

CONTACT INFORMATION	Director of AstroAI Center for Astrophysics Harvard & Smithsonian 60 Garden Street Cambridge, MA 02138, USA	(617) 304-0479 cgarraffo@cfa.harvard.edu www.ceciliagarraffo.com astroai@cfa.harvard.edu www.astroai.harvard.edu
EDUCATION	PhD in Physics, Mar 2010, University of Buenos Aires M.S. in Astronomy, Dec 2005, National University of La Plata	
RESEARCH	50 scientific, peer reviewed publications (14 as a first author), 1,649 citations, as of Dec 2023. Founding Director of AstroAI: The First Dedicated Center for Astrophysical Artificial Intelligence, Center for Astrophysics Harvard & Smithsonian 2023 - present. Affiliate at the Institute for Artificial Intelligence and Fundamental Interactions, MIT 2023 - present. Affiliate at Berkman Klein Center for Internet and Society, Harvard University 2023 - present. Astrophysicist for NASA's Chandra X-ray Observatory, CfA Harvard & Smithsonian 2021 - 2023. Research Scientist at the Institute for Applied Computational Sciences, Harvard University, and at CfA Harvard & Smithsonian - 2018 - 2021. Postdoctoral Fellow at High Energy Astrophysics Division, CfA Harvard & Smithsonian 2013 - 2018. Research Associate at Brandeis University, High-Energy and Gravitational Theory, Physics Department, 2010 - 2012.	
LEADERSHIP	Director of AstroAI & EarthAI at CfA Harvard & Smithsonian 2022 - present Principal Investigator of the Postbaccalaureate Program White Paper at CfA Harvard & Smithsonian 2023. Member of the management team of the Line Emission Mapper X-ray probe concept 2023 - present. Principal Investigator and Deputy Principal Investigator for SmallSat Mission Concepts 2020 - present. Chair of the Fostering Cross-Collaborations Committee, High Energy Division, CfA Harvard & Smithsonian 2022 - 2023. Member of the CfA Seminar Organizing Committee, CfA Harvard & Smithsonian 2022 - present. Member of the CfA Machine Learning Journal Club Organizing Committee, CfA Harvard & Smithsonian 2022 - present.	

Member of the Code of Conduct Working Group, CfA Harvard & Smithsonian 2022 - present.

- ORGANIZATION OF WORKSHOPS AND MEETINGS AstroAI Special Session, SOC, EAS 2024.
 SRG/eROSITA Conference, SOC, 2024.
 The Impact of Artificial Intelligence on Astrophysics Research: avenues and potential breakthroughs, SOC, AAS 243rd, 2024.
 AstroAI Meetings Organizer, CfA Harvard & Smithsonian 2022 - present.
 CfA Seminar Organizer, CfA Harvard & Smithsonian 2021 - present.
 Organizer of the Latin American School of Relativity and Astrophysics, 2021 and 2024.
 Organizer of CfA Women in Science meetings Harvard & Smithsonian 2015 -2018.
 Annual PostDoc Symposium and Social Dinner organizer, CfA Harvard & Smithsonian 2014.
- TEACHING Teaching Professor at [Amautas](#), a platform for science education in Spanish.
 Lecturer in Computer Sciences, Harvard University 2018 - 2021.
 Guest Lecturer, Department of Astronomy Harvard University 2018.
 Teaching Assistant at U. of Buenos Aires Argentina 2007-2008.
 Teaching Assistant at National U. of La Plata, Argentina 2003-2007.
 Thesis Committee member for Harvard Astronomy PhD student Kevin Ortiz 2022 - present.
 Thesis Committee member for Harvard Data Science MS student Tao Tsui 2020 - present.
- MENTORING Supervised more than 20 AstroAI students, fellows and interns: 2022 - present
 Supervised 5 Southampton M.S. students: 2016 - present.
 Supervised 6 IACS M.S. students: 2018 - present.
 Supervised 3 Summer Students at CfA: 2016 - present.
 Mentor for [Women in Data Science Cambridge Datathon](#) 2021, MIT.
 Mentor at the *Talented and Gifted STEM program for Latinas in the Boston Public Schools*, Harvard-Smithsonian CfA, 2016-2018.
 Advisor for *El Universo a Tus Manos* Program for Undergraduate Science Majors, CfA 2015 - 2018.
- MISSION INVOLVEMENT & COLLABORATIONS Principal Investigator of the Normal Incidence Extreme Ultraviolet Photometer (NExtUP), Pioneers mission concept; co-Principal Investigator SmallSat mission concept; co-Principal Investigator of the Normal Incidence Extreme Ultraviolet Astrospheric Telescope (NEAT).
 Member of the managing team of the Line Emission Mapper X-ray probe concept 2023.

Member of the Science Team for the Extreme-UV Stellar Characterization for Atmospheric Physics and Evolution (ESCAPE), small explorer (SMEX) mission concept.

Member of NASA's *Living With a Star* collaboration team; member of NeXSS's *Living Breathing Planet*; member of *The COCOA-PUFS Project*, Space Telescope Institute.

ACADEMIC
SERVICE:

Reviewer for SI Latino Initiative Program, Chandra X-ray Observatory, NASA, Astrostatistics Interest Group, American Statistical Association, NASA-FDL, MNRAS, Nature Astronomy, The Astrophysical Journal. Women in Science Council and the Postdoc Council at at CfA Harvard & Smithsonian. Academic Counselor at National U. of La Plata, 2003-2006.

PROPOSALS

NSF AI Research Institute: AstroAI, to be proposed in Feb 2024.

The Line Emission Mapper, X-ray probe concept, Co-I, proposed to NASA in Nov. 2023.

