

CURRICULUM VITAE OF LICIA VERDE

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 Citizenship: Italian; working in Spain since 2007

HIGHLIGHTS

- PhD in 2001; since 2007 **ICREA professor**¹ in Barcelona
- **Scientific Director** of “Journal of Cosmology and Astroparticle Physics” (JCAP), since June 2020
- **Scientific Director** of “Instituto de ciencias del Cosmos” of the University of Barcelona, since 2024; PI of the Maria de Maeztu grant and seal of excellence of the institute 2025-2029
- Honors and awards include:
 - 2024 Physics Medal, Real Sociedad Española de Física RSEF/BBVA
 - 2021 Premio Rey Jaime I de investigación Basica
 - 2019 Lodewijk Woltjer Lecture by the European Astronomical Society
 - 2018 Breakthrough Prize in Fundamental Physics with the WMAP team
 - 2012 Gruber Cosmology prize (with the WMAP team)
 - ERC Synergy grant 2025
 - ERC consolidator grant 2016
 - ERC starting grant 2009
- Major international projects include:
 - DESI, Dark Energy Spectroscopic Instrument (science team)
 - SDSSIII BOSS collaboration (science team)
 - Wilkinson Microwave Anisotropy Probe (WMAP) NASA mission (science team)
 - Anglo Australian two degrees galaxy redshift survey (data analysis team)
- Service include: ArXiv science advisory board (Dec 2015– 2023), chair (2019-2021), ArXiv science advisory council Chair (2023–present), arXiv Advisory board (2023–present); ADS users group (2022–present, chair in 2025); Scientific Organising Committee of more than 20 international conferences, career mentoring at different career levels, various international evaluation boards and committees.
- Dissemination: 90 plenary invited talks colloquia and seminars over the past 10 years (examples here), at least two outreach non-technical events per year.
- Publications: 275 Publications in peer reviewed high-impact journals, total citation count 102,856, h-index 102 (from Astrophysics Data System) total citation count 134571, h-index 114 (from googlescholar). Since 2022, consistently in the top 10 of best female scientists in Spain across all disciplines (according to Microsoft Academic).
- Supervision: 12 Master students, 2 undergraduate projects, 14 PhD students (of which 11 defended already), 25 postdocs (of which 1 on-going, and 10 hold permanent faculty positions)

¹Institució Catalana de Recerca i Estudis Avançats www.icrea.cat, Barcelona (Spain)

- Other interests: Open Access, Open Science, Publication ethics, Science Diplomacy, Diversity Equity and Inclusion
- Featured in PBS TV series “Closer to Truth” (In English) and appearance in “Las leyes de la termodinamica” a film by Mateo Gil, in cinemas April 2018 and on Netflix

1. CAREER

Academic Positions

September 2007 – present: **ICREA professor**²

September 2013 – September 2016: **Professor II**³, Institute of theoretical astrophysics, University of Oslo, Oslo, Norway

July 2003– August 2007: **Faculty**, Dept. of Physics and Astronomy, University of Pennsylvania , PA, USA

July 2002–June 2003: **Chandra Fellow** and **Spitzer Fellow**, Dept. of Astrophysical Sciences, Princeton University, Princeton, NJ, USA.

July 2001–June 2002: **Research Associate**, Physics and Astronomy department, Rutgers University, NJ, USA.

September 2000 – June 2001: **Research Associate**, Dept. of Astrophysical Sciences, Princeton University, Princeton, NJ, USA

Other academic positions (past 10 years)

Scientific Director of “Instituto de ciencias del Cosmos” of the University of Barcelona, since 2024

Scientific Director of “Journal of Cosmology and Astroparticle Physics” (JCAP), since June 2020

Imperial College London Visiting professor (2017–2025)

Harvard University Edward, Frances, and Shirley B. Daniels Fellow, Radcliffe Institute for Advanced Study, USA, Sept 2015–May 2016

Harvard University ITC, Harvard Smithsonian Center for Astrophysics, USA, Sep. 2015–May 2016

Education

October 1996 – August 2000: **PhD student, Marie Curie Fellow** at the Institute for Astronomy, University of Edinburgh. Edinburgh, UK.

October 1990 – July 1996: **Laurea degree in Physics**⁴ Universitá di Padova, Padova, IT

January 1996– June 1996: **Exchange student** at the University of Edinburgh, Edinburgh, UK

October 1994– June 1995: **Exchange student** at the University of Edinburgh, Edinburgh, UK

Degrees

PhD, University of Edinburgh. Thesis entitled “ Ω , Bias and Primordial Non-Gaussianity”, supervisor: *Prof. Alan F. Heavens* (February 2001)

Laurea degree (equivalent to BSC+MSC) in Physics, University of Padova. Thesis entitled “Large-scale bias in the Universe”. Supervisors *Prof. Sabino Matarrese, Prof. Alan Heavens*. Graded 110/110 cum laude (July 1996)

“Maturità classica”, Liceo Classico Marco Polo, Venice, IT (July 1990)

Languages

Italian (mother tongue), English (fluent), Spanish (fluent), French (basic)

²Institució Catalana de Recerca i Estudis Avançats www.icrea.cat, Barcelona (Spain)

