

CENTRA (Center for Astrophysics and Gravitation),
Instituto Superior Técnico, Universidade de Lisboa,
Physics Department,
Av. Rovisco Pais 1,
1049-001 Lisbon, Portugal

**PERSONAL
INFORMATION**

Name: Kyriakos Destounis
Birth date: 25/12/1988
Nationality: Greek
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EDUCATION

PhD in “Physics” **1/10/2016 – 10/9/2019**
Centre for Astrophysics and Gravitation (CENTRA),
Instituto Superior Técnico, Universidade de Lisboa, Portugal
Thesis title: “Dynamical behavior of black-hole spacetimes”
Supervisors: Prof. Vitor Cardoso, Assoc. Prof. João Costa
Final Grade: Pass with Distinction

MSc. in “Physics and Technological Applications” **19/12/2013 – 4/7/2016**
School of Applied Mathematical and Physical Sciences,
National Technical University of Athens, Greece
Thesis: “Gravitational collapse of matter in McVittie spacetime”
Supervisor: Prof. Eleftherios Papantonopoulos
Final Grade: 9.9/10

MSc. in “Microsystems and Nanodevices” **1/10/2012 – 17/3/2015**
School of Applied Mathematical and Physical Sciences,
National Technical University of Athens, Greece
Thesis: “Topological insulator interfaces with superconductors”
Supervisor: Prof. Georgios Varelogiannis
Final Grade: 8.4/10

BSc. in “Informatics” **15/9/2006 – 7/7/2012**
School of Information and Communication Technologies,
University of Piraeus, Athens, Greece
Thesis: “Chaos in nonlinear dynamical systems”
Supervisor: Prof. Aristeidis Sapounakis
Final Grade: 8.1/10

EMPLOYMENT

Junior Researcher – Fundação para a Ciência e a Tecnologia – FCT **25/11/2024 –**
Center for Astrophysics and Gravitation (CENTRA),
Instituto Superior Técnico, Universidade de Lisboa, Portugal
Grant duration: 6 years

Post-Doc Researcher **1/10/2022 – 30/9/2024**
Gravity Theory Group,
Sapienza University of Rome, Italy
Employer: Prof. Paolo Pani

Post-Doc Researcher – Teaching Assistant **1/10/2019 – 30/9/2022**
Theoretical Astrophysics Group,
University of Tübingen, Germany
Employer: Prof. Kostas D. Kokkotas

TEACHING & SUPERVISING EXPERIENCE

Teaching at Instituto Superior Técnico, Lisbon, Portugal

1/04/2025 –

- Master's and PhD course: Black holes and gravitational waves

Teaching Assistant at University of Tübingen, Germany

1/10/2019 – 30/9/2022

- BSc. courses: Electrodynamics, [Classical Field Theory](#)
- BSc./MSc. courses: [Introduction to General Relativity](#), [Relativistic Astrophysics and Experimental Gravitation](#)

Co-supervisor of 10 MSc student theses, 4 in Tübingen (F. Thaalba, G. Mascher, A. Kulathingal, G. Huez), 5 at Sapienza (F. Angeloni, A. Courty, E. Levati, A. Mollicone, R. F. Rosato) and 1 at Sapienza/GSSI (L. Pezzella)

1/10/2020 –

ACADEMIC ACTIVITIES

CENTRA, Instituto Superior Técnico, Lisbon, Portugal

15/1/2025 –

CENTRA seminars co-organizer

Sapienza University of Rome, Italy

15/9/2023 – 1/9/2024

Group meeting co-organizer at the Gravity Theory Group

Member of the “Einstein Telescope (ET)” Collaboration

10/7/2023 –

Member of the “European Consortium for Astroparticle Theory (EuCAPT)”

1/6/2022 –

Member of the “Hellenic Society on Relativity, Gravitation and Cosmology”

15/9/2022 –

University of Tübingen, Germany

1/10/2019 – 30/9/2022

Einstein seminar co-organizer at the Theoretical Astrophysics Group

University of Tübingen, Germany

10/9/2020 – 30/9/2022

Group meeting co-organizer at the Theoretical Astrophysics Group

Member of the “LISA Early Career Scientist (LECS)” Group

1/10/2019 –

Member of the “LISA Consortium”, Fundamental Physics and Astrophysics WGs

12/7/2019 –

Academic Referee (> 70 articles)

8/12/2018 –

Referee for **Cambridge University Press**, **Springer Publishing**, **GACR Czech Republic research grants**, Physical Review Letters (**PRL**), Physical Review D (**PRD**), Journal of High Energy Physics (**JHEP**), Journal for Cosmological and Astroparticle Physics (**JCAP**), The Astrophysical Journal (**ApJ**), Classical and Quantum Gravity (**CQG**), General Relativity and Gravitation (**GERG**), Physics Letters B (**PLB**) and others

