Bryam Steve Pinilla Jurado

PhD(c) in Astronomy

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Education

March 2023–Present

Ph.D candidate in Astronomy, Universidad de Chile, Santiago de Chile, Chile

- **Thesis:** "*Combining Theory and Multimodal Observations to Classify and Characterize Supernovae*", under the supervision of **Dr. Francisco Förster Buron.**

March 2014–July 2022

Bachelor of Science in Astronomy, *Graduate Ranking: 1/10*, Universidad de Antioquia, Medellín, Colombia, Finished.

- **Thesis:** "*Spectral characterization of host stars exoplanets using iSpec obtained by the TIGRE telescope*", under the supervision of **Dr. Lauren Flor Torres & Dr. Camilo Delgado Correal.**

Research Interests

- **Astroinformatic**
  Machine and Deep Learning apply to astronomy. Big Data Analysis.
- **Stellar Astrophysics**
  Star evolution, Stellar spectroscopy, Transient Events.
- **Astrochemistry**

Research Experiences

2021–Present

RECA Internship, *Characterization of progenitors and explosions of hydrogen-rich supernovae*, Dr. Cluadia P. Guitierrez (University of Turku) and Dr. Santiago Gonzales-Gaitan (CENTRA), Virtual, Colombia.

2022–Present

Junior Researcher, Fundación Universidad del Valle (Cali, Colombia), Grupo de Astronomía y Astrofísica Macondo (GAAM), Dr. Lauren Flor-Torres and Dr. Camilo Delgado-Correal.

- **100 Hours 100 Schools** Leader in the project of Las Cumbres Observatory by International Astronomical Search Collaboration (IASC) "100 Hours 100 Schools". In this we counts with 90 minutes will allow our to take 7-9 images depending on the object we are imaging. This program is designed for examining and discussing images of deep sky objects, planets and minor planet bodies (asteroids and comets) with school students.

Computational Skills

Programming Languages

Operative systems	**Linux intermedium**
Programming language	**Python intermedium, C basic, SQL basic, R studying**
Astronomy Software	**IRAF Basic, iSpec**

Languages

○ **Spanish:** Native language

○ **English:** Level B2, certificated by Global World. Exam: In process

Experience

Academic

2016 – 2022 **Teacher assistant II**, Responsible for 4 hour/week how advisor for high school and basic math for graduateds of high school at Mathematics Seminar, Universidad de Antioquia, Medellín, Colombia.

2016 – 2022 **Teacher assistant I**, Responsible for 4 hour/week for 8 grade and 10 of high school, and basic math for 11 grade and graduateds of high school) at Mathematics Seminar, Universidad de Antioquia, Medellín, Colombia.

Profesional

2018 – 2020 **Science Communicator and logistic assistant**, We count with a mobile dome as a Planetarium where we projected differents scientific shows, specially in astronomy. Also we realized some workshops in astronomy for persons with a large variability of ages, Inmerdome, Medellín, Colombia.

Summer Schools, Conferences & Workshops

2025 **IV Chilean Astrochemistry**, *Contributing as part of the logistics committe. Presentation*, Computational and Observational Search for Sulfur-Bearing Molecules using the APEX telescope

2024 **Curso del National Laboratory for High Performance Computing (NLHPC) de Introducción y Avanzado en el uso del Clúster Leftraru EPU**

2024 **1st UNAB Astrochemistry Workshop.**

2024 **1st Colombian Symposium on Astrochemistry**, *Presentation*, Computational and Observational Search for Sulfu-bearing Molecules in the carbon star IRC+10216 using the APEX telescope.

2024 **First LSST LatinAmerica Meeting**, *Poster*, Combining Theory and Multimodal Observations to Classify and Characterize Transient Events
Universidad de La Serena, La Serena, Chile.

2024 **Summer School in Statistics for Astronomers**, Center for Astrostatistics, Pennsylvania State University.

2023 **Workshop in Computational Chemistry and Molecular Spectroscopy**, *Poster, Concón, Chile, Computational and Observational search for HCSCN, HCSCCH and c-C_2H_2S sulfur molecules around the carbon star IRC+10216.*

2022 **Colombian Meeting of Astronomy & Astrophysics (COCOA)**, *Ponente,* Tunja, Colombia.

2022 **International Virtual Courses (IVC)**, *Introduction to Astrophysical Modeling and Computational,* Institute Teknologi Bandung, Indonesia.

2022 **Astronomy Python Bootcamp**, *Red de Estudiantes Colombianos de Astronomía.*

2022 **1° Latinoamerican School of Gaia**, Universidad de Antioquia, Medellín, Colombia.

2021 **Correcting Reddening Intelligently for Supernova Probes (CRISP)**, *Characterization of the light-curve transition of Hydrogen-rich Supernovae (Speaker),* Virtual
`https://sn-crisp.github.io/CRISP2021/`.

2021 **SuperVirtual: A virtual conference on supernovae and related transients**, *Characterization of the light-curve transition of Hydrogen-rich Supernovae (Poster),* Virtual
`https://sites.google.com/view/supervirtual2021`.

2021 **Escuela de Verano en Astrofísica (EVA) 2021**, Institute of Radioastronomy and Astrophysics (IRyA), UNAM (México), Virtual, México.

2019 **Colombian Meeting of Astronomy & Astrophysics (COCOA)**, *Asistente,* Medellín, Colombia.

━━━━━━━ Complementary Education

2022 **Data Science for All (DS4A)**, MinTic and Correlation One, Colombia, 375 hours.

2020 **High dispersion spectroscopy for Astronomy and The large-scale structure of the Universe (AstroTwinColo)**, Universidad de Antioquia , Medellín, Colombia.

2019 **Machine Learning in Astronomy and Gravitational Lens (AstroTwinColo)**, Universidad de Antioquia , Medellín, Colombia.

2017 **Application of methodology tools in investigation: Process in Science, Technology and Investigation**, SENA, Cundinamarca, Colombia, 40 hours.

2016 **Radioastronomy with ALMA e Introduction to astrochemistry (AstroTwinColo)**, Universidad de Antioquia, Medellín, Colombia.

2013 **Seedbed of INGENIO UAM**, seedbed at Autonomous University of Manizales, Manizales, Colombia, 40 hours.

2012 **Comprehensive action Leadership program**, IPlay, Manizales, Colombia, 120 hours.

2010 **Aptitude in the English language**, Centro de Idiomas Americanos (CIA), Manizales, Colombia, 120 hours.