

# LUCA VISINELLI

*Tenure-track associate professor,  
Shanghai Jiao Tong University;  
Fellow, T. D. Lee Institute (TDLI)*

+86 183 1706 2099  
✉ [luca.visinelli@sjtu.edu.cn](mailto:luca.visinelli@sjtu.edu.cn)  
🌐 [lucavisinelli.com](http://lucavisinelli.com)  
📄 [luca.visinelli](https://www.linkedin.com/company/luca-visinelli)

**Personal website:** [lucavisinelli.com](http://lucavisinelli.com); **Institutional website:** [tdli.sjtu.edu.cn](http://tdli.sjtu.edu.cn)

## Education

- December 16, 2011 **Ph.D. in Physics**, *The University of Utah*, Salt Lake City, USA.  
Advisor: Prof. Paolo Gondolo. Thesis: [Axions in CDM and inflation models](#)
- August 5, 2011 **M.Sc. in Physics**, *The University of Utah*, Salt Lake City, USA.  
Advisor: Prof. Paolo Gondolo. GPA: 3.982/4.000
- June 22, 2007 **M.Sc. in Physics**, *University of Bologna*, Italy.  
Advisor: Prof. Fiorenzo Bastianelli. Grade: 110/110 *cum Laude*
- October 14, 2005 **B.Sc. in Physics**, *University of Bologna*, Italy.  
Advisor: Prof. Giovanni Carlo Bonsignori. Grade: 110/110 *cum Laude*
- July 4, 2002 **High School Diploma**, *High School "E. Fermi"*, Bologna, Italy. Grade: 100/100.

## Previous research experience

- 2020 – 2021 **Marie Skłodowska-Curie "Fellini" fellow**, [INFN Frascati National Laboratories](#) (Italy)
- 2019 – 2020 **GRAPPA fellow**, [GRAPPA](#), [University of Amsterdam](#) (Netherlands)  
*Principal investigator:* Prof. Christopher Weniger (GRAPPA, Amsterdam)
- 2016 – 2019 **Postdoctoral researcher**, [NORDITA](#), [Stockholm](#) (Sweden)  
*Principal investigator:* Prof. Katherine Freese (UT Austin & Stockholm U.)
- 2013 – 2015 **Postdoctoral fellow**, [Euro-Mediterranean Center \(CMCC\)](#), Bologna (Italy)  
*Principal investigators:* Prof. Simona Masina (CMCC)
- 2007 – 2011 **Research assistant**, The University of Utah (USA)

## Certifications

- 2020-2031 **National Scientific Qualification** for the role of Associate Professor in Italy.  
Sector of competence: "02/A2 - Theoretical Physics of Fundamental Interactions"

## Publications

75 papers (of which 64 published/accepted on top-tier JCR journals), **h-index=40**;  
7000+ total citations, 16 (31) papers with 100+ (50+) citations; 106.9 average citations  
per refereed paper (INSPIRE statistics as of March 28, 2024).  
Full list of publications provided below, see also my [INSPIRE](#), [ADS](#), and [Google Scholar](#).

- ORCID** [0000-0001-7958-8940](https://orcid.org/0000-0001-7958-8940)
- ResearcherID** [J-5573-2015](https://www.researcherid.org/profile/J-5573-2015)
- Scopus** [34168444500](https://www.scopus.com/authid/detail.uri?authorid=34168444500)
- ArXiv** My article list on <https://arxiv.org>
- Sciprofiles** <https://sciprofiles.com/profile/lucavisinelli>
- GIT Repository** <https://github.com/lucavisinelli>

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## Individual Grants Awarded

- August 2023 **Research Fund for International Excellent Young Scientists**, National Natural Science Foundation of China, grant No. 12350610240. Principal Investigator: **Luca Visinelli**. 2023–2025. Approx. 110.000 USD for 2 years.
- November 2020 **Tenure-track position** offered as Associate Professor, Shanghai Jiao Tong University, with joint Fellowship at the [Tsung-Dao Lee Institute](#). Startup fund: Approx. 210.000 USD.
- November 2020 [Horizon 2020 FELLINI programme](#), issued by the European Union under the **Skłodowska-Curie** COFUND Action, grant agreement No. 754496 (H2020-MSCA-COFUND- 2016 FELLINI) “Tools for Axions, Leptogenesis, and Neutrino Theories (TALeNT)”. Principal Investigator: **Luca Visinelli**. 2020-2023. 50.520,00 EUR/year.
- 2007-2008 [Award for PhD students abroad](#) (26.318,70 EUR), University of Bologna
- Fall 2006 Undergraduate Student Award (Approx. 2.000 EUR), University of Bologna

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## Fellowships and Prizes Awarded

- January 2022 [2021 Buchalter Cosmology Prize \(Third Prize\)](#) for the paper “The XENON1T excess and future prospects” [[hep-ph/2103.15834](#)]. Co-recipients: S. Vagnozzi, P. Brax, A.C. Davis, J. Sakstein. Also announced by the [American Astronomical Society](#).

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## Group Grants and Fellowships Awarded

- Fall 2022 [Green Bank Telescope Proposal: “Continuing the Search for Axion Dark Matter in Andromeda with VEGAS”](#), Accepted (GBT/23A-245). Data has been taken during 2023.
- Spring 2022 [COST Action Proposal OC-2019-1-23688 “COSMIC WISPerS in the Dark Universe: Theory, astrophysics and experiments”](#), Approved. Principal investigator: Prof. Alessandro Mirizzi.
- August 2021 [Green Bank Telescope Proposal: “Searching for Axion Dark Matter in Andromeda Using an X-band Receiver”](#), Accepted (GBT/22A-067). Data has been taken during 2022.

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## Other Awards

- Fall 2020 [Tax Relief Award “Rientro dei Cervelli” \(Brain Gain\) issued by the Italian Government](#)
- Fall 2019 [Tax Relief Award for highly skilled immigrants in the Netherlands](#)
- Fall 2016 [Tax Relief Award for foreign key personnel in Sweden](#)
- Spring 2011 Outstanding Teaching Assistantship Award, The University of Utah.
- 2001-2002 Honorable Mention at the Italian Physics Olympiads.

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## Additional Participation in Research and Development Contracts

- 2019-2020 Dutch Research Council, contract No. 680.92.18.03 “The Hidden Universe of Weakly Interacting Particles”, Principal Investigator: Prof. Paul De Jong (University of Amsterdam), 2018-2023. I took part as GRAPPA Fellow at University of Amsterdam.
- 2016-2019 Swedish Research Council, contract No. 638-2013-8993, Principal Investigator Prof. Katherine Freese (U. of Texas Austin and Stockholm University), 2014-2024. Approximately 10.000.000,00 EUR. I took part at Stockholm University and Uppsala University.
- 2013 – 2015 EU FP7-SPACE “MyOcean followup”, 2014-2015, 99.244,19 EUR; EU FP7-SPACE “MyOcean2”, 2012-2014. 464.980,00 EUR. EU FP7-ENV “GEOCARBON”, 2012-2014. 95.000,00 EUR. Principal Investigator Prof. Simona Masina (Division director, Euro-Mediterranean Centre on Climate Changes). I participated as a post-doctoral researcher.

