

CURRICULUM VITAE

Nikolaos Karnesis

PERSONAL DATA

Date of Birth: 1985

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EDUCATION

2011 - 2015	Ph.D. Studies Institut d'Estudis Espacials de Catalunya, Barcelona, Spain.
2003 - 2010	Diploma on Applied Mathematical and Physical Sciences National Technical University of Athens, Greece.

PROFESSIONAL EXPERIENCE

2026 - present	Associate Researcher Research Center for Astronomy and Applied Mathematics, Academy of Athens, Athens, Greece
2026	Post Doc Position IAASARS / NOA, Athens, Greece.
2021 - 2025	Post Doc Position Aristotle University of Thessaloniki, Thessaloniki, Greece.
2020	CNRS Fellow Laboratoire AstroParticule et Cosmologie (APC), Paris, France.
2018 - 2019	CNES Fellow Laboratoire AstroParticule et Cosmologie (APC), Paris, France.
2015 - 2017	Post Doc Position Institut für Gravitationsphysik der Leibniz Universität (AEI), Hannover, Germany.
2016 - 2017	ESA LISA Pathfinder Mission Operations Scientist on duty, data analyst.

RESEARCH INTERESTS

My research revolves mainly around gravitational wave physics, astrophysics, cosmology, and data analysis. This includes both pure science and data analysis aspects, such as binary population properties or compact binaries parameter estimation, but also projects focusing on instrument calibration and data preprocessing. Within the LISA Consortium, I have been working on the ESA LISA mission, which is going to fly in the early 2030s, and is going to measure gravitational waves in space. I am quite interested in investigating solutions for the data analysis problems that LISA is going to face, which are mostly caused by the vast number of gravitational wave sources that are going to be overlapping in its data stream. In the past, I have been heavily involved in the ESA LISA Pathfinder mission (LPF). The LPF was launched in 2015 with the aim of testing key technologies for future space-borne gravitational-wave detectors. Before launch, I have been developing the data analysis tools in order to analyse the data almost in real time during mission operations.

Keywords: LISA Pathfinder and LISA data analysis, Bayesian statistics, Gravitational-Waves, compact binaries, stochastic Gravitational-Wave background, system calibration, experiment design, parameter estimation, signal analysis, matched filtering, Markov Chain Monte Carlo methods, Machine Learning.

GRANTS

2025	RADIGAL, HFRI.
2023	EMILIA, MSCA.
2020	ESA Prodex funding (PRODEX GR 2019).
2018	SpaceSHEL, HFRI.
2017	2017 DIA-PF CNES Fellowship.
2013	2012 BE1 00836. Visiting grant provided by the Generalitat de Catalunya.
2011	FI-DGR 2011. PhD Fellowship provided by the Generalitat de Catalunya.
2008	Training Grant. INSA Lyon in collaboration with the ESRF.

RESEARCH PROJECTS

Participated to numerous national and international projects relevant to Gravitational Wave Astronomy, across four different countries. Those were funded by national agencies and/or the European Commission.

LANGUAGES

Greek	Maternal
English	Fluent (Certificate of Proficiency, IELTS 7.5)
Catalan	Basic

RESEARCH ACTIVITIES & SCIENTIFIC COMMUNITIES

Scientific Communities	<p>ESA LISA Pathfinder mission: LISA Pathfinder Data Analysis Team, Operations.</p> <p>ESA LISA mission: Leading the Greek contribution to the mission's Ground Segment.</p> <p>LISA Consortium: LISA Consortium full member, Team Leader of the National Team.</p> <p>ESA: LISA Science Team.</p> <p>Virgo: Detector Characterization Group.</p> <p>Hellenic Society on Relativity Gravitation and Cosmology: Elected on the Governing Council 2020-2024), served as Treasurer.</p> <p>European Space Sciences Committee: Astronomy and Fundamental Physics Panel.</p> <p>Hellenic Astronomical Society: Full member.</p>
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REVIEWING ACTIVITIES

IOP Science Journals.
Physical Review (American Physical Society)
Science (American Association for the Advancement of Science)
NASA
Science and Technology Facilities Council (UK Research and Innovation)

TEACHING

2020 - 2024	Computational Astrophysics - Msc in <i>Computational Physics</i> . AUTH, Thessaloniki
2020 - 2023	General Relativity and Applications - Msc in <i>Subatomic physics and technological applications</i> . AUTH, Thessaloniki

PUBLICATIONS

More than 90 published works, in various topics, with h -index = 36, according to inspirehep.net, and 45 according to [google scholar](https://scholar.google.com).