



FRANCISCO G. MAION

Birthdate: 15/09/1997

Birthplace: São Carlos, SP, Brazil

Nationality: Brazilian

Contact: fgmaion@gmail.com, francisco.maion@dipc.org

EDUCATION

PhD | Computational Cosmology

Donostia International Physics Center

Supervisor - Prof. Dr. Raúl E. Angulo

Sep. 2021 – Sep. 2025 (Projected)

Donostia/San Sebastián, Spain

Master of Science | Cosmology

Universidade de São Paulo

Supervisor - Prof. Dr. L. Raul W. Abramo

Apr. 2019 – Aug. 2021

São Paulo, Brazil

Bachelor of Science | Physics

Universidade de São Paulo

Mar. 2015 – Jan 2019

São Paulo, Brazil

PUBLICATIONS - UPDATED 07/24

Probabilistic Lagrangian bias estimators and the cumulant bias expansion.

2024

Stucker, J., Pellejero-Ibáñez, M., Angulo, R., Maion, F., Voivodic, R.

arXiv:2405.01950

HYMALAIA: A Hybrid Lagrangian Model for Intrinsic Alignments.

2023

Maion F., Angulo R. E., Bakx T., Chisari N. E., Kurita T., Pellejero-Ibáñez M.

Monthly Notices of the Royal Astronomical Society, Volume 531, Issue 2, May 2024, Pages 1365–2966

Suppressing variance in 21 cm signal simulations during reionization.

2023

Giri S., Schneider A., Maion F., Angulo R. E.

Astronomy & Astrophysics 669 A6 (2023)

The bacco simulation project: bacco hybrid Lagrangian bias expansion model in redshift space

2023

Pellejero Ibañez M., Angulo R. E., Zennaro M., Stucker J., Contreras S., Aricò G., Maion F.

Monthly Notices of the Royal Astronomical Society, Volume 520, Issue 3, April 2023, Pages 3725–3741

Statistics of biased tracers in variance-suppressed simulations

2022

Maion F., Angulo R. E. and Zennaro M.

Journal of Cosmology and Astroparticle Physics, IOP Publishing, 2022, 2022, 036

Priors on Lagrangian bias parameters from galaxy formation modelling.

2022

Zennaro M., Angulo R. E., Contreras S., Pellejero-Ibáñez M. and Maion F.

Monthly Notices of the Royal Astronomical Society, Volume 514, Issue 4, August 2022, Pages 5443–5456

GRANTS AND AWARDS

Prêmio Vídeo Pós-Graduação USP (€ 1,096.50)

2019

Prize given to best outreach video made by a graduate student in the area of Exact and Earth Sciences.

FAPESP M.Sc. Fellowship (€ 11,355.39)

2019-2021

Highly competitive grant given by state funding agency.

FAPESP Undergraduate Fellowship (€ 2,205.26)

2017-2018

Highly competitive grant given by state funding agency.

SKILLS

Programming: Advanced Python (NumPy, SciPy, Matplotlib, Jupyter Notebook), Intermediate C

Cosmological Codes: CAMB, Gadget, pymultinest, BACCO (Co-developer)

Languages: Portuguese (Native), English (C1), Spanish (Fluent), Euskera (Beginner)

SELECTED TALKS

HYMALAIA: A Hybrid Lagrangian Model for Intrinsic Alignments

IX Fundamental Cosmology Meeting

November 2023
La Laguna, Spain

Oxford Cosmology Journal Club

October 2023
Oxford, UK

UCL Cosmology Seminar

October 2023
London, UK

Statistics of Biased Tracers in Variance-Suppressed Simulations

Midwest Cosmology Network Journal Club

May 2022
Online

MIAPbP

May 2022
Garching, Germany

IFT-Unesp AC/JC

May 2022
Online

TEACHING EXPERIENCE

Cosmology (5 Day Workshop)

Aug. 2021
São Paulo, Brazil

Universidade de São Paulo

Physics I (Teaching Assistant)

Jan. 2019 - Jul. 2019
São Paulo, Brazil

Universidade de São Paulo

Physics I (Teaching Assistant)

Jan. 2020 - Jul. 2020
São Paulo, Brazil

Universidade de São Paulo

COMMUNITY INVOLVEMENT

Preparatory Course for Underprivileged Students

Jan. 2019 – Aug. 2020
São Paulo, Brazil

Physics teacher at a preparatory course focusing on university admission exams.

REFERENCES

Prof. Raul E. Angulo

Donostia International Physics Center

Leader of DIPC Computational Cosmology Group

Contact: reangulo@dipc.org

Prof. N. Elisa Chisari

University of Utrecht

Assistant Professor at the Institute for Theoretical Physics

Contact: n.e.chisari@uu.nl

Prof. L. Raul Abramo

Professor at the Mathematical Physics Department

Contact: abramo@if.usp.br

University of São Paulo