Instituto Superior Técnico, Lisbon, Portugal

10/9/2017 – 25/7/2018

Group meeting co-organizer at the Gravitation in Técnico (GRIT) group, CENTRA

GRANTS & FUNDING

- **Funding agent:** Fundação para a Ciência e a Tecnologia – FCT Grant, Junior Researcher, Individual Call to Scientific Employment Stimulus - 6th Edition
Principal Investigator: Kyriakos Destounis
Grant number: [2023.07417.CEECIND/CP2830/CT0008](#)
Grant title: “Gravitational-wave footprints of astrophysical environments around black holes”
Associated institution: Instituto Superior Técnico – Center for Astrophysics and Gravitation (CENTRA)
Total grant amount: 255.900 €

- **Funding agencies:** Deutscher Akademischer Austauschdienst (DAAD), State Scholarships Foundation (IKY)

Grant number: 57628320

Grant title: DAAD program for the “Promotion of the exchange and scientific cooperation between Greece and Germany IKYDAAD 2022”

Collaborators: Prof. Kostas D. Kokkotas and Prof. Theodoros Apostolatos

Universities involved: University of Tübingen, National and Kapodistrian University of Athens

Total grant amount: 16.000 €

SCIENTIFIC MISSIONS

- Visitor at Sapienza University of Rome, Italy **23/2/2025 – 3/3/2025**
- Visitor at the School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece **11/2/2025 – 22/2/2025**
- Visitor at CENTRA, Instituto Superior Técnico, Lisbon, Portugal **1/10/2024 – 24/11/2024**
- Visitor at the Physics Department, Universität Tübingen, Tübingen, Germany **21/4/2024 – 3/5/2024**
- Visitor at Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Potsdam, Germany **19/2/2024 – 23/2/2024**
- Visitor at the School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece **15/7/2023 – 19/9/2023**
- Visitor at CENTRA, Instituto Superior Técnico, Lisbon, Portugal **10/4/2023 – 24/4/2023**
- Visitor at the Department of Physics, National and Kapodistrian University of Athens, Greece **25/8/2022 – 19/9/2022**
- Visitor at the Mathematics Department, Instituto Superior Técnico, Lisbon, Portugal **4/2/2020 – 19/2/2020**
- Visitor at the Department of Applied Mathematics, and Theoretical Physics, University of Cambridge, UK **20/5/2019 – 25/5/2019**
- Visitor at Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Hannover, Germany **12/5/2019 – 17/5/2019**
- Visitor at the Physics Department, Universität Tübingen, Tübingen, Germany **10/4/2019 – 17/4/2019**
- Visitor at the Institute of Theoretical Physics, Charles University, Prague, Czech Republic **10/3/2019 – 17/3/2019**

ORGANIZATION COMMITTEES

- **12th Aegean Summer School**, *Recent Developments in theory and observations in gravity and cosmology*, Sifnos, Greece, **9-14 September 2024**
- **11th Aegean Summer School**, *Recent Developments in theory and observations in gravity and cosmology*, Syros, Greece, **5-15 September 2022**

INVITED SPEAKER IN SEMINARS, COLLOQUIA & CONFERENCES

1. **“Orbital resonances in extreme-mass-ratio inspirals and gravitational wave phenomenology”**, Center for Astrophysics and Gravitation (CENTRA), Instituto Superior Técnico, Lisbon, Portugal, **3 April 2025**
2. **“General-relativistic black-hole dynamics and gravitational waves”**, Physics department, National Technical University of Athens, Athens, Greece, **28 March 2025**
3. **“When resonances kick in: gravitational-wave phenomenology of orbital resonances in extreme-mass-ratio inspirals”**, School of Applied Mathematical and Physical Sciences, Athens, Greece, **18 February 2025**
4. **“Quasinormal modes and Pseudospectra: A complementary notion to black-hole spectroscopy”**, Intercontinental Seminars on Gravity and Cosmology (ISGC), (online), **20 November 2024**
5. **“Testing gravity with space detectors: the case of extreme-mass-ratio inspirals”**, Workshop on the Relativistic and Exotic Universe, Fudan { Tübingen Universities, Shanghai, China, (online), **19 September 2024**