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## Academic Service

- 2023 Co-organizer of the “Tea time” colloquia at Tsung-Dao Lee Institute.
- 2021-today Committee member, Tsung-Dao Lee Institute and Shanghai Jiao Tong University. I regularly take part in the committees for selecting graduate students, postdocs, junior professors, as well as prizes and grants for students and researchers.
- 2017-2018 Nordita Postdoc Representative (Administrative position), Stockholm (Sweden).
- 2017-2018 Organizing the bi-weekly “Beyond the Standard Model” Workgroup at Oskar Klein Centre, Stockholm (Sweden).
- 2016-Today Regular refereeing for Physical Review Letters (PRL), Physical Review D (PRD), Physics Letters B (PLB), Physics of the Dark Universe (PDU), Journal of Cosmology & Astroparticle Physics (JCAP), Modern Physics Letters A (MPLA), Universe.

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## Service in Editorial Boards

- 2022-2023 Guest editor for the Special Issue of the journal Symmetry: “*Asymmetric and Symmetric Dark Matter*”, to be published in 2024.  
Link: [https://www.mdpi.com/journal/symmetry/special\\_issues](https://www.mdpi.com/journal/symmetry/special_issues).
- 2020-2022 Guest editor for the Special Issue of the journal Universe: “*Dark Matter and Dark Energy: Particle Physics, Cosmology, & Experimental Searches*”, to appear in 2023.  
Link: [www.mdpi.com/journal/universe/special\\_issues/DM\\_DE](http://www.mdpi.com/journal/universe/special_issues/DM_DE).

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## Organization of international conferences

- Fall 2025 Co-organizer of the workshop: “Exploring New Frontiers in Cosmology: The quest for a more comprehensive concordance model”, Galileo Galilei Institute, Arcetri (Italy)
- December 2023 Co-organizer of the [32nd Texas Symposium on Relativistic Astrophysics](#), TDLI Shanghai.
- October 2023 Organizer of the workshop [Advancements in Axion Physics](#), TDLI Shanghai. [YouTube](#)

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## Teaching Experience

- 2017 Lecturer for FK5024 “Nuclear physics”, Stockholm University, Stockholm (Sweden)
- 2015-2016 Lecturer for “Introductory Mathematics”, Department of Political Sciences, University of Bologna (Italy)
- 2015 Teaching assistant in Mathematics for International Markets, Department of Economics, University of Bologna. Supervisor: Prof. Sabrina Mulinacci
- 2015 Teaching assistant for “Mathematics for Economics and Finance”, Department of Economics, University of Bologna. Supervisor: Prof. Alessandra Giovagnoli
- 2010-2011 Teaching assistant for Physics 3740, “Special relativity and quantum mechanics”, The University of Utah. Supervisors: Prof. Kyle Dawson and Prof. Jordan Gerton
- 2009 Teaching assistant for Physics 5020, “Electromagnetism”, The University of Utah. Supervisor: Prof. Mikhail Raikh
- 2008 Teaching assistant for Physics 5010, “Classical and Quantum Mechanics”, The University of Utah. Supervisor: Prof. Mikhail Raikh

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## Research in Physics

**Topics** Theoretical physics, astroparticle physics, and cosmology.

**Sample talk:** my presentation in Georgetown University (Washington D.C.) for the Vera Rubin Symposium, link: <https://www.youtube.com/watch?v=iazE3tBg2cw>

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## Mentoring of undergraduate and master students

- 2023–today I am mentoring Linda Raimondo for her B.Sc. at University of Torino (Italy).
- 2023–today I am mentoring Qixuan Xu during a leap year at the Tsung-Dao Lee Institute (China).
- 2022–2023 My former M.Sc. student Kratika Mazde is now a graduate student at IAP Paris.
- 2019–2020 My former M.Sc. student Nicklas Ramberg has graduated at Mainz University and is now a postdoc at SISSA. [\[Link to the master thesis\]](#)

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## Mentoring of PhD students

- 2023–today Hanyu Cheng, Tsung-Dao Lee Institute & Shanghai Jiao Tong University.
- 2023–today Ziwen Yin, Tsung-Dao Lee Institute & Shanghai Jiao Tong University.
- 2023–today Xinhui Chu, Tsung-Dao Lee Institute & Shanghai Jiao Tong University
- 2023–today Yongzhi Tang, Tsung-Dao Lee Institute & Shanghai Jiao Tong University

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## Co-Supervision of PhD and M.Sc. students

- 2023–2024 Andrea Boccia (Ph.D. University of Napoli). Main advisor: Fabio Iocco.
- 2021–2023 Rittick Roy (M.Sc. Fudan University). Main advisor: Cosimo Bambi.
- 2019–2022 Youjia Wu (Ph.D. University of Michigan). Main advisor: Katherine Freese.
- 2017–2018 Janina Renk (Ph.D. Stockholm University). Main advisor: Joakim Edsjö.

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## Postdocs supervision

- 2024–today Hong-Yi Zhang, Tsung-Dao Lee Institute.
- 2022–today Michael Zantedeschi, Tsung-Dao Lee Institute.

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## Programming skills

- Systems Linux, UNIX, Mac OS, Microsoft.
- Programming Python, Fortran, C/C++, Visual Basic, Pascal, parallel computing with MPI.
- Calculus Mathematica, Matlab, R.
- Databases Maintenance of numerical codes using the GIT repository
- Datasets Manipulating large datasets in different format: NetCDF, ASCII, NCO, CDO.
- Supercomputer High performance computing (IBM iDataplex cluster “Athena”, 7712 cores).
- Text editor Microsoft Office,  $\text{\LaTeX}$ , Vi.
- Software used GAL PROP, DarkSUSY, Gadget2, MESA, NEMO, BFM.