The Radiation Environment of JWST's Key Planet Host LHS 475, CXC cycle 25th, PI, 2023

Normal-incidence Extreme Ultraviolet Photometer (NExtUP), NASA Smallsat Studies AS3, co-PI, 2019.

The Extreme-UV Stellar Characterization for Atmospheric Physics and Evolution (ESCAPE), NASA SMEX, Co-I, 2019.

Realistic MHD Modelling of Wind-Driven Processes in Cataclysmic Variable-Like Binaries, NASA HEC, PI, 2018.

Modeling Chandra Observations of Disk-Star Interaction, CXC cycle 20th, PI, 2018.

Weaving the history of the solar wind with magnetic field lines, HST cycle 26, Co-I, 2018.

Ionization of protoplanetary disks by energetic flare and CME particles, Smithsonian Institution, Co-I, 2017.

The High-Energy Environment of the Triple Super-Earth Host GJ 9827, XMM, Co-I, 2017.

Characterizing the Winds of M Dwarf Stars, HST Cycle 25, Co-I, 2017.

PTFO 8-8695b: The Youngest Exoplanet or a Stellar Feature?, CXC cycle 18th, Co-I, 2016.

Lessons from Mars: Are Habitable Atmospheres on Planets around M Dwarfs Viable?, Smithsonian Institution Consortium for Unlocking the Mysteries of the Universe grant, Co-I, 2014.

The first mass and angular momentum loss measurements for a CV-like binary, joint XMM and HST program, Co-I, 2014.

INVITED AND
PLENARY
TALKS

AstroAI: Enabling Next Generation Astrophysics. Caltech Astronomy Colloquium, Nov 2023.

AstroAI: Enabling Next Generation Astrophysics. Columbia University Astronomy Colloquium, Nov 2023.

AstroAI: Advancing Astrophysical Research through Tailored Artificial Intelligence. AMNH, NY Oct 2023.

AstroAI: Enabling Next Generation Astrophysics. CCA, Flatiron Institute, NY Oct 2023.

Stellar High-Energy Radiation and its Effects on Exoplanets. Astronomy colloquium at University of Washington, Seattle, Oct 2022.

Stellar High-Energy Radiation and its Effects on Exoplanets. Astronomy colloquium at University of Sheffield, UK, fall 2022.

StelNet: A Hierarchical Bayesian Neural Network for Stellar Characterization. Invited speaker at the European Astronomical Society Annual Meeting, Valencia, Jun 2022.

The Role of Magnetic Complexity in the Rotation Evolution of Cool Stars. Invited speaker at Fifty Years of the Skumanich Relations conference, Boulder, Colorado, March 2022.

Stellar High-Energy Radiation and its Effects on Exoplanets Invited speaker at the Sun-Climate Symposium, Madison, Wisconsin, May 2022.

StelNet: A Hierarchical Bayesian Neural Network for Stellar Characterization. Data Science colloquium at Universidad de San Martin, Argentina, May 2021.

Stellar High-Energy Radiation and its Effects on Exoplanets. Chandra X-ray Center Special Talk, Feb 2021.

Estudiando estrellas para entender planetas UBA coloquio. Physics colloquium at Universidad de Buenos Aires, Oct 2020.

En Busca de Planetas Habitables Usando Redes Neuronales. International Invited Speaker, Festival de Astronomia. Colombia, Jan 2020.

StellarNet: A Bayesian Neural Network for Stellar Evolution. Invited talk at CMM Pucon Symposium, Chile, Aug 2019.

Stellar Spin to Planetary Atmospheres. Invited talk at Planet-Star Connections in the Era of TESS and Gaia, Kavli Institute for Theoretical Physics in Santa Barbara, California, Jun 2019.

Stellar Activity and Rotation in Cool Stars. Keynote speaker at Einstein Fellows Symposium, Cambridge, MA, Oct 2018.

Stellar Activity and its Impact in Exoplanets. Invited talk at the “First light in a new era of astrophysics” meeting, Aarhus, Denmark, Jul 2018.

Gone With the Wind: from stellar spin to planetary atmospheres. CfA Summer Colloquium, Jun 2018.

The Revolution Revolution. Invited talk at Institute for Theory and Computation (ITC) Pizza Lunch, CfA, Feb 2018.

From stars to planets. Invited Colloquium, Boston College, Newton, MA, Nov 2017.

Magnetic Complexity: The missing piece that solves two puzzles, Invited talk at the “Stars and Planets Science Extravaganza 2!”, CfA, Cambridge, MA, Oct 2017.

Stellar Activity Evolution: Impact on Exoplanets and CV evolution. Invited Astrophysics Colloquium, Boston University, Boston, MA, Feb 2017.

The Missing Morphology Term in Stellar Rotation Evolution. Plenary talk at The 19th Cambridge Workshop on Cool Stars, Solar Systems, and the Sun, Uppsala, Sweden, June 2016.

OUTREACH
AND
SCIENTIFIC
JOURNALISM

AI in Astronomy presentation for 6th grade, Chenery Middleschool 2023.

Faculty for Amautas, platform for science outreach in Spanish.

Mirar el Cielo Viendo el Origen, C. Garraffo, G. Giribet, J. R. Martinez Galarza, & C. Aguirre., article for *Antesis, Argentina* 2021.

Mentor through the *YouthAstroNet* program at CfA, 2016.

Article for general public about the man in the cosmic landscape: C. Garraffo, G. Giribet, and K. Poppenheager; *Antesis, Argentina*, 2016.

Caption for Chandra X-Ray Observatory images. NASA HQ, 2014.

Video presentation on Black Holes for Shamrock Elementary School, Oct 2013.

Article on Chandra discovery for general public: “*Supernova SN 1979C: El agujero negro más joven?*”. C. Garraffo and G. Giribet, *CienciaNet, Argentina*, 2010.