6. ***“The balance between chaos and order: a PostDoc’s tale”***, Invited speaker at “A Symposium in honor of Kostas Kokkotas”, Syros, Greece, **2 September 2024**
7. ***“Inspirational and ringdown tests of strong-field gravity”***, Einstein Seminar, Universität Tübingen, Germany, **2 May 2022**
8. ***“Gravitational-wave footprints of astrophysical environments around black holes”***, Gravity group, Sapienza University of Rome, Italy, **28 February 2024**
9. ***“Gravitational-wave tests of strong-field gravity: transient resonances and astrophysical environments”***, Astrophysical and Cosmological Relativity division, Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Potsdam, Germany, **21 February 2024**
10. ***“Non-integrable extreme-mass-ratio inspirals: transient resonances and gravitational waves”***, LISA Phase A, Gravitational Waves from Massive Black Holes in the “Gravitational Universe”, University of Milano-Bicocca, Milan, Italy, **30 January 2024**
11. ***“Gravitational-wave tests of strong-field gravity: transient resonances and astrophysical environments”***, Gravity group journal club, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece, **19 December 2023**
12. ***“Black-hole spectroscopy and spectral instability of quasinormal modes”***, AstroParticle Symposium 2023, Institut Pascal, Orsay, France, **10 November 2023**
13. ***“Spectral instability of quasinormal modes and strong cosmic censorship”***, Workshop NTUA 2023, Athens, Greece, **18 September 2023**
14. ***“Challenging black-hole spectroscopy: quasinormal modes, spectral instabilities and the pseudospectrum”***, Gr@v group, University of Aveiro, Portugal, **21 April 2023**
15. ***“Supermassive rotating boson stars in highly-asymmetric binaries: transient resonances and gravitational waves”***, Center for Astrophysics and Gravitation (CENTRA), Instituto Superior Técnico, Lisbon, Portugal, **12 April 2023**
16. ***“Inspirational and ringdown tests of strong-field gravity”***, Sapienza University of Rome, Italy, **12 October 2022**
17. ***“Gravitational-wave astrophysics with LISA: slow evolvers win in the end”***, Gran Sasso Science Institute, L’Aquila, Italy, **5 October 2022**
18. ***“Black Hole Spectroscopy: quasinormal modes, spectral instabilities and the pseudospectrum”***, 11th Aegean Summer School, Syros, Greece, **14 September 2022**
19. ***“Gravitational-wave astrophysics with the Laser Interferometer Space Antenna”***, Astrophysics Colloquium, Universität Tübingen, Germany, **13 June 2022**
20. ***“Pseudospectrum of black holes and compact objects”***, Centro Brasileiro de Pesquisas Físicas – CBPF, Rio de Janeiro, Brazil, **29 March 2022**
21. ***“Pseudospectrum of black holes and compact objects”***, Perimeter Institute for Theoretical Physics, Canada (online), **3 February 2022**
22. ***“Gravitational-wave imprints of non-integrable extreme-mass-ratio inspirals”***, Center for Astrophysics and Gravitation (CENTRA), Instituto Superior Técnico, Portugal (online), **8 June 2021**
23. ***“Gravitational-wave imprints of non-integrable extreme-mass-ratio inspirals”***, Gr@v group, University of Aveiro, Portugal (online), **2 June 2021**
24. ***“Strong cosmic censorship with a positive cosmological constant”***, DAAD meeting: Neutron stars in the GW era, Universität Tübingen, Germany, **15 November 2019**
25. ***“Strong cosmic censorship in charged black-hole spacetimes”***, Department of Applied Mathematics and Theoretical Physics (DAMPT), University of Cambridge, England, **24 May 2019**
26. ***“Strong cosmic censorship in charged black-hole spacetimes”***, Max-Planck Institute for Gravitational Physics, Hannover, Germany, **16 May 2019**
27. ***“Strong cosmic censorship in charged black-hole spacetimes”***, Theoretical Astrophysics Group, Universität Tübingen, Germany, **11 April 2019**
28. ***“Strong cosmic censorship in charged black-hole spacetimes”***, Institute of Theoretical Physics, Charles University, Prague, Czech Republic, **12 March 2019**

29. **“Quasinormal modes and strong cosmic censorship”**, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece, **4 January 2018**
30. **“Pseudospectrum of black holes”**, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece, **19 April 2017**