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## Articles published in peer-reviewed international journals

A complete list of my publications can be found at: <http://inspirehep.net/author/profile/L.Visinelli.1>

67. S. Bulanov *et al* (with **L. Visinelli**), *The science case for an intermediate energy advanced and novel accelerator linear collider facility*, *JINST* **19**, T01010 [[physics.acc-ph/2203.08425](#)] (2024).
66. G. Montefalcone, V. Aragam, **L. Visinelli**, and K. Freese, *WarmSPY: A numerical study of cosmological perturbations in warm inflation*, *JCAP* **2401**, 032 [[astro-ph/2306.16190](#)] (2024).
65. A. Addazi, Y.-F. Cai, A. Marcianò, and **L. Visinelli**, *Have pulsar timing array methods detected a cosmological phase transition?*, *Phys. Rev. D* **109**, 015028 [[astro-ph/2306.17205](#)] (2024).
64. D. Alesini *et al* (with **L. Visinelli**), *The future search for low-frequency axions and new physics with the FLASH resonant cavity experiment at Frascati National Laboratories*, *Phys. Dark Univ.* **42**, 101370 [[physics.ins-det/2309.00351](#)] (2023).
63. G. Lambiase, L. Mastrototaro, and **L. Visinelli**, *Astrophysical neutrino oscillations after pulsar timing array analyses*, *Phys. Rev. D* **108**, 123028 [[astro-ph/2306.16977](#)] (2023).
62. S. Vagnozzi, R. Roy, Y.-D. Tsai, **L. Visinelli**, and others, *Horizon-scale tests of gravity theories and fundamental physics from the Event Horizon Telescope image of Sagittarius A\**, *Class. Quant. Grav.* **40**, 165007 [[gr-qc/2205.07787](#)] (2023).
61. Y.-D. Tsai, Y. Wu, S. Vagnozzi, and **L. Visinelli**, *Novel constraints on fifth forces and ultralight dark sector with asteroidal data*, *JCAP* **2304**, 031 [[hep-ph/2107.04038](#)] (2023).
60. A. Litsa, K. Freese, E. Sfakianakis, P. Stengel, and **L. Visinelli**, *Primordial non-Gaussianity from the Effects of the Standard Model Higgs during Reheating after Inflation*, *JCAP* **2303**, 033 [[hep-ph/2011.11649](#)] (2023).
59. G. Montefalcone, V. Aragam, **L. Visinelli**, and K. Freese, *Observational constraints on warm natural inflation*, *JCAP* **2303**, 002 [[gr-qc/2212.04482](#)] (2023).
58. G. Montefalcone, V. Aragam, **L. Visinelli**, and K. Freese, *Constraints on the scalar-field potential in warm inflation*, *Phys. Rev. D* **107**, 063543 [[gr-qc/2209.14908](#)] (2023).
57. K. Mazde and **L. Visinelli**, *The interplay between the dark matter axion and primordial black holes*, *JCAP* **2301**, 021 [[astro-ph/2209.14307](#)] (2023).
56. G. Lambiase, L. Mastrototaro, and **L. Visinelli**, *Gravitational waves and neutrino oscillations in Chern-Simons axion gravity*, *JCAP* **2301**, 011 [[hep-ph/2207.08067](#)] (2023).
55. L. Caloni, M. Gerbino, M. Lattanzi, and **L. Visinelli**, *Novel cosmological bounds on thermally-produced axion-like particles*, *JCAP* **2209**, 021 [[astro-ph/2205.01637](#)] (2022).
54. W. Lin, **L. Visinelli**, D. Xu, and T. T. Yanagida, *Neutrino astronomy as a probe of physics beyond the Standard Model*, *Phys. Rev. D* **106**, 075011 [[hep-ph/2202.04496](#)] (2022).
53. Y. Wu, S. Baum, K. Freese, **L. Visinelli**, and H.-B. Yu, *Dark stars powered by self-interacting dark matter*, *Phys. Rev. D* **106**, 043028 [[hep-ph/2205.10904](#)] (2022).
52. Y. Chen, R. Roy, S. Vagnozzi, and **L. Visinelli**, *Superradiant evolution of the shadow and photon ring of Sagittarius A\**, *Phys. Rev. D* **106**, 043021 [[astro-ph/2205.06238](#)] (2022).

51. S. Vagnozzi and **L. Visinelli**, *Note on fundamental physics tests from black hole imaging*, *Res. Notes AAS* **6**, 106 [[astro-ph/2205.11314](#)] (2022).
50. **L. Visinelli** and H. Terças, *B-field induced mixing between Langmuir waves and axions*, *Phys. Rev. D* **105**, 096024 [[hep-ph/1807.06828](#)] (2022).
49. E. di Valentino *et al*, *A Review of the Particle Physics, Astrophysics, and Cosmology Associated with the Cosmological Tensions and Anomalies*, *J. High En. Astrophys.* **2204**, 002 [[astro-ph/2203.06142](#)] (2022).
48. R. Roy, S. Vagnozzi, and **L. Visinelli**, *Superradiance evolution of black hole shadows revisited*, *Phys. Rev. D* **105**, 083002 [[astro-ph/2112.06932](#)] (2022).
47. B. Barman, N. Bernal, N. Ramberg, and **L. Visinelli**, *QCD Axion Kinetic Misalignment without Prejudice*, *Universe* **8**(12), 634 [[hep-ph/2111.03677](#)] (2022).
46. **L. Visinelli**, *Boson Stars and Oscillatons: A Review*, *Int. J. Mod. Phys. D* **30** 15, 2130006 [[gr-qc/2109.05481](#)] (2021).
45. G. Choi, W. Lin, **L. Visinelli**, and T. T. Yanagida, *Cosmic Birefringence and Electroweak Axion Dark Energy*, *Phys. Rev. D* **104**, L101302 [[hep-ph/2106.12602](#)] (2021).
44. A. Litsa, K. Freese, E. Sfakianakis, P. Stengel, and **L. Visinelli**, *Large Density Perturbations from Reheating to Standard Model particles due to the Dynamics of the Higgs Boson during Inflation*, *Phys. Rev. D* **104** 12, 123546 [[hep-ph/2009.14218](#)] (2021).
43. T. Edwards, B. Kavanagh, **L. Visinelli**, and C. Weniger, *Transient Radio Signatures from Neutron Star Encounters with QCD Axion Miniclusters*, *Phys. Rev. Lett.* **127**, 131103 [[hep-ph/2011.05378](#)] (2021).
42. B. Kavanagh, T. Edwards, **L. Visinelli**, and C. Weniger, *Stellar Disruption of Axion Miniclusters in the Milky Way*, *Phys. Rev. D* **104**, 063038 [[astro-ph/2011.05377](#)] (2021).
41. S. Vagnozzi, **L. Visinelli**, P. Brax, A. C. Davis, and J. Sakstein, *Direct detection of dark energy: the XENON1T excess and future prospects*, *Phys. Rev. D* **104**, 063023 [[hep-ph/2103.15834](#)] (2021).
40. B. Carr, F. Kühnel, and **L. Visinelli**, *Black Holes and WIMPs: All or Nothing or Something Else*, *Mon. Not. Roy. Astron. Soc.* **506** 3, 3648 (2021) [[astro-ph/2011.01930](#)] (2021).
39. E. di Valentino, O. Mena, S. Pan, **L. Visinelli**, W. Yang, A. Melchiorri, D. F. Mota, A. G. Riess, and J. Silk, *In the Realm of the Hubble tension - a Review of Solutions*, *Class. Quant. Grav.* **38**, 153001 [[astro-ph/2103.01183](#)] (2021).
38. N. Ramberg and **L. Visinelli**, *QCD axion and gravitational waves in light of NANOGrav results*, *Phys. Rev. D* **103**, 063031 [[astro-ph/2012.06882](#)] (2021).
37. T. Rindler-Daller, K. Freese, R. Townsend, and **L. Visinelli**, *Stability and Pulsation of the First Dark Stars*, *Mon. Not. Roy. Astron. Soc.* **503** 3, 3677 [[astro-ph/2011.00231](#)] (2021).
36. B. Carr, F. Kühnel, and **L. Visinelli**, *Constraints on Stupendously Large Black Holes*, *Mon. Not. Roy. Astron. Soc.* **501** 2, 2029 [[astro-ph/2008.08077](#)] (2021).
35. E. di Valentino *et al*, *Cosmology Intertwined IV: The Age of the Universe and its Curvature*, *Astropart. Phys.* **131**, 102607 [[astro-ph/2008.11286](#)] (2021).
34. E. di Valentino *et al*, *Cosmology Intertwined III:  $f\sigma_8$  and  $S_8$* , *Astropart. Phys.* **131**, 102604 [[astro-ph/2008.11285](#)] (2021).