³Equivalent to adjunct professor

⁴Now equivalent to BSc +Master

Honors and Awards

- 2026 Lancelot M. Berkeley–New York Community Trust Prize for Meritorious Work in Astronomy (DESI)
- 2025 Elected to Academia Europaea
- 2025 ERC Synergy grant, corresponding PI
- 2025 Jocelyn Bell Burnell inspiration medal by the European Astronomical Society on behalf of arXiv
- 2025 Dirac Lectures "Cosmology Beyond the Λ -CDM Model", Florida State University April 2025
- 2024 Physics Medal, Real Sociedad Española de Física RSEF/BBVA
- 2023 Giuseppe and Vanna Cocconi Prize in cosmology (SDSS/BOSS collaboration) by the European Physical Society
- 2021 Premio Rey Jaime I de investigación Basica
- 2019 Lodewijk Woltjer Lecture by the European Astronomical Society, honours astronomers of outstanding scientific distinction.
- 2018 Premi Nacionals de Recerca; awarded by the Generalitat and Catalan Foundation for Research and Innovation, recognizes the researcher who has recently contributed significantly internationally to the advancement of a scientific discipline in any of its fields: human and social sciences, life sciences and health, engineering and technology and experimental sciences.
- 2018 Breakthrough Prize in Fundamental Physics with the WMAP team
- 2017 Narcís Monturiol Medal "to honour individuals and organisations that made outstanding contributions to scientific and technological development in Catalunya".
- 2016 ERC Consolidator grant
- 2015 Thompson Reuters ISI Highly cited researcher –*The top 1% most cited researchers in the field*
- 2015 Radcliffe Institute of advanced study fellowship Edward, Frances, and Shirley B. Daniels Fellow.
- 2015 Elected to Young Academy of Europe (2015–present)
- 2012 Gruber Cosmology prize (WMAP)
- 2012 Rosenblum lecture, "Connecting Cosmology to fundamental physics: examples", Hebrew University
- 2010 Svein Rosseland lecture, "Big questions about the Universe", Oslo University
- 2009 ERC starting grant
- 2007 NASA group achievement award for the results of the WMAP mission
- 2004 Niels Bohr lecture "Cosmology from the Cosmic microwave background and galaxy surveys", Niels Bohr institute, Copenhagen
- 2004 NASA group achievement award for the results of the WMAP mission
- 2002 Chandra Fellowship
- 2002 Spitzer fellowship
- 1997 Amelia Earhart Fellowship of Zonta International foundation
- 1997 Prize "Premio STET Guglielmo Reis Romoli" from *Gruppo STET*
- 1997 Foundation Blanceflor-Boncompagni Ludovisi nee' Bildt Award

1996 Dewar & Ritchie Studentship from the University of Edinburgh

1995 Performance prize for Erasmus students from Aldo Gini Foundation

Grants (past 10 years only)

ERC Syn grant RedHOT cPI, 2026-2032 12M EUR

Maria de Maeztu award to ICCUB (2025-2029), PI, 2M Eur.

Plan Nacional grant (2023–2027) 200,00 EUR+ one 4years studentship PI

Plan Nacional grant (2019–2022) 228,448 EUR PI

CoI and “guarantor” of the Maria de Maeztu distinction awarded to the Instituto de Ciencias de Cosmos (2020-2024) 2M Euros

BePreSysE, European Research Council (ERC Consolidator grant), 2017-2022, PI. (1.83M Euros)

Two Marie Curie fellowships (2015 call, researchers started in 2016-2017) Advisor of researcher.

Beatriu de Pinos fellowship (2015-2017) Advisor of researcher.

CoI and “guarantor” of the Maria de Maeztu distinction awarded to the Instituto de Ciencias de Cosmos (2015-2019) 2M Euros

Plan nacional grant (2015–2019) 227,480 EUR, PI, + one PhD student grant.

Professional development

“Leadership and management skills for senior scientists” May 2024, by hfp consulting

“Science and Technology Diplomacy” 3 weeks Summer school, IBEI, Barcelona, July 2021

MOOC: HarvardX, “Exercising Leadership; Foundational principles” by Ronald Heifetz (Apr 2021)

MOOC: edEX, Catalyst, “Communication skills for Bridging Divides”

MOOC: coursera University of Michigan “Successful negotiation: essential strategies and skills” by George Siedel, March 2020

MOOC: LinkedIn, Fred Kofman on “Managing conflict”, Jan 2020

MOOC: edEX, Catalyst, “Leading With Effective Communication” (Inclusive Leadership Training) Jan 2020

MOOC: edEX, Catalyst, “Unconscious Bias: From Awareness to Action” (Inclusive Leadership Training) Aug 2018

2. RESEARCH INTERESTS

The subjects I have been working on are:

Cosmology; statistics of the large-scale structure of the Universe and cosmic microwave background (CMB) fluctuations; statistical analysis of large-scale structure and galaxy surveys; use of higher order correlations in cosmology and their applications to galaxy redshift surveys; relationship between the clustering properties of visible matter and of the dark matter; nature of the primordial fluctuations: the initial conditions for cosmological structure formation; dark energy; neutrino properties from cosmology; problems for the Λ CDM paradigm; the H_0 tension; robust analysis and interpretation of forthcoming surveys.

Major projects I have been involved with are (in chronological order):

- I have measured the relationship between the clustering properties of visible matter and of the dark matter from the 2dFGRS catalog. This work became one of the Two-degree-Field Galaxy Redshift Survey team papers. This measurement is particularly important in cosmology as the theory predicts the clustering properties of the dark matter but we mostly trace the large-scale structure via the clustering of visible matter. This measurement led to a determination of the density parameter of the Universe independent from the CMB.

