September 2017)
- Public lectures on exoplanets during “The night of researchers” (Torino 2013, 2019)
- Scientific divulgation about the discovery and the study of extrasolar planets within “La fête de la science” (Marseille, November 2009) on the occasion of the International Year of Astronomy
- Lectures and guided tours of the solar telescope at the Astrophysical Observatory of Catania for high-school students (Catania, 2006-2007)

➤ **Interviews and press releases related to my publications:**

- 14 June 2010: interview on France 3 about the discovery of six CoRoT exoplanets (<http://mediterranee.france3.fr/info/provence-alpes/marseille--decouverte-d-exoplanetes-63611598.html?onglet=videos>)
- 14 June 2010: Rich exoplanet harvest for CoRoT (<http://www2.cnrs.fr/en/1744.htm>)
- 2 June 2014: A megaEarth found by HARPS-N (“Una megaterra per HARPS-N”, <http://www.media.inaf.it/2014/06/02/una-megaterra-per-harps-n/>; <http://www.tng.iac.es/news/2014/06/02/harps-megaeearth/>)
- 2 July 2014: Different Twins (“Gemelli diversi”, <http://www.media.inaf.it/2014/07/02/gemelli-diversi/>; <http://www.tng.iac.es/news/2014/07/03/two-planets/>)
- 17 September 2014: An inverted planetary system (“Un sistema planetario invertito”, <http://www.media.inaf.it/2014/09/17/un-sistema-planetario-invertito/>; <http://www.tng.iac.es/news/2014/09/17/kepler101/>)
- 27 January 2015: “Ah oui, je suis TrES léger!” (<http://www.media.inaf.it/2015/01/27/oh-oui-je-suis-tres-leger/>; <http://www.tng.iac.es/news/2015/02/03/exo-planet/>)
- 29 January 2015: interview with mediainaf about “investigating the history of the Vulcan planets” (“Indagando la storia dei pianeti vulcano”, <http://www.media.inaf.it/2015/01/29/indagando-la-storia-dei-pianeti-vulcano/>)

3 December 2015: interview with mediainaf about false positives among the Kepler giant planetary candidates (“Credevo fosse un Giove e invece era una stella”, <http://www.media.inaf.it/2015/12/03/kepler-falsi-positivi/>, <http://gallery.media.inaf.it/main.php/v/voci/interviste/20151203-aldo-bonomo.mp3.html>)

7 April 2017: the violent migration of hot giants (“La migrazione violenta dei giganti caldi”, <http://www.media.inaf.it/2017/04/07/la-migrazione-violenta-dei-giganti-caldi/>)

19 January 2018: the ultra short-period super-Earth K2-141b (“K2-141b: la Super-Terra dall'orbita ultra-breve”, <http://www.media.inaf.it/2018/01/19/k2-141b-orbita-ultra-breve-e-temperature-infernali/>; <http://www.tng.iac.es/news/2018/01/29/k2-141/>)

19 March 2018: A habitable planet hides as its star has a tantrum (“La stella fa le bizzze e il pianeta si nasconde”, <https://www.media.inaf.it/2018/03/19/kepler-2-3/>; <http://www.tng.iac.es/news/2018/03/21/k2/>)

26 March 2018: A super-Earth with a super nucleus (“Una super-Terra con un super nucleo”, <https://www.media.inaf.it/2018/03/26/una-super-terra-con-un-super-nucleo/>, interview on Rai-1 at http://gallery.media.inaf.it/main.php/v/video/inafintv/Rai1/20180402_unomattina.mp4.html)

18 August 2018: Acqua più abbondante del previsto nei pianeti extrasolari (More water than expected on extrasolar planets)
http://www.ansa.it/canale_scienza_tecnica/notizie/spazio_astronomia/2018/08/18/acqua-piu-abbondante-del-previsto-nei-pianeti-extrasolari_cef5fa51-181b-41d1-a356-672779a6f6ce.html

11 December 2018: the identity card of Kepler-1657b (“La carta d’identità di Kepler-1657b” <https://www.media.inaf.it/2018/12/11/kepler-1657b-aldo-bonomo/>)

4 February 2019: Different twin super-Earths (“Ecco le due super-terre gemelle ma diverse”, <https://www.media.inaf.it/2019/02/04/kepler-107-superterre-gemelle/>; http://www.ansa.it/canale_scienza_tecnica/notizie/spazio_astronomia/2019/02/07/da-una-catastrofe-cosmica-due-pianeti-gemelli-diversi-_115f0ba7-1e76-4b1a-9a62-887016c960db.html; <http://www.tng.iac.es/news/2019/02/04/giant-impact/>)

23 April 2019: Methane on an hot Jupiter (“C’è metano su quel gioviano”, <https://www.media.inaf.it/2019/04/23/ce-metano-su-quel-gioviano/>, http://www.tng.iac.es/news/2019/04/22/jupiter_methane/)

27 September 2019: Heavy air on an exoplanet? HARPS-N can answer (“Aria pesante sull'esopianeta? Te lo dice HARPS-N”, <https://www.media.inaf.it/2019/09/27/harps-kelt-9b/>, <http://www.tng.iac.es/news/2019/09/29/arm/>)

27 June 2019: Water worlds galore, <https://www.nature.com/articles/s41550-019-0846-4>

➤ **Talks at international or national meetings, conferences, and workshops:**

21-23/10/2019: “Congresso Nazionale di Astrochimica e Astrobiologia (proto-) planetarie”, Trieste, Italy