33. E. di Valentino *et al*, *Cosmology Intertwined II: The Hubble Constant Tension*, *Astropart. Phys.* **131**, 102605 [[astro-ph/2008.11284](#)] (2021).
32. E. di Valentino *et al*, *Cosmology Intertwined I: Perspectives for the Next Decade*, *Astropart. Phys.* **131**, 102606 [[astro-ph/2008.11283](#)] (2021).
31. L. Di Luzio, M. Giannotti, E. Nardi, and **L. Visinelli**, *The landscape of QCD axion models*, *Physics Reports* **1**, 870 [[hep-ph/2003.01100](#)] (2020). [Corrigendum: *Physics Reports* **6**, 006 (2022).]
30. S. Vagnozzi, C. Bambi, and **L. Visinelli**, *Concerns regarding the use of black hole shadows as standard rulers*, *Class. Quant. Grav.* **37**, 8 [[gr-qc/2001.02986](#)] (2020).
29. S. Vagnozzi, **L. Visinelli**, O. Mena, and D. Mota, *Do we have any hope of detecting scattering between dark energy and baryons through cosmology?*, *Mon. Not. R. Astron. Soc.* **493** 1, 1139 [[gr-qc/1911.12374](#)] (2020).
28. **L. Visinelli** and J. Redondo, *Axion Miniclusters in Modified Cosmological Histories*, *Phys. Rev. D* **101**, 023008 [[hep-ph/1808.01879](#)] (2020).
27. **L. Visinelli**, S. Vagnozzi, and U. Danielsson, *Revisiting a negative cosmological constant from low-redshift data*, *Symmetry* **11**(8), 1035, *Special Issue* [[astro-ph/1907.07953](#)] (2019).
26. T. Tenkanen and **L. Visinelli**, *Axion dark matter from Higgs inflation with an intermediate  $H_*$* , *JCAP* **1908**, 033 [[astro-ph/1906.11837](#)] (2019).
25. E. Di Valentino, R. Ferreira, **L. Visinelli**, and U. Danielsson, *Late time transitions in the quintessence field and the  $H_0$  tension*, *Phys. Dark Univ.* **26**, 100385 [[astro-ph/1906.11255](#)] (2019).
24. C. Bambi, K. Freese, S. Vagnozzi, and **L. Visinelli**, *Testing the rotational nature of the supermassive object M87\* from the circularity and size of its first image*, *Phys. Rev. D* **100**, 044057 [[gr-qc/1904.12983](#)] (2019).
23. S. Vagnozzi and **L. Visinelli**, *Hunting for extra dimensions in the shadow of M87\**, *Phys. Rev. D* **100**, 024020 [[gr-qc/1905.12421](#)] (2019).
22. N. Ramberg and **L. Visinelli**, *Probing the Early Universe with Axion Physics and Gravitational Waves*, *Phys. Rev. D* **99**, 123513 [[astro-ph/1904.05707](#)] (2019).
21. W. H. Kinney, S. Vagnozzi, and **L. Visinelli**, *The Zoo Plot Meets the Swampland: Mutual (In)Consistency of Single-Field Inflation, String Conjectures, and Cosmological Data*, *Class. Quant. Grav.* **36**, 11 [[astro-ph/1808.06424](#)] (2019).
20. **L. Visinelli** and S. Vagnozzi, *Cosmological window onto the string axiverse and the supersymmetry breaking scale*, *Phys. Rev. D* **99**, 063517 [[hep-ph/1809.06382](#)] (2019).
19. S. Boucenna, F. Kühnel, T. Ohlsson, and **L. Visinelli**, *Novel Constraints on Mixed Dark-Matter Scenarios of Primordial Black Holes and WIMPs*, *JCAP* **1807**, 003 [[hep-ph/1712.06383](#)] (2018).
18. K. Freese, E. Sfakianakis, P. Stengel, and **L. Visinelli**, *The Standard Model Higgs Boson can delay Reheating in Inflation*, *JCAP* **1805**, 067 [[hep-ph/1712.03791](#)] (2018).
17. **L. Visinelli**, N. Bolis, and S. Vagnozzi, *Brane-world extra dimensions in light of GW170817*, *Phys. Rev. D* **97**, 064039 [[gr-qc/1711.06628](#)] (2018).
16. **L. Visinelli**, S. Baum, J. Redondo, K. Freese, F. Wilczek, *Dilute and dense axion stars*, *Phys. Lett. B* **777**, 64 [[astro-ph/1710.08910](#)] (2018).