- Between 2002 and 2006 I have been a member of the Wilkinson Microwave Anisotropy Probe (WMAP) science team and I have been directly involved in the analysis, interpretation and the release of the observations of the WMAP satellite. Two articles that reported the WMAP results in 2003 have been the first and second most cited papers in astronomy in 2003 and 2004 and the second and the third most cited papers in physics and in astronomy in the year 2003, 2004 and 2005, surpassed only by “Review of particle physics. Particle data group”. (source SLAC SPIRES). WMAP results were awarded the 2012 Gruber cosmology prize and the 2018 Breakthrough prize in fundamental physics.
- I have been a member of the Atacama Cosmology Telescope (ACT) science team (first light June 2007) until 2010.
- Between 2004 and 2007 I have been member of the team of a proposed NASA space mission as part of JDEM (Joint Dark Energy Mission): Advanced Dark Energy Physics Telescope (ADEPT).
- Membership of SDSS III and BOSS collaboration. (www.sdss3.org), I have been leading the first measurement and interpretation of the higher order statistics of BOSS galaxies (July 2014).
- I have been part of the steering committee and science working group of COrE+ (Cosmic Origins Explorer) a proposed European space mission for CMB polarimetry measurements
- Membership of DESI (Dark energy spectroscopic instrument) since 2016. With my group I developed the blind analysis strategy used in the first year data release and the ShapeFit template based analysis also used in the first year data release.
- Neutrino properties from cosmology. Co-author of the corresponding Particle Physics Data Group chapter.
- The Hubble tension: studying and coordinating international efforts to understand the Hubble tension, the discrepancy between early- and late-universe measurements of the cosmic expansion rate. My role has been primarily that of a synthesizer and critical theorist and to interpret all the evidence within the big picture; I led efforts to rigorously assess systematic uncertainties, compare datasets, and evaluate whether the Hubble tension points to new physics or unresolved measurement issues.

3. INVITED TALKS & SEMINARS, COLLOQUIA & LECTURES

Cosmology Invited talks and seminars (past 5 years)

“*A tale of many H0*” Germany Science week, Seon (DE) Dec 2025

“*A tale of many H0*” Christmas Lecture, Capodimonte Observatory, Naples (IT) Dec 2025

“*Beyond precision cosmology*” keynote and panel discussion, Utrecht Philosophy of Astronomy and Cosmology conference (NL), Sept 2025.

“*Precision cosmology: what’s next?*” at “European astronomy: science vision beyond 2040” session of European Astronomical Society meeting 2025 Cork, Ireland

workshop “*What’s under the H0od?*” ISSI Bern (CH), March 2025

Panel discussion “Hubble tension” Solvay workshop on Gravitational Waves Cosmology, Feb 2024 (remote)

“*A tale of many H0*” at “Current themes”, Nils Bohr Institute, Copenhagen (DK), June 2024

“*Lemaitre: getting Hubble into trouble*” Lemaitre conference 2024, Specola Vaticana (IT), June 2024

“*DESI results and cosmological interpretation*”

- La Sapienza, Rome (IT), Oct. 2025
- Colloquium, Albert Einstein Institute (DE), Postdam, June 2025
- IFCA, Santander (ES) April 2025

- CPAN Madrid (ES) Nov 2024
- IPMU, Tokyo (JP), August 2024
- IoA50: New Frontiers of Astronomy, Cambridge (UK), July 2024
- DAMTP Cambridge (UK) April 2024

“Closing remarks: what would it take to accept AI findings?” Machine Learning in astronomical surveys, ML-IAP/CCA-2023, Paris (FR) Dec 2023

“Round table discussion: What will be the impact of large language models in astronomy?” Machine Learning in astronomical surveys, ML-IAP/CCA-2023, Paris (FR) Dec 2023

Discussion on “Simulations: can’t live without them...” DIPC workshop on Large-scale structure and cosmological simulations, San Sebastian (ES) May 2023.

“How many h are there? and what do they mean?”

- “Tensions in Cosmology”, Corfu (HE), September 2022
- CosmoVerse action (online), March 2023
- Institute for Advanced Studies, Princeton, NJ, USA, March 2023

“Neutrino properties from Cosmology” Plenary talk PASCOS 2022, Heidelberg (DE), July 2022.

“Precision cosmology, when the party is over” invited plenary talk, RSEF Bienal de la Fisica 2022, Murcia, (ES) July 2022

“Cosmic speedometers and how to read them”

- King’s college, London (UK), June 2022
- Colloquium ICCUB Barcelona (ES), November 2022.

“Model-agnostic analysis of large-scale structure and implications for cosmology” University of Zurich (CH), March 2022.

Debate panelist on: “What would it take for the community to accept the findings?” conference: Debating the potential of machine learning in cosmological surveys, IAP, Paris (FR), October 2021.

“What’s new in cosmology?” TAUP21, 17th International Conference on Topics in Astroparticle and Underground Physics, plenary (virtual) Sept 2021

“Hubble troubles”

- colloquium INFN Torvergata, Rome (IT), Oct 2025
- Invited, IAA Severo Ochoa Meeting: Addressing Key Astrophysical Questions from Granada (ES), Oct.. 2022
- Invited plenary, EREP, Salamanca, ES, Sept. 2022
- Colloquium at Institute for Fundamental Physics of the Universe, Trieste, IT, November 2022
- MIAPP workshop on Hubble tension, (virtual) Oct. 2021
- Plenary and panel discussion Sixteenth Marcel Grossmann Meeting on General Relativity (MG16) (virtual) July 2021

“Precision Cosmology... Now what?”

- Colloquium, St. Andrews University, Physics and Astronomy department, Jan 2022 (Virtual)
- IAA Colloquium, Sept. 2021 (virtual)
- Joint Geneva area–EPFL Colloquium (Virtual), May 2021

“The unreasonable effectiveness of the Λ CDM”

- Lustrum Symposium (Virtual), NL, May 2021
- Colloquium, IFIC Valencia (ES), Nov 2021
- Colloquium QUID ULTRA, Rome (ES), Dec 2021

“*Hubble tensions*”

- Weizmann Institute (Virtual) May 2021.
- Conference: Cosmological Frontiers of Fundamental Physics 2021(Virtual), APC Institute, FR, May 2021.
- “*Focus on the Hubble tension*” GGI tea time, Licia Verde & Adam Riess, (Virtual) March 2021.

