

Andres Daniel Perez

Curriculum Vitae

Soldado de Malvinas 2248
Villa Adelina(1607), Buenos Aires, Argentina
✉ andresperez@df.uba.ar
🌐 <http://users.df.uba.ar/andresperez/>



Personal Information

DNI 33.910.755
Nationality Argentina
Birthdate 19/12/1988
Age 31
Contact andresperez@df.uba.ar - perez.andres.daniel@gmail.com

Education

Apr 2015 **PhD in Physics**, *Instituto de Física de Buenos Aires (IFIBA), Universidad de Buenos Aires - CONICET.*
-present
Supervisor: Dr. Daniel Elbio LOPEZ-Fogliani.
Mar 2015 **Licenciatura en Ciencias Físicas (equivalent to a Masters degree in Physics)**, *Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires.*
GPA 9,39/10.
UBA's Average GPA over the last 5 years (Licenciatura Física): 8,73/10

Research experience

Mar 2014 **Astroparticle and Particle Physics Group**, *Instituto de Física de Buenos Aires (IFIBA), Universidad de Buenos Aires - CONICET*, <http://apgroup.df.uba.ar> .
-present
Tesis de Licenciatura. Advisor: Dr. Daniel Elbio LOPEZ-Fogliani; PhD at the present.
Aug 2011 **Instituto de Química Física de los Materiales, Medio Ambiente y Energía (INQUIMAE)**, *UBA, FCEN, Ciudad Universitaria, Pabellon II.*
July 2012
Participant in the project "Generación de clusters de metales nobles en fase gaseosa mediante ablación laser" (Generation of noble metal clusters in the gas phase by laser ablation). Advisor: Dr. Ernesto Marceca.

Scientific Interests

Pheno and **Particle Physics**
Theoretical Beyond Standard Model Phenomenology: Supersymmetric Models, Collider Physics,
Physics Neutrino Physics, Higgs Physics
Astroparticle Physics
Dark Matter candidates: Direct and Indirect Detection Searches, Astrophysical probes
Thesis *Ph. D. - Currently working on:* Phenomenology of supersymmetric models : Particles and Dark Matter.
Undergraduate: Gravitino as dark matter particle and its detectability.

Publications

- 2019 **MeV-GeV γ -ray telescopes probing gravitino LSP with coexisting axino NLSP as dark matter in the $\mu\nu$ SSM**, *arXiv:1911.08550 [hep-ph]*.
Germán A. Gómez-Vargas, Daniel E. López-Fogliani, Carlos Muñoz, Andres D. Perez
- 2019 **MeV-GeV γ -ray telescopes probing axino LSP/gravitino NLSP as dark matter in the $\mu\nu$ SSM**, *JCAP 2001 (2020) no.01, 058*, *arXiv:1911.03191 [hep-ph]*.
Germán A. Gómez-Vargas, Daniel E. López-Fogliani, Carlos Muñoz, Andres D. Perez
- 2017 **Search for sharp and smooth spectral signatures of $\mu\nu$ SSM gravitino dark matter with Fermi LAT**, *JCAP 1703 (2017) no.03, 047*, *arXiv:1608.08640 [hep-ph]*.
Germán A. Gómez-Vargas, Daniel E. López-Fogliani, Carlos Muñoz, Andres D. Perez, Roberto Ruiz de Austri
- Citations and more information about online preprints:
<http://inspirehep.net/author/profile/A.D.Perez.1>

Organization of Scientific Meetings

- Jul 2019 **Member of the Organizing Committee as Scientific Secretary**, *The 15th International Conference on the Dark Side of the Universe (DSU2019) - CABA, Buenos Aires, Argentina*.
1-week-Conference
<http://dsu2019.df.uba.ar/>

Attendance and Presentations at Scientific Meetings

- Dec 2019 **Opportunity for short baseline neutrino experiments in nuclear reactors in Argentina**, *ICAS-UNSAM, Gral. San Martín, Buenos Aires, Argentina*.
1-week-Workshop
<https://indico.cern.ch/event/854531/>
- Jul 2019 **The 15th International Conference on the Dark Side of the Universe (DSU2019)**, *CABA, Buenos Aires, Argentina*.
Poster Presentation: Multiple dark matter candidates analysis.
1-week-Conference
<http://dsu2019.df.uba.ar/timetable.html>
- Mar 2019 **10th CERN Latin-American School of High-Energy Physics (CLAS-HEP2019)**, *Villa General Belgrano, Córdoba, Argentina*.
Poster Presentation: Supersymmetric Dark Matter Candidates.
2-weeks-School
<https://indico.cern.ch/event/763013/>
- Sep 2018 **103a Reunión de la Asociación Física Argentina**, *Ciudad Autónoma de Buenos Aires, Buenos Aires, Argentina*.
Oral Presentation: Exploring axino-gravitino dark matter with gamma-ray telescopes in supersymmetric models with broken R-parity.
1-week-Conference
<http://rafa.fisica.org.ar/wp-content/uploads/2018/10/LibroResumenesRAFA2018.pdf>