15. **L. Visinelli**, *(Non-)thermal production of WIMPs during kination*, *Symmetry* **10**, 546 [[astro-ph/1710.11006](#)] (2018).
14. **L. Visinelli**, *Light axion-like dark matter must be present during inflation*, *Phys. Rev. D* **96**, 023013 [[astro-ph/1703.08798](#)] (2017).
13. S. Baum, **L. Visinelli**, K. Freese, and P. Stengel, *Dark matter capture, sub-dominant WIMPs, and neutrino observatories*, *Phys. Rev. D* **95**, 043007 [[astro-ph/1611.09665](#)] (2017).
12. **L. Visinelli**, *Observational Constraints on Monomial Warm Inflation*, *JCAP* **1607**, 054 [[astro-ph/1605.06449](#)] (2016).
11. **L. Visinelli**, *Condensation of Galactic Cold Dark Matter*, *JCAP* **1607**, 009 [[hep-ph/1509.05871](#)] (2016).
10. **L. Visinelli**, S. Masina, M. Vichi, A. Storto, and T. Lovato, *Impacts of Data Assimilation on the Global Ocean Carbonate System*, *Journal of Marine Systems* **158**, 106 (2016).
9. **L. Visinelli** and P. Gondolo, *Kinetic decoupling of WIMPs: analytic expressions*, *Phys. Rev. D* **91** 8, 083526 [[astro-ph/1501.02233](#)] (2015).
8. **L. Visinelli**, *Neutrino flavor oscillations in a curved space-time*, *Gen. Rel. Grav.* **47** 5, 62 [[gr-qc/1410.1523](#)] (2015).
7. **L. Visinelli**, *Cosmological perturbations for an inflaton field coupled to radiation*, *JCAP* **1501**, 005 [[astro-ph/1410.1187](#)] (2015).
6. **L. Visinelli**, S. Masina, M. Vichi, and A. Storto, *Impacts of Physical Data Assimilation on the Global Ocean Carbonate System*, *Biogeosciences Discussions* **11** (4), 5399-5441 (2014).
5. P. Gondolo and **L. Visinelli**, *Axion Cold Dark Matter in view of BICEP2 results*, *Phys. Rev. Lett.* **113**, 011802, Editor's Suggestion [[hep-ph/1403.4594](#)] (2014).
4. **L. Visinelli**, *Axion-Electromagnetic Waves*, *MPLA* **28**, 35 [[physics.class-ph/1401.0709](#)] (2013).
3. **L. Visinelli**, *Natural Warm Inflation*, *JCAP* **1109**, 013 [[astro-ph/1107.3523](#)] (2011).
2. **L. Visinelli** and P. Gondolo, *Axions Cold Dark Matter in Nonstandard Cosmologies*, *Phys. Rev. D* **81**, 063508 [[astro-ph/0912.0015](#)] (2010).
1. **L. Visinelli** and P. Gondolo, *Dark Matter Axions Revisited*, *Phys. Rev. D* **80**, 035024 [[astro-ph/0903.4377](#)] (2009).

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## Proceedings

3. **L. Visinelli**, *Theoretical Motivations for Hidden Light Bosons*, Submitted to Nuclear and Particle Physics Proceedings (2024).
2. **L. Visinelli**, *Analytic expressions for the kinetic decoupling of WIMPs*, *Journal of Physics - Conference Series* **718** [[astro-ph/1601.00817](#)] (2016).
1. **L. Visinelli** and P. Gondolo, *Axion Cold Dark Matter Revisited*, *Journal of Physics - Conference Series* **203** [[astro-ph/0910.3941](#)] (2010).



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## Articles currently under review

4. F. Iocco and **L. Visinelli**, *Compatibility of JWST results with exotic halos*, submitted to Phys. Dark Univ. [[astro-ph/2403.13068](#)] (2024).
3. C. Gatti, **L. Visinelli**, M. Zantedeschi, *Cavity Detection of Gravitational Waves: Where Do We Stand?*, submitted to Phys. Rev. D [[gr-qc/2403.18610](#)] (2024).
2. ngEHT Collaboration (with **L. Visinelli**), *Fundamental Physics Opportunities with the Next-Generation Event Horizon Telescope*, Submitted to Living Rev. Relativ. [[astro-ph/2312.02130](#)] (2024).
1. Y.-D. Tsai, D. Farnocchia, M. Micheli, S. Vagnozzi, and **L. Visinelli**, *Constraints on fifth forces and ultralight dark matter from OSIRIS-REx target asteroid Bennu*, Submitted to Communication Physics [[hep-ph/2309.13106](#)] (2024).

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## Articles in preparation

8. L. Walters *et al*, *A search for axions-photon conversions in the Andromeda galaxy using the Green Bank Telescope*, in preparation (collaboration with astronomers at University of Virginia).
7. **L. Visinelli**, T.T. Yanagida, and M. Zantedeschi, *B-L gauge bosons and neutrinos*, in preparation.
6. Q. Xu, S. Vagnozzi, and **L. Visinelli**, *Superradiance and light bosons*, in preparation.
5. H. Chen and **L. Visinelli**, *Cosmic strings decay*, in preparation.
4. Z. Yin and **L. Visinelli**, *Axion star condensation around primordial black holes and microlensing limits*, in preparation.
3. X. Chu and **L. Visinelli**, *Gravitational wave detection*, in preparation.
2. Y. Tang and **L. Visinelli**, *Axion dark matter and asymptotic potentials*, in preparation.
1. L. Raimondo, **L. Visinelli et al**, *Light bosons in the Sun*, in preparation.

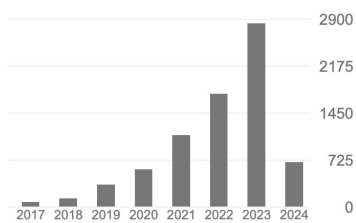
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## Technical reports

4. R. X. Adhikari *et al*, *Report of the Topical Group on Cosmic Probes of Fundamental Physics for Snowmass 2021* [[hep-ex/2209.11726](#)] (2022).
3. J. Jaeckel, G. Rybka, L. Winslow, *et al*, *Axion Dark Matter* [[hep-ex/2203.14923](#)] (2022).
2. D. Antypas *et al*, *New Horizons: Scalar and Vector Ultralight Dark Matter* [[hep-ex/2203.14915](#)] (2022).
1. D. Alesini *et al*, *KLASH Conceptual Design Report* [[ins-det/1911.02427](#)] (2019).

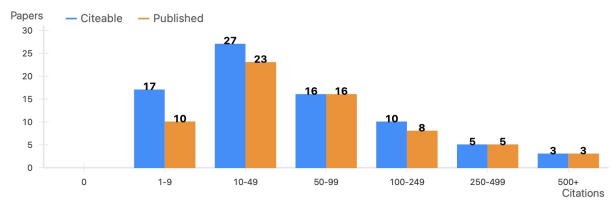
## Summary of statistics as of March 28, 2024

	All	Since 2019
Citations	7769	7330
h-index	43	41
i10-index	60	58



Citations per year (Google Scholars)

	Citeable ⓘ	Published ⓘ
Papers	78	65
Citations	7,388	7,037
h-index ⓘ	42	40
Citations/paper (avg)	94.7	108.3



Total number of citations (HEP-INSPIRE)