Open Science Invited talks and seminars (past 5 years)

“*Peer review in the age of AI*” NASA Cosmic Origin Program, AI/ML Science and technology group, Planned for Feb 2026

Denario launch Webinar Oct 2025

arXiv old and new: 34 years Open Access Avant la Lettre with Ralph Wijers for the arXiv team, Jocelyn Bell Burnell award presentation at European Astronomical Society meeting, Cork (IR) June 2025

“*The Crisis of Scientific Publishing: Lights and Shadows*” Future Visions on Science Communication 2024 - Convegno Nazionale Comunicazione della Scienza (presentation and round table discussion, in Italian), SISSA, Trieste (IT) Nov 2024

arXiv accessibility Forum 2024 SciELO session in Spanish/Portuguese (webinar), Sept 2024

“*Thirty years of arXiv: Open access avant la lettre*” with Ralph Wijers, ERCEA scientific seminars, European Research Council, (virtual), April 2024

“*Open science: an astrophysicist perspective*” Lectio Magistralis, Opening of the academic year at SISSA, Trieste (IT), Nov. 2022

Invited lectures

“*Neutrinos in Cosmology*” 2 lectures, Erice summer school June 2022.

“*Cosmostatistics*” at First CosmoStatistics Mexican School, 8 lectures with hands-on exercises, Guanajuato MX, April 2016.

“*Statistics*” at School on cosmology tools, IFT, Madrid, Nov 2013

“*Neutrinos in Cosmology*” 3 lectures, ISAPP summer school July 2013.

“*Cosmology*” 6 lectures, ISAPP summer school July 2013.

“*Introduction to Cosmology*” 3 Lectures CERN Student Summer Program, CERN, Geneva (CH) August 2013

“*Neutrinos and non-gaussianity*”, Euclid school for Engineers, Sept 2012, IAP, Paris (FR).

4 invited lectures “*Introduction to Cosmology*” CERN Student Summer Program, CERN, Geneva (CH) August 2012

3 invited “*Statistical Tools for CMB*”, ISAPP graduate school “Cosmic Microwave Background and High Energy Physics”, July 2012.

5 invited lectures “*Introduction to Cosmology*” CERN Student Summer Program, CERN, Geneva (CH) August 2011

2 invited lectures: “*Introduction to cosmology*”, CERN Latin-American School of High-Energy Physics. March 2011.

3 invited lectures: “*Statistical and numerical tools in Cosmology*”, School Essential cosmology for the next generation, Jan 2011

3 lectures: “*Introduction to Cosmology*”, TAE Barcelona, September 2010.

5 invited lectures “*Introduction to Cosmology*” CERN Student Summer Program, CERN, Geneva (CH) July 2010

5 invited lectures “*Introduction to Cosmology*” CERN Student Summer Program, CERN, Geneva (CH) July 2009

5 Invited lectures on “*Statistical tools for Cosmology*”, 2nd TRR33 Winter School on Cosmology: Theory for Observers; Observations for Theorists, December 2008.

Two lectures on “*Tools to analyze large scale structure surveys*”, PAU academic Training, Madrid (December 2007)

4 invited lectures on “*Statistical methods for CMB analysis*”, ”XIX Canary island Winter School In Astrophysics: The Cosmic Microwave Background: from quantum fluctuations to the present Universe”, November 2007, IAC Canary Islands, Spain.

3 lectures on “*Large-Scale Structure*” for graduate students, at “*PIRE school in cosmology*” at Universidad Catolica de Chile (March 2007).

4 lectures “*Observing dark energy*”, at Advanced School “The Dark side of the Universe” Como, IT (May 2007)

Non-technical presentations (In English, Spanish and Italian)

“*Scientific controversies: Expansion of the Universe*” PioneersWorks’ Janna Levin hosts Adam Riess & Licia Verde in conversation

“*Hubble, Einstein and 5000 ojos mirando al cielo*”, Fundacion Ramon Areces, Madrid (ES) June 2025 (in Spanish)

“*Hubble, Einstein and 5000 eyes on the Universe*”, Institute of Molecular Biology of Barcelona, IBMB. Barcelona (ES), Dec 2024

“*Qué tan rápido s’expande el Universo?*” XVII Jornades de Relativitat de Terrassa (ES), Apr 2024 (in Spanish)

“*The women’s Universe*” Public debate with Jocelyn Bell-Burnell moderated by Domenica Bueti, Castello di Miramare Trieste, IT, Oct 2023

Genesi On the dialogue Science and Religion, involving the general public and high school students, Diocesis of Rovigo (IT) May 2023 (in Italian)

Round table discussion in “*Attracció i retenció del talent al sector NewSpace català*”, Barcelona, Feb 2023 (Spanish/Catalan)

“*Los retos de la igualdad*” Round table discussion, La Vanguardia talks, Barcelona, March 2022 (Spanish)

“*VI Coloquio; Mujer Ciencia y Empresa*” Round table discussion, Marina de Empresas, Valencia, March 2022 (Spanish)

“*Observando la luz del Universo mas lejano*” Valencia, Ciutat de les artes i les Ciencias, March 2022 (Spanish)

“*Preguntale a una científica*” (middle and high school students) Valencia, Ciutat de les artes i les Ciencias, March 2022 (Spanish)

“*arXiv*” Conference of Italian Universities Rectors, Jan 2022 (Virtual, Italian)

“*Dark matter*” Round table (virtual) G. Mamon, L. Verde, and C. Frenk; Chaos, University of Bristol, March 2021.

