



Andres Alejandro Navarro Alsina

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EDUCATION

06/2020 - present
Bonn, Germany

Rheinische Friedrich-Wilhelms-Universität Bonn

Ph.D candidate in Astrophysics

06/2017 - 12/2019
Campinas, Brasil

Universidade Estadual de Campinas

M.Sc. in Physics

Thesis: *Effects of PSF modeling in cosmological estimates using weak gravitational lensing* [Link](#)

06/2011 - 06/2017
Bogotá, Colombia

Universidad Nacional de Colombia

B.Sc. in Physics

PROFESSIONAL EXPERIENCE

06/2021-present
Bonn, Germany

Argelander-Institut für Astronomie - Universität Bonn

- Graduate teaching assistant. Courses: Optical observations and Advanced laboratory course in optical astronomy

02/2020-06/2020
Campinas, Brasil

Universidade Virtual de São Paulo.

- Instructor. Courses: Basic mathematics, Fundamentals and Practices In teaching mathematics, Object-oriented programming.

08/2018-06/2020
Campinas, Brasil

Gleb Wataghin Institute of Physics - Universidade Estadual de Campinas

- Graduate teaching assistant. Courses: Physics I (mechanics), II (oscillation and waves) and IV (nuclear physics)

03/2014-06/2017
Bogotá, Colombia

Physics Department - Universidad Nacional de Colombia

- Undergraduate physics tutor. Courses: Bases of Theoretical Physics and Mathematics and Sciences Workshop. Other program: Autonomous study groups
- Scientific initiation scholar (Two research projects in gamma spectroscopy and Geant4 simulations of detection system)

01/2015-03/2015
Campinas, Brasil

The Brazilian Synchrotron Light Laboratory at CNPEM

- Scholar in the 24° Summer program

SCHOOLS, CONFERENCES AND TALKS (Excluding weekly and monthly meetings)

1. Euclid OU-SHE and Weak Lensing SWG Meeting, Ebinburgh, Scotland (virtual) (December 2022) (**talk**)
2. Euclid Consortium Meeting 2022, Oslo, Norway (April 2022)
3. Euclid Consortium Meeting 2021 (virtual) (May 2021)
4. IV encuentro internacional en ingenierías de la Universidad Popular del Cesar Colombia y el II Congreso Internacional en Informática y Ciencias de la Computación del Tecnológico Nacional de México Campus Perote, Veracruz México (**speaker**) [Link](#)
5. VIII Congreso Internacional de Innovación y Apropiación de las Tecnologías de la Información y las Comunicaciones CIINATIC 2021 (**speaker**) [Link](#)
6. Debating the potential of machine learning in astronomical surveys (virtual) (October 2020)
7. VII Euclid Developers Workshop (virtual) (October 2020)
8. Advanced Euclid School: The science of future cosmological surveys, Les Houches, France (virtual) (15-26 June 2020)
9. III Joint ICTP-Trieste/ICTP-SAIFR School on Observational Cosmology, Sao Paulo, Brazil (July, 2019)
10. Dark Energy Survey Collaboration Meeting, Campinas, Brazil (December, 2018) (**talk**)
11. Winter school of Observational Cosmology, UNICAMP, Campinas, Brasil (July, 2018)
12. III Particle Detector School, UniAndes, Bogotá, Colombia (November, 2016) (**poster**)
13. II Latinamerican School on Medical Physics, UdeA, Medellin, Colombia (December, 2015)
14. XI LASNPA, UdeA, Medellin, Colombia (December 2015) (**poster**)
15. II Andean School on Nuclear Physics, SGC, Bogotá, Colombia (October, 2014) (**poster**)

Scholarships and Awards

1. Member of the International Max Planck Research School (IMPRS) of Bonn and Cologne. (I am the student representative for the university of Bonn)
2. CNPq scholarship to pursued master's studies in either Universidade de São Paulo or Universidade Estadual de Campinas (top results in the Unified Postgraduate Examination in Physics (EUF) applied by the Brazilian Physics Society in 2017)
3. OEA-Instituto Balseiro Fellowship (2017) (Declined)
4. Teaching assistantship Universidad Nacional de Colombia (2017) (Declined)
5. Andres Bello Distinction (2010) (top results in the national exams ICFES)

Outreach

1. Linea Lunch talk: ‘Cosmology from weak lensing’ [Link](#)

Certifications

1. Didactic Design for Distance Learning, UNIVESP, 2021
2. Collaborative Teaching and Learning in Distance Education, UNIVESP, 2020
3. Pedagogical Mediation in Distance Education, UNIVESP, 2020
4. Resources for Teaching and Learning in Distance Education, UNIVESP, 2020

Computer skills

- Software: C , C++ , Python, Bash, Java, L^AT_EX, LINUX, Emacs, git, Root-CERN, Geant4, Jupyter, TensorFlow, Keras, Scikit-learn, emcee.
- Astro software: Galsim, DS9, TopCAT, IRAF, SExtractor, TreeCorr, Cosmosis, CLASS.
- Open Repositories Links: [GitHub](#), [Arch-AUR](#) .

Publications

- Euclid preparation: Weak-lensing shear measurement with machine learning, sensitivity to blending and selection effects. **A. Navarro-Alsina**, M. Tewes, T. Schrabback, et al., (in preparation, expected 2023)
- Dark Energy Survey Year 3 results: Cosmology from cosmic shear and its robustness to Data Calibration (A. Amon, D. Gruen, M. A. Troxel, N. MacCrann, S. Dodelson, A. Choi, C. Doux, L. F. Secco, S. Samuroff, E. Krause, J. Cordero, J. Myles, J. DeRose, R. H. Wechsler, M. Gatti, **A. Navarro-Alsina**, et Al ([link](#), 2021)
- Dark Energy Survey Year 3 Results: Weak Lensing Shape Catalogue. M. Gatti, E. Sheldon, A. Amon, M. Becker, M. Troxel, A. Choi, C. Doux, N. MacCrann, **A. Navarro Alsina**, et Al ([link](#), Nov 2020)
- Dark Energy Survey Year 3 Results: Point-Spread Function Modeling. (M. Jarvis, G. M. Bernstein, A. Amon, C. Davis, P. F. Léget, K. Bechtol, I. Harrison, M. Gatti, A. Roodman, C. Chang, R. Chen, A. Choi, S. Desai, A. Drlica-Wagner, D. Gruen, R. A. Gruendl, A. Hernandez, N. MacCrann, J. Meyers, **A. Navarro-Alsina**, et Al ([link](#), Nov 2020)
- +24 articles in second tier of authorship ([Link to full list](#))