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## Invited talks

55. 06/03/24 University of Trento (IT), Searching for high-frequency gravitational waves with resonant cavities
54. 03/28/24 Yunnan University (CHN), Resonant Conversion in Neutron Star Magnetospheres
53. 03/13/24 IBS Science and Culture Center, Daejeon (Korea), Indirect Detection of the QCD Axion: Resonant Conversion in Neutron Star Magnetospheres
52. 03/06/24 Shanghai Jiao Tong University (CHN), Indirect Detection of the QCD Axion: Resonant Conversion in Neutron Star Magnetospheres
51. 08/22/23 University of Texas at Austin (USA), [Axions as dark matter or dark radiation](#)
50. 07/18/23 University of Bologna (IT), [The interplay of primordial black holes, dark matter, and axions](#)
49. 05/16/23 Fudan University, Shanghai (CHN), [Dark radiation in the Universe](#)
48. 03/09/23 University of Napoli (IT), The interplay of primordial black holes, dark matter, and axions
47. 02/09/23 [University of Trento \(IT\)](#), The interplay of primordial black holes and particle dark matter
46. 02/06/23 University of Ferrara (IT), The interplay of primordial black holes and particle dark matter
45. 01/26/23 [DESY \(DE\)](#), Novel Cosmological Bounds on Thermally-produced Axion-like Particles
44. 05/20/22 [Chinese Academy of Science, Beijing \(CHN\)](#), Radio signals from axions conversion
43. 04/27/22 [KEK, Tsukuba \(JP\)](#), Radio signals from axions conversion
42. 04/08/22 Indian Institute of Technology, Mumbai (IN), [Superradiance evolution of black hole shadows](#)
41. 12/15/21 [Helsinki Institute of Physics \(FI\)](#), Axion miniclusters in the Milky Way
40. 10/14/21 SISSA, Trieste (IT), Radio signals from axion miniclusters colliding with neutron stars
39. 06/11/21 University of L'Aquila (IT), The population of axion miniclusters in the Galaxy
38. 04/26/21 Shanghai Jiao Tong University, Shanghai (CHN), Direct detection of dark energy
37. 02/17/21 Kavli IPMU, Tokyo (JP), [The interplay of primordial black holes and particle dark matter](#)
36. 11/04/20 Institute of Physics, Academia Sinica (TW), [Compact objects and dark matter](#)
35. 10/13/20 Undergraduate seminar, Colgate University (USA), *One dark matter candidate: the axion*
34. 06/04/20 International Institute of Physics, Natal (BR), *Radio and gravitational wave signals from cosmic axions* [[LINK to the YouTube video on the IIP channel: https://rb.gy/tsg0of](#)]
33. 05/11/20 Newton 1665 webinars series, *New physics out of the Shadow* [[LINK to the YouTube video on the Newton1665 channel: https://www.youtube.com/watch?v=yCDUfzv8oKY](#)]
32. 04/29/20 Latin American Webinars (LAWphysics) series, *Astrophysics with axion stars and miniclusters* [[LINK to the YouTube video on the LAWphysics channel: https://www.youtube.com/watch?v=ilfmBKMgyH8](#)]
31. 04/07/20 University of Texas at Austin (USA), [The future of light boson dark matter](#)

30. 03/02/20 DAMTP Institute of Astronomy, University of Cambridge (UK), *Light boson dark matter*
29. 12/20/19 National Institute Of Chemical Physics And Biophysics, Tallinn (ES), *Light boson dark matter*
28. 11/27/19 Fudan University, Shanghai (CHN), *Testing the rotational nature of the supermassive object M87\**
27. 11/25/19 Shanghai Jiao Tong University, Shanghai (CHN), *Light bosons as dark matter candidates*
26. 11/07/19 Nordita, Stockholm (SE), [\*Testing the rotational nature of the supermassive object M87\\*\*](#)
25. 05/21/19 INFN Frascati, Rome (IT), [\*Axion miniclusters and implications for axion detection\*](#)
24. 05/10/19 Wayne State University, MI (USA), [\*Probing the Early Universe with Axion Physics\*](#)
23. 05/01/19 Kavli Institute for Cosmological Physics, IL (USA), [\*Probing the Early Universe with Axions\*](#)
22. 04/30/19 Argonne National Laboratory, IL (USA), [\*Probing the Early Universe with Axions\*](#)
21. 04/25/19 University of Michigan, MI (USA), *The Quest for the Axion*
20. 04/17/19 Barry University, FL (USA), *Introduction to Cosmology and Particle Physics*
19. 04/12/19 University of Florida, FL (USA), [\*Probing the Early Universe with Axion Physics\*](#)
18. 04/04/19 IFIC, Valencia (ES), [\*Probing the Early Universe with Axions\*](#)
17. 01/08/19 SISSA, Trieste (IT), *The Cold Dark Matter axion and Axion Stars*
16. 10/23/18 Nikhef Amsterdam (NL), [\*The Quest for the Axion\*](#)
15. 11/30/18 INFN Frascati, Rome (IT), [\*Motivations for the search of light axions\*](#)
14. 10/23/18 University of Bologna (IT), *Searching for Axions and the String Axiverse in the Cosmo*
13. 10/18/18 INFN Frascati, Rome (IT), *Searching for Axions in the Lab and in the Cosmo*
12. 04/11/18 Latin American Webinars (LAWphysics) series, [\*The axion in cosmology and astrophysics\*](#)  
[LINK to the YouTube video on the LAWphysics channel: <https://www.youtube.com/watch?v=YWqVpPrpLjw>]
11. 02/01/18 CEICO, Prague (CZ), *The Cold Dark Matter axion and Axion Stars*
10. 12/01/17 University of Turin (IT), *The Cold Dark Matter axion and Axion Stars*
9. 08/16/17 University of Oslo (NO), *Dark matter capture and neutrino observatories*
8. 06/15/17 University of Bologna (IT), *Dark matter capture and neutrino observatories*
7. 02/01/07 University of Michigan, MI (USA), *Axion cold dark matter, miniclusters, and axion stars*
6. 10/25/16 University of Helsinki (FI), *Axion cold dark matter, status and perspectives*
5. 01/21/16 University of Zaragoza (ES), *Axion cold dark matter, status and perspectives*
4. 06/03/13 CMCC Lecce (IT), *Impacts of Data Assimilation on the Global Ocean Carbonate System*
3. 06/15/11 University of Pisa (IT), *Axion cold dark matter in standard and non-standard cosmologies*
2. 10/12/10 University of New Mexico, NM (USA), *An integral equation for distorted-wave amplitudes*
1. 05/21/09 University of Bologna (IT), *Axion cold dark matter revisited*