“*Observing the light of the distant Universe*” (virtual) Cambridge University Scientific society, March 2021.

“*Understanding the Universe*” Women in aerospace association Barcelona Chapter, Feb 2021

“*BigBang: el inicio de todo?* ” Live talks Cosmoecaixa (virtual, Spanish) Nov 2020.

“*Observando la luz del Universo mas lejano*” March 2020, Parque de las Ciencias, Granada (In Spanish)

“*Premio nobel de la fisica 2019 a Jim Peebles*” as part of Dark matter day, UB Oct 2019 (in Spanish).

“*Osservando la luce dell'universo piú lontano*”, in “*Svelare l'universo*” Centro culturale San Gaetano, Padova, Oct. 2019 (in Italian)

“*Una tarde en el lado oscuro del Universo*” Cosmoecaixa, Barcelona, June 2019, a conversation with Rocky Kolb (Spanish/English).

“*Observando la luz del Universo mas lejano*” Cosmoecaixa, Barcelona, April, 2018 (Spanish)

“*Comprender el Universo*” “sopar amb Estrelles”, Semana de la ciencia, Gava, Nov 2017 (Spanish)

“*Comprender el Universo*” series “*Dia de la Ciència a les Escoles*”, public: 16-17 years old, Nov 2016, Sant Vicenc dels Horts (Spanish)

“*Cosmology and Science diplomacy*” in ERCEA (European Research Council Executive Agency) Conference “Frontier Research and Science Diplomacy”, public: politicians, policy makers, Oct 2016, Brussels.

“*Probing the large-scale Universe*” hour-long interview for public television WGBH Forum Network, Boston, Jan. 2016.

“*Where does the Sun go at night?*” and “*The solar system*” 3-4 years old and 4-5 years old preschoolers, British School of Barcelona, June 2015

“*El lado oscuro del Universo*” Comision d'egualdad UB, UB, April 2015 (Spanish)

“*Cosmologia: observando el invisible*”, Asociacion Astronomos Aficionados ASTER, Barcelona, April 2015 (Spanish)

“*El lado oscuro de universo*”, series “*La ciencia en primera persona*”, en el “*Dia de la Ciencia a les Escoles*”, public 4to de ESO 19 Nov 2014, Sant Boi de Llobregat. (Spanish)

“*Observando los temblores del big bang*” Planetario de Madrid, 13 Nov 2014 (<https://vimeo.com/112259646>, Spanish)

“*Diez preguntas sobre el Universe, un concurso para todos los públicos*” Teruel, Sept 2014. (Spanish)

“*Que es y donde esta el 96% del Universo?*” Agrupació Astronòmica de Sabadell , March 2014 (Spanish)

“*Que es y donde esta el 96% del Universo?*” Pessics de Ciencia, series, Ajuntament de L'Hospitalet, October 2013 (Spanish)

“*Euclid and neutrinos*” Euclid Hangout, June 2013

Two lectures on *Cosmology* CERN open days, September 2013.

“*Origins*” 2013, September 2013, CERN

“*Black Holes*”, International English College, Malaga (ES), May 2010.

“*L'Universo*”, Scuola Elementare Italiana di Barcellona (8-9 years old), April 2010 9Italian)

“*Big Questions about the Universe*”, ICREA colloquium, Barcelona, Oct 2009

“El lado oscuro del Universo”, ciclo ”Humanidades, Ingeniería y Arquitectura”, UPM, Madrid (ES), May 20, 2009 9Spanish)

“The dark side of the universe”, International English College, Malaga (ES) -High school level-, March 2009.

“The dark side of the universe”, SETroutes Insight lecture (www.set-routes.org) Nov 2008, CERN, Geneva (CH)

“A crisis in Cosmology?”, EuroScience Open Forum - ESOF 2008 Barcelona (ES), July 2008

“How can the CMB help constraining dark energy?”, “A Decade of Dark Energy Science Writer’s Workshop”, May 2008, Space Telescope Science Institute, Baltimore, MD, USA

“La energia Oscura”, “XI ciclo de conferencias presente y futuro del a ciencia y la tecnologia”, Malaga (ES), April 2008 (Spanish)

“Dark energy”, March 2008, Oporto (PT).

“Seeing dark energy with the cosmic microwave background and galaxy surveys” Dark energy session at 2005 AAAS, Washington, DC, USA.

Two talks at Euroscience Open Forum, “*The cosmic connection*” and “*The top 10 mysteries of the Universe*”, Stockholm, August 2004

“Combining Cosmic Microwave Background observations and Galaxy Surveys”, Cool astronomy for everyone session at AAS, Nashville, May 2003

Science and art

“Esplorando la musica del Cosmo”: introducing the concert of DeProducers, Auditorium, Barcelona, June 2021

Contribution to “Searching the unknown: the Dark Matter Collection” by Enrico Magnani, 2019

Spectral Exchange (dialog with visual artists and writers) San Sebastian Nov 2018

<https://www.tabakaler.eu/en/spectral-exchange>

Inspirational talks

British School of Barcelona, opening of STEM center, Barcelona, April 2022

Zonta International, Alumnae Network meeting, Nice, FR, June 2016 on gender equality in STEM

English International College (Malaga, ES), June 2015, closing of the academic year 2015 and graduation

4. TRAINING and MENTORING EXPERIENCE

Students and Postdocs

Undergraduate students

Supervisor of undergraduate student Irene Abril. Summer 2021 → Master student then PhD student, Cambridge, UK.