Title: *The composition of small planets with HARPS-N@TNG*

9/02/2018: “5 years of HARPS-N Science Workshop”, La Palma Island, Spain

Title: *Investigating giant planet migration history with HARPS-N eccentricity and obliquity measures*, Invited talk

12-15 September 2017: “Nuovi Attori per Nuovi Scenari dell'Astrofisica” (new actors for new scenarios of astrophysics), LXI Congresso Nazionale della Società Astronomica Italiana, Padova, Italy

Title: *La straordinaria diversità delle architetture dei sistemi planetari* (the extraordinary diversity of exoplanetary system architectures), Invited talk

16-21 July 2017: “Transiting Exoplanets”, Keele, UK

Title: *Characterization of the K2-3 planetary system with 300 HARPS and HARPS-N radial velocities*

Title: *A Giano view of the atmosphere of HD189733b*

1-3 March 2017: “La missione e le prospettive scientifiche del TNG nell'astrofisica del 2020”, (the mission and scientific perspectives of the TNG for the astrophysics in 2020), Padova, Italy

Title: *GAPS-2 The Origins: a new frontier with GIARPS*

21-23 June 2016: “4th CHEOPS Science Workshop”, Geneva, Switzerland

Title: *CHEOPS and the search for habitable planets*

5-9 October 2015: “Twenty years of giant exoplanets”, Observatoire de Haute Provence, France

Title: *Structure and evolution of transiting giant planets: a Bayesian homogeneous determination of orbital and physical parameters*

29 June-03 July 2015: “From Super-Earths to Brown Dwarfs: who's who?”, Paris, France

Title: *Structure and evolution of transiting giant planets: a Bayesian homogeneous determination of orbital and physical parameters*

5-7 November 2014: “La ricerca dei pianeti extrasolari in Italia” (the search for exoplanets in Italy), Rome, Italy

Title: *Results from CoRoT and Kepler*, Invited talk

5-7 November 2012: “GREAT-ESF Workshop. Gaia and exoplanets: great synergies on the horizon”, Turin, Italy

Title: *The impact of Gaia on the planet occurrence rates as derived from the space-based transit surveys Kepler and CoRoT*

19-21 October 2011: Atelier “Magnétisme stellaire et Planètes extrasolaires” (stellar magnetic activity and extrasolar planets), Observatoire de Haute Provence, France

Title: *L'activité et les mesures de transit* (stellar activity and transit observations)

14-17 June 2011: “Second CoRoT international Symposium”, Marseille, France

Title: *Frequency of small planets in the CoRoT fields of view*

16-18 Sept 2009: “Unsinkable Planets: Telluric planet detection and stellar activity”, Exeter, UK

Title: *Detection of planetary transits in the presence of stellar microvariability*

➤ **Oral contributions at the following restricted meetings:**

8-10 May 2019: 14th GAPS Progress Meeting, Trieste, Italy

28-30 November 2018: 13th GAPS Progress Meeting, Napoli, Italy

14-16 May 2018: 12th GAPS Progress Meeting, Cagliari, Italy

8-10 November 2017: 11th GAPS Progress Meeting, Milano, Italy

15-17 May 2017: 10th GAPS Progress Meeting, Palermo, Italy
15 February 2017: 3rd ETAEARTH Progress Meeting, Bruxelles, Belgium
17-18 January 2017: GAPS Meeting on Atmospheres and Young Planets, Rome, Italy
24-26 October 2016: 9th GAPS Progress Meeting, Aosta, Italy
15-16 June 2016: Meeting INAF-Macroarea 2: Stelle, popolazioni stellari e mezzo interstellare, Bologna, Italy
6-8 April 2016: 8th GAPS Progress Meeting, Padova, Italy
15 February 2016: 2nd ETAEARTH Progress Meeting, Bruxelles, Belgium
4-7 November 2015: 7th GAPS Progress Meeting, Catania, Italy
22-24 April 2015: 6th GAPS Progress Meeting, Trieste, Italy
2 December 2014: PLATO 2.0 Transit Detection Workshop, Catania, Italy
22-24 October 2014: 5th GAPS Progress Meeting, Naples, Italy
29-30 April 2014: 4th GAPS Progress Meeting, Milan, Italy
24-25 October 2013: 3rd GAPS Progress Meeting, Palermo, Italy
26-27 February 2013: Joint meeting of the ETAEARTH Consortium and HARPS-N Science Team, Rome, Italy
4-5 February 2010: CoRoT CEST Meeting, Paris, France
1-2 February 2010: CoRoT Transit Modelling Meeting, Berlin, Germany
4-5 November 2009: CoRoT CEST Meeting, Paris, France
8-9 June 2009: CoRoT CEST Meeting, Paris, France

➤ Selected observing proposals

- Co-I/Co-writer of the Long-Term Proposal “GAPS2: the origin of planetary system diversity”, 68 nights/yr with GIARPS@TNG, 2018-2023
- PI of the Proposal “A search for low-mass planets in the habitable zone of a nearby and quiet M dwarf”, 2 nights on HARPS-N, 04-09/2018
- PI of the Proposal “Probing the atmosphere of the hot Jupiter HD102195b with Giano”, 2 nights, 03/2016
- PI of the Proposal “A Giano view of the dayside of tau Bootis b”, 2 nights, 03-04/2016
- Co-I/Co-writer of the Proposals “Characterizing the Global Architecture of Planetary Systems with HARPS-N”, ~65 nights/yr with HARPS-N@TNG, 2012-2017

➤ Skills

- Scientific programming: IDL, Fortran, C; experience in High Performance Computing on grid infrastructures.
- Languages: Italian (mother language), English (spoken and written), French (spoken and written).