## Conference talks

45. 09/03-06/24 [2nd General Meeting of the COST Action "Cosmic WISPerS"](#), Istanbul (Turkey), *Indirect Detection of the QCD Axion: Resonant Conversion in Neutron Star Magnetospheres*
44. 07/08-12/24 [IDM2024](#), GSSI (Italy), *Indirect Detection of the QCD Axion: Resonant Conversion in Neutron Star Magnetospheres*
43. 07/01-05/24 [Invisibles Workshop 2024](#), Bologna (Italy),  *$H_0$  and cosmological tensions: An overview*
42. 06/17-20/24 [New Horizons in Primordial Black Hole physics \(NEHOP\)](#), Durham (UK), *Searching for high-frequency gravitational waves with resonant cavities*
41. 04/09-11/24 [Gravitational Waves and the early Universe Workshop](#), Beijing (CHN), *Searching for high-frequency gravitational waves with resonant cavities*
40. 11/16-18 23 [The 9th China LHC Physics Workshop \(CLHCP2023\)](#), Shanghai (CHN), *Theoretical Motivations for Hidden Light Bosons*
39. 11/10-13 23 [International Symposium on Cosmology and Particle Astrophysics CosPA 2023](#), Hong Kong, *Direct detection experiments and light bosons*
38. 10/30-11/3 23 [IBS Conference on Dark World 2023](#), IBS Science and Culture Center, Daejeon (Korea), *Direct detection experiments and light bosons*
37. 09/15 23 [Dark Energy from Fundamental Theories to Observations](#), Frascati (Italy), *Direct detection experiments and light chameleons*
36. 09/11-14 23 [Plenary talk](#) on axions at [TeVPA 2023](#), Napoli (Italy), [The QCD axion: theory, phenomenology, and searches](#)
35. 06/19-21 23 [New Horizons in Primordial Black Hole physics \(NEHOP\)](#), Napoli (Italy), *Primordial black holes and particle dark matter are intimately intertwined*
34. 06/5-9 23 [Axion Across Boundaries](#), Galileo Galilei Institute, Arcetri (Italy), *Axions and inflation* [\[YouTube\]](#)
33. 02/23-24 23 [Kick-off Meeting of COST Action COSMIC WISPerS](#), INFN Frascati (Italy), *Axions and PBHs*
32. 11/18-20 22 [Particle Physics and Cosmology Symposium 2022](#), Shanghai (CHN), *Novel Cosmological Bounds on Thermally-produced Axion-like Particles*
31. 11/29-12/03 21 [Sixth Colombian Meeting on High Energy Physics](#), Santa Marta (CO), *Plenary speaker: Future probes of light bosons*
30. 10/12-13/21 [Cosmology Frontier in Particle Physics: Astroparticle Physics and Early Universe](#), NCTS NTU, *Axion miniclusters in the Milky Way*
29. 07/5-16/21 [Cosmology from Home 2021](#), *Direct detection of dark energy* [\[LINK to YouTube video\]](#)
28. 05/15/21 [TDLI International Workshop "Current Topics on Axion"](#), Shanghai Jiao Tong University, Shanghai (CHN), *Future probes of the axion landscape*
27. 10/13-16/20 [The 5th IBS-IFT-MultiDark Workshop](#), Institute for Basic Science (IBS), Daejeon (KR), *Recent and future developments of dark matter axion physics*

26. 09/24/20 [CoCo 2020: Cosmology in Colombia](#), Bogotá (CO), *Constraints on Reheating to SM Particles due to Large Effective Higgs Boson Mass*
25. 08/24/20 [Cosmology from Home 2020](#), *Axion Miniclusters: Tidal Disruption and Radioastronomy* [\[LINK\]](#)
24. 07/21/20 [IDM2020](#), Zurich (CH), *The future of Axion Physics*
23. 12/2-6/19 [TeVPA 2019](#), Sydney (AU), *Probing the Early Universe with Axion Physics*
22. 06/24-06/26 [Vera Rubin Fest](#), Washington DC (USA), *Axions*
21. 06/10-14/19 [Invisibles19](#), Valencia (ES), *Coordinating one of the panel discussion session*
20. 12/18/18 [SLAP 2018](#), King's College London (UK), *The Cold Dark Matter axion and Axion Stars*
19. 12/11/18 [The quest for New Physics](#), Instituto de Física Corpuscular (ES), *Axion Stars*
18. 09/05/18 [Invisibles18 Workshop](#), Karlsruhe Institute of Technology (DE), *Dilute and dense axion stars*
17. 06/20/18 [14th Patras Workshop](#), DESY Hamburg (DE),  
*The Higgs Boson can delay Reheating after Inflation*
16. 06/12/18 [Preparing for Dark Matter Particle Discovery](#), Chalmers University of Technology, Goteborg (SE),  
*The Higgs Boson can delay Reheating after Inflation*
15. 03/07/18 [Ultralight Dark Matter and Axions](#), University of Michigan (USA),  
*The parameter space of axion-like particles*
14. 02/22/18 [UCLA Dark Matter 2018](#), UCLA (USA), *Axions in cosmology and astrophysics*
13. 08/31/17 [DaVCO](#), CP<sup>3</sup> Origin (DK), *Axions and ALPs as the Cold Dark Matter*
12. 08/04/17 [Self-interacting dark matter](#), Niels Bohr Institute (DK), *Sharpening Fuzzy Dark Matter*
11. 07/19/17 [Advances in Theoretical Cosmology in Light of Data](#) Nordita (SE), *Axion dark matter*
10. 12/06/16 [Axion Dark Matter workshop](#), Nordita (SE), *Axion dark matter, miniclusters, and axion stars*
9. 08/12/16 [IDM2016](#), Sheffield (UK), *Galactic Cold Dark Matter from First Principles*
8. 09/07/15 [TAUP 2015](#), Turin (IT) *Analytical expressions for the kinetic decoupling of WIMPs*
7. 11/19/14 [GEOCARBON Final Meeting](#), Paris (FR),  
*Summary contribution to GEOCARBON from Land and Ocean Components*
6. 07/08/14 [NEMO Users Meeting](#), Grenoble (FR),  
*Assimilation of Physical and Carbonate Data on the Global Ocean Carbonate System*
5. 10/15/10 [American Physical Society Four Corners Meeting](#), Ogden (USA),  
*An integral equation for distorted-wave amplitudes*
4. 07/13/10 [PPC 2010 Conference](#), Turin (IT), *An integral equation for distorted-wave amplitudes*
3. 03/28/10 [SnowPac & SnowCluster 2010](#), Alta (USA), *Axion dark matter in non-standard cosmologies*
2. 07/02/09 [TAUP 2009](#), Rome (IT), *Axion cold dark matter revisited*
1. 10/20/07 [American Physical Society Four Corners](#), Flagstaff (USA),  
*Oscillation amplitude for neutrino wave packets*



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## Workshop attendance

- May 2023 [Axions across boundaries between Particle Physics, Astrophysics, Cosmology and forefront Detection Technologies](#), Galileo Galilei Institute, Arcetri (IT)
- April 2017 [The 5th MCTP Spring Symposium](#), Ann Arbor, MI (USA)
- September 2014 [Data Assimilation in Ocean Physics](#), Trieste (Italy)
- June 2013 [Advanced School on Data Assimilation](#), Bologna (Italy)
- December 2009 [Focus week on indirect dark matter search](#), IPMU Tokyo (Japan)