SELECTED PUBLICATIONS INSPIRE-HEP

- [1] E. Levati, A. Cárdenas-Avendaño, **K. Destounis**, and P. Pani. Cumulative effect of orbital resonances in extreme-mass-ratio inspirals. [Phys. Rev. D, accepted](#).
- [2] L. Pezzella, **K. Destounis**, A. Maselli, and V. Cardoso. Quasinormal modes of black holes embedded in halos of matter. [Phys.Rev.D 111 \(2025\) 6, 064026](#).
- [3] A. Eleni, **K. Destounis**, T. A. Apostolatos, and K. D. Kokkotas. Resonant excitation of eccentricity in spherical extreme-mass-ratio inspirals. [Phys.Rev.D 110 \(2024\) 12, 124004](#).
- [4] R. F. Rosato, **K. Destounis**, and P. Pani. Ringdown stability: greybody factors as stable gravitational-wave observables. [Phys.Rev.D Letters 110 \(2024\) 12, L121501](#).
- [5] V. Boyanov, V. Cardoso, **K. Destounis**, J. L. Jaramillo, and R. Panosso Macedo. Structural aspects of the anti-de Sitter black hole pseudospectrum. [Phys.Rev.D 109 \(2024\) 6, 064068](#).
- [6] **K. Destounis**, V. Boyanov, and R. Panosso Macedo. Pseudospectrum of de Sitter black holes. [Phys.Rev.D 109 \(2024\) 4, 044023](#).
- [7] **K. Destounis**, F. Angeloni, M. Vaglio, and P. Pani. Extreme-mass-ratio inspirals into rotating boson stars: Nonintegrability, chaos, and transient resonances. [Phys.Rev.D 108 \(2023\) 8, 8](#).
- [8] V. Cardoso, **K. Destounis**, F. Duque, R. Panosso Macedo, and A. Maselli. Gravitational waves from extreme-mass-ratio systems in astrophysical environments. [Phys.Rev.Lett. 129 \(2022\) 24, 24110](#).
- [9] V. Boyanov, **K. Destounis**, R. Panosso Macedo, V. Cardoso, and J. L. Jaramillo. Pseudospectrum of horizonless compact objects: a bootstrap instability mechanism. [Phys.Rev.D 107 \(2023\) 6, 064012](#).
- [10] P. Amaro-Seoane *et al.* Astrophysics with the Laser Interferometer Space Antenna. 3 2022. [Living Rev.Rel. 26 \(2023\) 1, 2](#), **Significant contribution in Section 3**.
- [11] M. H. Y. Cheung, **K. Destounis**, R. Panosso Macedo, E. Berti, and V. Cardoso. Destabilizing the Fundamental Mode of Black Holes: The Elephant and the Flea. [Phys.Rev.Lett. 128 \(2022\) 11, 111103](#).
- [12] V. Cardoso, **K. Destounis**, F. Duque, R. Panosso Macedo, and A. Maselli. Black holes in galaxies: Environmental impact on gravitational-wave generation and propagation. [Phys.Rev.D Letters 105 \(2022\) 6, L061501](#).
- [13] **K. Destounis**, R. Panosso Macedo, E. Berti, V. Cardoso, and J. L. Jaramillo. Pseudospectrum of Reissner-Nordström black holes: quasinormal mode instability and universality. [Phys. Rev. D 104, 084091 \(2021\)](#).
- [14] **K. Destounis**, A. G. Suvorov, and K. D. Kokkotas. Gravitational-wave glitches in chaotic extreme-mass-ratio inspirals. [Phys. Rev. Lett. 126 \(2021\) 14, 141102](#).
- [15] **K. Destounis**, R. D. B. Fontana, F. C. Mena, and E. Papantonopoulos. Strong Cosmic Censorship in Horndeski Theory. [JHEP 10 \(2019\) 280](#).
- [16] **K. Destounis**. Charged Fermions and Strong Cosmic Censorship. [Phys. Lett. B 795 \(2019\) 211-219](#).
- [17] V. Cardoso, J. L. Costa, **K. Destounis**, P. Hintz, and A. Jansen. Strong cosmic censorship in charged black-hole spacetimes: still subtle. [Phys. Rev. D 98 \(2018\) 10, 104007](#).
- [18] V. Cardoso, J. L. Costa, **K. Destounis**, P. Hintz, and A. Jansen. Quasinormal modes and Strong Cosmic Censorship. [Phys. Rev. Lett. 120 \(2018\) 3, 031103](#), **Editor’s Suggestion, Featured in Physics**.

ACADEMIC SKILLS **Programming languages:** Mathematica, Matlab, C++ (intermediate level)
Software: Windows, Linux, LaTeX, Cluster computing

LANGUAGES Greek (native), English (fluent), Portuguese (elementary)

OUTREACH

- **Mentor of young researchers** (MSc, PhD students, early PostDocs) at the “LISA Early Career Scientist” Working Group
- Kyriakos Destounis, **“An Easter-egg hunt through data”**, contribution to the project [The Birth of an Idea](#)

INTERVIEWS & PRESS COVERAGE

- “A possible failure of determinism in General Relativity”, [APS Physics](#)
- “Some black holes erase your past”, [Berkeley News](#)
- “Does General Relativity violate determinism in charged black holes?”, [Physics World](#)
- “The wall of death around black holes could break down”, [Live Science](#)
- “Here’s how you could survive being sucked into a black hole”, [Futurism](#)
- “You could survive falling into a black hole but it may get weird”, [New Scientist](#)
- “Doomsday, according to Einstein”, [GRIT press release](#)
- “Mind the environment”, [GRIT press release](#)