

Miguel Sabogal García

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Experience

05-08/2022 **Research intern**, RECA Internship program 2022, Red de Est. de Astronomía de Col.

2019–2022 **Student representative**, Research Group for Elementary Particles and Cosmology.

2018 – 2019 **Mentor**, Pgm. Hermano mayor de extensión extracurricular por Pgm. de Física, UA.

05-06/2022 **Supportive Mentor**, Pgm. de Apoyo a la Permanencia y Graduación estudiantil, UA

Education

- 2015 – 2022 **Physicist**, Bachelor's degree/ Universidad del Atlántico.

Research Experience and Publications

Peer-Reviewed Publications

- Oliveros, A., **Sabogal, M.A.**, & Acero, M.A. Barrow holographic dark energy with Granda–Oliveros cutoff. Eur. Phys. J. Plus 137, 783 (2022). DOI: [10.1140/epjp/s13360-022-02994-z](https://doi.org/10.1140/epjp/s13360-022-02994-z)
- **Sabogal, M. A.** , Parra, I. C. , Bandera, M. , Gallardo, J. , & Mejía-Cortés, C. (2020, May). Mobility of localized beams in non-homogeneous photonic lattices. In Journal of Physics: Conference Series (Vol. 1547, No. 1, p. 012023). IOP Publishing. DOI: [10.1088/1742-6596/1547/1/012023](https://doi.org/10.1088/1742-6596/1547/1/012023)

Manuscripts Under Review

- Cardona, W., & **Sabogal, M.A.** (2022). Holographic energy density, dark energy sound speed, and tensions in cosmological parameters: H0 and S8. arXiv preprint [arXiv:2210.13335](https://arxiv.org/abs/2210.13335).

In Preparation

- **Sabogal, M.A.**, & Gonzalez, J.(2022). Hubble constant estimation from BAO signals with LSST-simulated data. Draft: [zenodo.7131390](https://zenodo.org/record/7131390)

Honors and Awards

- Funding award "**Enabling Science Program 2021 Award - 51**", granted by the Legacy Survey of Space and Time (**LSST**) observatory.
- **Undergraduate Honors Theses**, Universidad del Atlántico.

Presentations and Events

Event: *CoCo 2021: Cosmology in Colombia*

Type of event: *National Congress*

Type of participation: *Speaker*

Conference title: *Cosmological analysis of Barrow holographic dark energy model considering the Granda-Oliveros infrared cutoff.*

Place: *Online, 08/09/2021 – 11/09/2021.*

Event: *4th Colombian Meeting on High Energy Physics*

Type of event: *National Congress*

Type of participation: *Support staff and Assistant*

Place: *BARRANQUILLA - Universidad del Atlántico , 02/12/2019 – 06/12/2019.*

Event: *XVI National Meeting on Optics and VII Andean and Caribbean Conference on Optics and its applications*

Type of event: *National Congress*

Type of participation: *Speaker*

Conference title: *Mobility of localized beams in non-homogeneous photonic lattices.*

Place: *MONTERÍA - Universidad de Córdoba , 26/11/2019 – 30/11/2019.*

Languages

English Speak: **fluent** Read: **fluent** Write: **good** Nivel: **B2**

Additional Skills

Specialized software **Cosmic Linear Anisotropy Solving System (CLASS)** : *Advanced*

Specialized software **Gaussian processes (GaPP)** : *Advanced*

Python : *Advanced*

C/C++ : *Intermediate*

Fortran 90: *Intermediate*

MATLAB : *Advanced*

Mathematica : *Advanced*

Web repositories

GitHub: [msabogal](#)