Co-supervisor of undergraduate student Santiago Wuhl (University of Cordoba) 2023 → Master at Leipzig

Master students

Co-supervisor (with Nils Schoneberg) of Master (Erasmus+) student Katayoon Ghaemiardakani (2023-2024) → PhD student at Marseille

Co-supervisor (with Hector Gil-Marín) of Master student Francisco Ascacio (2023-2024)

Co-supervisor (with Hector Gil-Marín) of Master student Adriana Nadal (2022-2023) → PhD student at UB

Co-supervisor (with Nils Schoneberg) of Master student Marina Augustin (2022–2023)

Supervisor of Master student Sergi Novell (2020–2021) → PhD student at UB

Co-Supervisor of Master student Lorenzo Piga (May 2019–June 2019) from Univ. Rome (IT) → PhD student at Parma Univ.

Co-Supervisor of Master student Alba Kalaja (Feb 2019–April 2019) from Univ. Padova (IT) → PhD student at Groningen

Co-Supervisor of Master (Erasmus + student) Giulio Scelfo (March 2018–June 2018) from Univ. Padova (IT) → PhD student at SISSA Trieste (IT)

Supervisor of Master student Jose-Luis Bernal Mera (2014–2015) → FPU PhD student at UB. Now Ramon y Cajal Fellow at University of Cantabria.

Co-Supervisor of master student Andrea Ravenni (2015) from Univ. Padova (IT) → PhD student at Padova University.

Tutor of Master student Francesca Frangoude (Jan 2011–Sept 2011) → PhD student at Laboratoire d’Astrophysique de Marseille. Now faculty at Durham.

PhD students

PhD Co-Advisor (with Hector Gil-Marin) of Francisco Ascacio (Dec 2025–Present)

PhD Co-Advisor (with Hector Gil-Marin) of Adriana Nadal (Oct 2023–Present)

PhD Advisor (with Hector Gil-Marin) of Anya Paopiamsap, la Caixa Inphinit (Oct 2024–Present)

PhD Advisor of Emanuele Fondi, la Caixa Inphinit (Oct 2021–Sept. 2025)

PhD Co-Advisor (with Hector Gil-Marin) of Sergi Novell (Oct 2021–Sept. 2025)

PhD Co-Advisor (with Hector Gil-Marin) of Samuel Brieden (Oct 2018–Sep. 2022) → Postdoctoral Fellow at Edinburgh University

PhD Co-Advisor Ali Rida Khalife, (May 2017–2022) → Postdoc IAP Paris.

PhD advisor of Kathleen Short, La Caixa PhD fellowship (2017–2022)

PhD advisor of David Valcin (May 2017–Dec 2020) → Postdoctoral Fellow at Ohio/Berkeley University (USA)

PhD advisor of Nicola Bellomo (Jan 2016–Jan 2020) → Postdoctoral Fellow at UT (Austin TX USA)

PhD advisor of Jose-Luis Bernal Mera (Sep. 2015–Sep 2019) → Postdoctoral Fellow at JHU (USA), now Ramon y Cajal Fellow at University of Cantabria

PhD advisor of Hector Gil-Marin (Nov 2008–Sept. 2012) → postdoc at Institute of Cosmology and Gravitation Portsmouth (UK).

PhD advisor of Anna Mangilli (Nov 2007–Sept 2011) → Planck postdoc at IAP Paris now permanent at CNRS

Advisor of graduate student Carolyn Sealfon (July 2003–June 2006) → lectureship at West Chester University (USA).

Postdocs

Postdoctoral advisor of Francesco Sorrenti (Sept 2025–Present)

Postdoctoral co-advisor (with Hector Gil-Marin) of Daniel Forero-Sachez (Oct 2024–Present)

Postdoctoral advisor of Ben Giblin (May 2022–May 2023)

Postdoctoral advisor of Nils Schoneberg (Oct 2021-Oct 2024)

Postdoctoral advisor of Davide Gualdi (May 2019– Sep. 2022) → Senior data scientist at Boston Consulting Group.

Postdoctoral advisor of Davide Bianchi (Oct 2018–Oct 2021) → long term Fellow University of Milan (IT)

Advisor of Hector Gil Marin, La Caixa Fellowship Junior Leader (Oct 2018–2022). Now Ramon y Cajal Fellow UB

Postdoctoral advisor of Ilia Musco (March 2018– September 2019) → Postdoc Geneva University

Co-Postdoctoral advisor of Ricardo Ferreira (2016–2018) → Nordita Fellow Stockholm.

Postdoctoral advisor of Ben Kalus (Sep. 2017–Sept 2020) → postdoctoral Fellowship KASI

Postdoctoral advisor of Alexander Mead (Sep. 2017–Oct 2020) Marie Curie Fellow → Edinburgh University.

Postdoctoral advisor of Alvise Raccanelli (Sept. 2016–Sept 2018) Marie Curie Fellow → CERN theory Fellowship, from 2020 Faculty Padova Univ.

Postdoctoral advisor of Bin Hu (Dec 2015–Dec 2016) → Faculty, Thousand talents program, CN

Postdoctoral advisor of Emilio Bellini (June 2014–Sept, 2016) → Beecroft Fellow, Oxford.

Postdoctoral advisor of Antonio Cuesta (Oct 2013–Jan 2017) → University of Granada (Now faculty at University of Cordoba)

Postdoctoral advisor of Fergus Simpson (Jan 2014–March 2017) → Startup α -I

Postdoctoral advisor of Jorge Norena (Oct 2010–Oct 2013) → postdoc at University of Geneva, CH, now Faculty, Chile.

