Jesus David Prada Gonzalez

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Born: March 8, 1995-Barrancabermeja, Colombia
Nationality: Colombian

Current position

Master of Sciences in Physics Student, Universidad de los Andes

Areas of specialization

Computational Astrophysics • Galactic & Extragalactic Astrophysics • Theoretical physics

Education

2012-2016 Bachelor of Sciences in Physics, Universidad de los Andes. GPA 4.66/5.0

2016-Ongoing Master of Sciences in Physics, Universidad de los Andes. GPA 4.77/5.0

Research

Summer 2015 **Research Experiences for Undergraduates (REU) program at Cornell University**: Comparison of the Schechter parameters of Halo mass function in different Halo environments from the Millennium Simulation. Advisers: Martha Haynes, Michael Jones & David Chernov.

July & November 2017 **Research internship at Heidelberg's Institute of Theoretical studies**: The expected shape of the Milky Way's Dark Matter Halo. Advisers: Volker Springel & Jaime Forero.

Ongoing **First author publication**: The influence of the environment on the HI mass functions in cosmological simulations. Collaborators: Martha Haynes, Michael Jones, Ricardo Giovanelly & Jaime Forero.

Schools & Events

Dec 2014 **Oral presentation at the Colombian Congress of Astronomy and Astrophysics (COCOA)**. Pasto, Colombia. Title: A Dark Matter density estimator that uses information from the phase space. Advisor: Jaime Forero.

Oct 2016 **Oral presentation at the Latin American XV Regional IAU Meeting (LARIM)**. Cartagena, Colombia. Title: The influence of the environment on the HI mass functions in cosmological simulations. Collaborators: Martha Haynes, Michael Jones, Ricardo Giovanelly & Jaime Forero.

Oct 2017 **Poster at the Colombian Congress of Astronomy and Astrophysics (COCOA)**. Pereira, Colombia. Title: The influence of the environment on the HI mass functions in cosmological simulations. Collaborators: Martha Haynes, Michael Jones, Ricardo Giovanelly & Jaime Forero.

Computing & Researcher Skills

Systems: Linux, MSWindows

Development: C, Python, Bash, SQL, Java, OpenMP, MPI.

Software: LaTeX, MATLAB, Mathematica.

Tools: Analysis of Arepo & Gadget-2 output databases. Parallelization. Finite differences. Finite volume. Finite elements. Monte Carlo. Machine Learning.

Service to the profession

2013-2016 **Professor's assistant** for basic and advanced physics courses at Universidad de los Andes: Physics II, Teaching Practice & Analytical Mechanics

2013-2015 **Teaching assistant** in Clínica de Problemas (Problem solving assistance for undergraduate students) at Universidad de los Andes.

2016-II **Teacher** of Experimental Physics I at Universidad de los Andes

2017 **Teacher** of Computational Tools at Universidad de los Andes

Grants & awards

2012 Academic Excellence Distinction 2012-I for obtaining the best GPA among all students from the Physics undergraduate program at Universidad de los Andes

Languages

Spanish: Native
English: Fluent (TOEFL Test Score 102/120)

Personal Interests

Speed Cubing (solving the Rubik's Cube as fast as possible).
Science Fiction.
French & German Languages.
Calisthenics.
Machine Learning.
Quantum Mechanics Foundations.