- Jul 2018 **Conference on Shedding Light on the Dark Universe with Extremely Large Telescopes**, *Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italia.*
Poster Presentation: Decaying Dark Matter in the light of future MeV-GeV gamma-ray telescopes for Axino-Gravitino scenarios.
1-week-Conference
<http://indico.ictp.it/event/8320/>
- Jun 2018 **Summer School on Cosmology**, *Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italia.*
Poster Presentation: Decaying Dark Matter in the light of future MeV-GeV gamma-ray telescopes for Axino-Gravitino scenarios.
2-weeks-School
<http://indico.ictp.it/event/8317/>
- May 2018 **PHENOEXP 2018: LHC Physics and beyond**, *ICAS-UNSAM, Gral. San Martín, Buenos Aires, Argentina.*
3-days-Workshop
<https://indico.cern.ch/event/703922/>
- Apr 2018 **LAPIS 2018: La Plata International School on Astronomy and Geophysics ‘Cosmology in the era of large surveys’**, *La Plata, Buenos Aires, Argentina.*
Poster Presentation: Decaying Dark Matter in the light of the proposed e-Astrogam for different Axino-Gravitino scenarios.
1-week-School
<http://lapis2018.fcaglp.unlp.edu.ar/>
- Sep 2017 **102a Reunión de la Asociación Física Argentina**, *La Plata, Buenos Aires, Argentina.*
Oral and Poster Presentation: Search for sharp and smooth spectral signatures of $\mu\nu$ SSM gravitino dark matter with Fermi LAT.
1-week-Conference
<http://rafa.fisica.org.ar/wp-content/uploads/2018/10/Libro102Rafa2017extensoFinal.pdf>
- Aug 2017 **First Interdisciplinary Workshop on History, Philosophy and Current Perspectives of Cosmology**, *Buenos Aires, Argentina.*
3-days-Workshop
- Apr 2017 **AR-HEP II**, *ICAS-UNSAM, Gral. San Martín, Buenos Aires, Argentina.*
Oral Presentation
1-day-Workshop
<https://indico.cern.ch/event/628961/>
- Sep 2016 **High Precision for Hard Processes at the LHC**, *ICAS-UNSAM, Gral. San Martín, Buenos Aires, Argentina.*
HP2 4-days-Workshop
<https://indico.cern.ch/event/492257/>
- Jun - Jul 2016 **School on Dark Matter**, *ICTP-SAIFR / IFT-UNESP, São Paulo, Brazil.*
Oral Presentation: Search for sharp and smooth spectral signatures of $\mu\nu$ SSM gravitino dark matter with Fermi LAT.
2-weeks-School
<http://www.ictp-saifr.org/school-on-dark-matter-2/>
- Apr 2016 **QUBIC in Argentina**, *IAR, Buenos Aires, Argentina.*
1-day-Workshop
<http://fisica.cab.cnea.gov.ar/particulas/html/qubic/>

- Mar 2016 **Gravitational waves, Cosmology and Compact Objects**, FCAG-UNLP, La Plata, Buenos Aires, Argentina.
2-days-Workshop
- Apr 2013 **XVIII Congreso Argentino de Fisicoquímica y Química Inorgánica (CAF-QI) (XVIII Argentinean Congress of Physical-Chemistry and Inorganic Chemistry)**, Rosario, Santa Fe, Argentina.
Poster presentation: Generación de clusters de metales nobles en fase gaseosa mediante ablación laser (Generation of noble metal clusters in the gas phase by laser ablation).
Iván Paganini, Andres Perez, Luis Domenianni y Ernesto Marceca
1-week-Conference
<http://aaifq.org.ar/libroCafqi2013/>

Grants

- 2017-2019 **Project PIP 2017-2019** No 11220170100154CO. (PIP are CONICET projects)
Member of the project ‘Searching for Physics Beyond the Standard Model: Supersymmetry, Neutrino Physics, Dark Matter and Dark Energy’
Funding: 150,000 \$
- Mar 2015 **PhD fellowship, CONICET** (Consejo Nacional de Investigaciones Científicas y
Mar 2020 Técnicas), Argentina.
- 2004-2014 **Studentship** (study materials and transportation) Rotary Club de San Isidro Funda-
tion, Argentina. Period: High School and Licenciatura en Ciencias Físicas (equivalent
to a Masters degree in Physics).

Group Outreach Activities

- Jul 2019 **‘El lado oscuro del Universo’** Article and interview by Lis Tous about the conference
DSU2019.
Published in ‘Lo que pasa en Exactas’ <https://exactas.uba.ar/el-lado-oscuro-del-universo/>
- Nov 2019 **‘Astropartículas y partículas elementales’** Description of the group research
Nov 2018 interests and activities to students and colleagues.
Nov 2017 Poster at ‘Departamento de física open day’, years: 2016, 2017, 2018 and 2019
Nov 2016 <http://apgroup.df.uba.ar/press.html>
- Apr 2017 **‘A la búsqueda de nueva física’** Article by Patricia Olivella about our research
Jul 2017 group APgroup.
Published in the magazine ‘El Cable’ <http://comunicacion.exactas.uba.ar/903-2/>
Published in the online magazine ‘Nexciencia’ <https://nexciencia.exactas.uba.ar/particulas-elementales-astroparticulas-materia-energia-oscura-supersimetria-daniel-lopez-fogliani>

Languages

- Spanish Native.
- English Grade 10/10, Ingles Universitario IIIB, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires.

Postgraduate courses and schools

- Schools **10th CERN Latin-American School of High-Energy Physics (CLAS-HEP2019)** Villa General Belgrano, Córdoba, Argentina

Summer School on Cosmology Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italia

LAPIS 2018: La Plata International School on Astronomy and Geophysics
'Cosmology in the era of large surveys' La Plata, Buenos Aires, Argentina

School on Dark Matter ICTP-SAIFR / IFT-UNESP, São Paulo, Brazil

Courses **Statistics in Experimental Physics**, Departamento de Física, FCEyN, UBA
Experimental Cosmology: Dark Matter, Departamento de Física, FCEyN, UBA
Superstrings and Theory M, Departamento de Física, FCEyN, UBA
Introduction to Astrophysics, Departamento de Física, FCEyN, UBA
Observational Cosmology: Dark Energy, Departamento de Física, FCEyN, UBA