Postdoctoral advisor of Christian Wagner (Oct 2009–Sept. 2012) → postdoc at MPA, Munich

Postdoctoral advisor of Ben Hoyle (Nov 2009–Sept. 2012) → postdoc at Excellence Cluster, Munich.

Postdoctoral advisor of Aday Robaina (August 2010–July 2012) → postdoc at Univ. Michigan USA. Now analyst.

Postdoctoral advisor of Roland de Putter (Oct 2010 – Sept. 2012) → Caltech Postdoctoral Scholar at Jet Propulsion Laboratory

Postdoctoral advisor of Beth Reid (Nov 2008–August 2010) → Hubble Fellow at Berkeley (USA)

Postdoctoral advisor of Anastasios Avgoustidis (Dec 2008–Oct.2009). Dr. Avgoustidis is now faculty at Nottingham University (UK).

Postdoctoral advisor of Carmelita Carbone (May 2008–May 2009). Dr. Carbone is now faculty at Milan Observatory (IT).

Postdoctoral advisor of Carlos Hernandez-Monteagudo (Feb 2005 — September 2007). Dr. Hernandez-Monteagudo is now staff at IAC.

Postdoctoral advisor of Viviana Acquaviva (Nov 2006 — August 2007). Dr. Acquaviva is now a Faculty at CUNY New York (USA).

Mentoring

-Mentor in 1000Girls1000Talents program of the New York Academy of Science to increase worldwide the participation of women in STEM-careers. (2015–2017)

-Advisor for other Mentors of the 1000Girls1000Talents program of the New York Academy of Science to increase worldwide the participation of women in STEM-careers (2016–2017)

-Mentor: Asociacion Mujeres Investigadoras & tecnologas, 2021

-Mentor within DESI collaboration 2022, 2023, 2024

5. SERVICE and Conference organization**Committees (Advisory, Selection, Thesis- past 10 years)**

Search and selection committee for the next director of European Southern Observatory (spring 2025)

Valer Generalitat valenciana program akin to ICREA: advisor and selection committe inaugural call 2025

ArXiv Science Advisory council inaugural Chair (July 2023–Present)

ArXiv Science Advisory Board Chair (Jan 2019-Dec 2021)

ArXiv science advisory board (Dec 2015– Present). As part of my Science Advisory Board position I have participated in: Search committee of the next Executive director, sub group on arXiv Strategic Planning, sub group on Scholarly communication ecology including open access mandates, technical evaluation for a dark archive for arXiv, arXiv code of conduct, arXiv mission vision and values document, development of arXivLabs, developement of AI policy, guidance towards arXiv as a independent 501c3.

Alto Consejo Consultivo of the Generalitat Valenciana (from 2022)

Consejo Científico Asesor de la Fundación GADEA por la Ciencia (from 2022)

Scientific Advisory Panel at Institute of Physics, University of Amsterdam (2022)

NASA ADS users group (2023-present)

Max Planck Institute for Astrophysics (Garching) Scientific International Advisory Committee “Fachbeirat” (2015-2023), Chair in 2022.

ICS Zurich external advisory visiting committee (2021)

International Advisory committee, Oskar Klein Center (Stockholm) 2021

DESI external collaborators committee (2019–2020)

DESI publication board (2016–2021) Chair 2019-2021: to ensure the scientific quality of DESI publications and satisfy the data management plan requirements.

Lisa Meitner Selection panel (2021).

“conseill assesor” to increase UB success in ERC grant applications via internal selection and mentoring program and mock panel for interviews (2019–present)

Euclid speakers bureau (2019–2020): to ensure fair representation in Euclid talks and that talk content complies with Euclid requirements.

EuCPT steering committee (2019–2022, also working on governance and code of conduct), European Consortium for Astro Particle Theory; eucapt.org

Selection committee for faculty position, Ecole Normale Superieure, Paris, 2017

International Astrostatistics association council member (2016–2017)

Selection committee for faculty position, Stockholm University, 2017

Panel for the evaluation of the International Max Planck Research Schools (IMPRS) Heidelberg DE (2015)

Steering committee of COrE/PRISM-ESA next generation CMB polarization mission (2014–2017)

Visiting committee Institut d’Astrophysique de Paris (IAP), Paris, AERES expert (2013)

Institute Lagrange Paris, Scientific committee (2011–2015)

PhD thesis committees:

M. Francis (Rutgers University); R. Kristiansen (Oslo University); G. Dobler (UPenn); F. Stabenau (UPenn); Z. Wahhaj (UPenn); D. Dolney (UPenn), J. Grande (UB), Johan Samsings (Dark, Copenhagen), Zachary Sleepian (Harvard University), A. Escriba (UB), M. Millon (EPFL), Guillermo Abellan (Montpellier), Vincenzo Aronica (Aix Marseille Université’)

Editorial board

Scientific Director of “Journal of Cosmology and Astroparticle Physics” (JCAP), since June 2020

Editor for “Journal of Cosmology and Astroparticle Physics” (JCAP), since 2017

Editorial Advisory Panel for “Classic and Quantum Gravity” (CQG), 2016-2019

Editor for “Physics of the dark universe” journal, Elsevier, 2013–2018.

Astronomical service

Referee

Referee for ApJ, MNRAS, PRD, PRL, PRD, Nature, A&A, CQG, JCAP

Reviewer (selected)

ERC advanced grants, PE9 panel 2019, 2021, 2023, 2025 (co-chair in 2025)

Ireland science Foundation 2024

German Federal Ministry of Education and Research (BMBF), 2022

BIST Barcelona Institute for Science and Technology grants reviewer (2017, 2018, 2020, 2021)

NASA ADAP dual blind review panel, Nov 2020

Panel for MSCA H2020 and co-FUND programs 2018–2019

Ramon y Cajal positions selection committee 2019

Chair of the NASA Hubble Fellowship Physics & Cosmology selection panel, NASA, Jan 2018

NSERC (Natural Sciences and Engineering Research Council of Canada) grant reviewer (2018)

2018, 2019 DiRAC allocation reviewer

Marie Curie Fellowship expert reviewer 2018

co-FUND Fellowship expert reviewer 2018

Radcliffe Fellowship selection committee (2016–2025) –Harvard University–

Grant reviewer for ANPCYT (Argentina National research council, 2017)

Einstein Fellowships Allocation committee (2015) –NASA–

Grant reviewer (Physics section) for Ministerio de Economía y Competitividad (ES) Plan Nacional grants – akin to UK rolling grants– (2015)

Grant allocation committee (Astro section), for Ministerio de Economia y Competitividad (ES) Plan Nacional grants – akin to UK rolling grants- (2015,2017)

Grant reviewer for Swiss National Science foundation (2015, 2017, 2018, 2019)

Grant reviewer for CONICYT (Chilean national research council) (2015, 2016)

Grant reviewer for NWO (Dutch national research funding) (2014).

Grant reviewer for SRNSF (Georgia National Research funding) (2013)

Grant reviewer for French Agence Nationale de Recherche (2013, 2016).

ERC (European Research Council) referee and “expert” (2012–Present)

Grant Reviewer for German Research Foundation DFG (2011, 2012, 2013)

Reviewer for STFC- Science and Technology Funding Council- (UK, 2010, 2011, 2019)

Prize committees

Gruber Prize 2022, 2023, 2024, 2025

Premi Rey Jaume I selection panel, 2023, 2025

Livio Gratton prize 2021, 2022 best PhD thesis.

Premi Nacional de Recerca, Premi Nacional de talent Jove, 2019, (2025 partial participation for illness)

MERAC prize, Tycho Brahe medal, Fritz Zwicky Prize of European Astronomical society, 2019–present

John Bahcall Physics Award 2016

Conference organisation (past 5 years, selected)

Scientific Organizing Committee EAS 2025 special session on stellar ages.

Scientific Organizing Committee Cosmo21 (statistical challenges in 21st century cosmology) 2023

Scientific Organizing Committee EAS 2022 special session on ”Shedding light on the dark side of the universe with new cosmological probes”

Scientific Organizing Committee IAP Machine learning 2021

Scientific Organizing Committee WIN21

Scientific Organizing Committee B-modes from space, MPI, Garching December 2019.

Scientific Organizing Committee for Kavli Institute for Theoretical Physics program ”Tensions between the Early and the Late Universe”, Santa Barbara, USA, July 2019

Scientific Organizing Committee for Gordon Research Conference ”String theory and Cosmology”, 2019 Edition.

Scientific Organizing Committee for Cosmo21 2018, Valencia.

Scientific Organizing Committee for Neutrino 2018, Heidelberg 2018

Scientific Organizing Committee for Spanish-Portuguese Relativity Meeting 2018

Scientific Organizing Committee for Cosmo21 2018

Scientific Organizing Committee for Spanish Astronomical society biannual meeting (2017-2018 and 2019-2020)

Other

Working group: CMBPol Mission Concept Study, Inflation working group and Fisher working group (preparation for the US National Academies Decadal Survey, 2008); Writer: LSST Science Book (writer in BAO, Large-scale structure and bispectrum chapters, in preparation for the US National Academies Decadal Survey); Reviewer for the astronomy textbook “The Cosmic Perspective” Bennett et al. 4th ed. (2005)

Public understanding of science

Several radio/news interviews, news articles and podcasts. Among them:

- podcast Noosfera (la Razon) “Una energia muy oscura” Jan 2026
- Ondacero, la rosas de los vientos ”Lo que el universo aun no nos ha contado” 2025
- podcast “ad astra, storie dall’ Universo” curation of the series and guest of one episode (on spotify, in italian) 2024
- podcast for Physics World “Celebrating the physics of the cosmos and 20 years of JCAP”. 2024
- “¿Como empezo todo? ” podcast ORBITALAIKA for RTVE, 2021
- “Understanding the Universe”, webinar Women4Space, Feb 2021
- “Exploring the Hubble tension” Cern Courier Interview article, May 2021
- “Cartografiando el Universo” Hector Gil-Marin and Licia Verde, SAE Bulletin Dec 2021
- “¿Debemos dejar que la inteligencia artificial optimice la sociedad?” the conversation May 2021
- “Que es la energia oscura?” las cientificas responden, El Pais, April 2021.
- “desde cuando existe el espacio tiempo?” las cientificas responden , El Pais, Aug 2020.
- TV3 appearance en “el matí” program, Dec 4th 2019.
- Featured in PBS TV series “Closer to Truth” (In English)
- Inauguration of Science week, Parlament de Catalunya, November 2019 (Spanish)
- Appearance in “Las leyes de la termodinamica” a film by Mateo Gil, in cinemas April 2018 and on Netflix (In Spanish; English with Spanish Subtitles)
- La Vanguardia Sec. Big Vang, “Cual es la teoría más válida sobre el final del Universo?”, April 2018 (in Spanish)
- National Geographic Espana, “Carta estrella”, “La conquista de Martes”, Dec 2016. (In Spanish)
- Fabrica de ciencia Radio Gava, March 2016 (http://us.ivoox.com/es/cosmologia-fondo-microondas-galaxias-otros-aspectos-audios-mp3_rf_10710722_1.html) (In Spanish)
- WHBG Public broadcasting, hour-long documentary, Jan 2016 (<http://www.forum-network.org/lectures/probing-large-scale-universe/>) (In English)