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## Visitors hosted at the Tsung-Dao Lee Institute

- April-May 24 Enrico Schiappacasse, San Sebastian University (CL)
- March-May 24 Andrea Boccia, University of Napoli (IT)
- 4/12 2024 Prof. Jessica Turner, University of Edinburg (UK)
- 2/25–27 2024 Prof. Alejandro Ibarra, TUM (DE)
- 2/19–23 2024 Prof. Eleonora Di Valentino, University of Sheffield (UK)
- 11/7–11 2023 Dr. Florian Kühnel, LMU (DE)
- 9/16–28 2023 Prof. Fabio Iocco, University of Napoli (IT)

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## Books

- May 14, 2024 Enzo Pellegrino & **Luca Visinelli**, *Dove Abita il Tempo* (In Italian).  
To be published with Pendragon Editions.

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## Outreach: Presenting science to popular audience

- July 2022 [South physics observatory astronomy summer camp “Astronomy for Future Scientists”](#), The University of Utah. Host: Paul Ricketts.
- January 2022 Virtual interview with the online newspaper “Fanpage” on dark energy (in Italian) [\[Youtube link\]](#)
- September 2021 Interview for the podcast “co.scienza” (in Italian), aimed at young researchers [\[Link\]](#)
- August 2021 Public lecture “Le cinque ere dell’Universo e la vita su altri pianeti” (In Italian).  
Youtube links: [PART 1](#) [PART 2](#)
- August 2020 Public lecture “Buchi neri e onde gravitazionali: La ricerca in Italia” (In Italian).  
Youtube links: [PART 1](#) [PART 2](#)
- March 2016 Public lecture “Capire le onde gravitazionali” (In Italian), Bologna.
- November 2015 Public lecture “Physics for everybody!” (In Italian), Bologna.
- February 2013 Public lecture “Galileo, father of the scientific method” (In Italian), Bologna.
- April 2011 Public lecture “Dark Matters”, The University of Utah, Math Department.

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## Press coverage and media appearance

October 2021	"Signal From The XENON1T Experiment May Be A Hallmark Of Dark Energy", <b>Forbes</b>
September 2021	"Have we detected dark energy?", <b>www.cam.ac.uk</b>
June 2021	"Can we see dark energy from Earth? New experiments offer hope", <b>Space.com</b>
January 2021	"Black holes could reach 'stupendously large' sizes", <b>Queen Mary University of London</b>
November 2020	"Top ArXiv papers from week 48 2020, entry #2", <b>Sunny Vagnozzi's blog</b>
November 2020	"Top ArXiv papers from week 46 2020, entry #2", <b>Sunny Vagnozzi's blog</b>
September 2020	"'Stupendously large' black holes could grow to truly monstrous sizes", <b>Space.com</b>
September 2020	"Black holes - Do they grow stupendously large?", <b>Astrobit.es.org</b>
April 2020	"Interview with Luca Visinelli on "Il Messaggero" (In Italian)", <b>ilmessaggero.it</b>
September 2018	"Hunting for extra dimensions with gravitational waves", <b>Oskar Klein Centre blog</b>
August 2018	"Zoos, Swamplands and Cosmology", <b>Astrobit.es.org</b>
September 2017	"Interview with Luca Visinelli", <b>Oskar Klein Centre blog</b>

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## Visiting researcher

06 09-12 2024	INFN Frascati (IT)
2/2-7 2024	University of Texas at Austin (TX)
01/17-23 2024	INFN Ferrara (IT)
8/21-9/3 2023	University of Texas at Austin (TX)
07 09-15 2023	INFN Frascati (IT)
4/20-5/20 2019	University of Michigan (MI)
Apr 10-20 2019	Barry University (FL)
Jan 20-31 2019	INFN Frascati (IT)
May 1-15 2017	Perimeter Institute (CA)
Feb 25-30 2017	MIT (MA)
Jan-Feb 2017	University of Michigan (MI)

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## Additional work experience

2015	<b>Editing work for JCAP and JHEP</b> , Sissa-Medialab publications, Trieste (Italy)
2015 - 2016	<b>High school teacher</b> , Private High School "M. Malpighi", Bologna (Italy)
2015 - 2016	<b>High school teacher</b> , Public High School "E. Majorana", Bologna (Italy)
2011 - 2016	<b>Private tutoring</b> in mathematics and physics for high school and university students.
2011 - 2012	<b>Editor for high-school mathbooks</b> , Zanichelli Editore. <a href="#">Textbook here</a> .

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## Other Experiences

2015 - today	<b>Voluntary affiliation, Italian Civil Protection Department</b> , <i>Loiano (Bologna)</i> , Italy.
2014 - 2016	<b>Elected as Town Councilor</b> , <i>Comune di Loiano (Bologna)</i> , Italy.
September 2011	<b>Mathematics and Finance</b> , <i>Università di Bologna</i> , Italy.
- March 2012	Intensive six-months course on: Stochastic Calculus, Assessment of Financial Risk, Computational Finance, Application of Big Data to Finance, Interest Rates and Risk

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## Professional references addressing my research activity

**Christoph Weniger** **Associate Professor (Postdoc supervisor),**  
• GRAPPA, University of Amsterdam  
Room C4.160, Science Park 904, 1098 XH Amsterdam, The Netherlands.  
Tel. +31 20525 6294, Email: [c.weniger@uva.nl](mailto:c.weniger@uva.nl).

**Paolo Gondolo** **Full Professor (Ph.D. supervisor),**  
• Department of Physics and Astronomy, The University of Utah  
115 S 1400 E #201, Salt Lake City, UT 84112-0830.  
Tel. +1 801 581 77 88, Email: [paolo.gondolo@utah.edu](mailto:paolo.gondolo@utah.edu).

**Anne-Christine Davis** **Full Professor,**  
Department of Applied Mathematics and Theoretical Physics, University of Cambridge  
Wilberforce Road, Cambridge CB3 0WA, United Kingdom.  
Tel. +44 012 2333 7878, Email: [ad107@cam.ac.uk](mailto:ad107@cam.ac.uk).

**Katherine Freese** **Full Professor (Postdoc supervisor),**  
• Department of Physics, University of Texas at Austin  
2515 Speedway, Austin TX 78712, United States of America.  
Tel. +1 734 604 1325, Email: [ktfreese@utexas.edu](mailto:ktfreese@utexas.edu).

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## Professional references addressing my teaching activity

**Lars Bergström** **Professor and former director,**  
Oskar Klein Centre, Stockholm University  
Roslagstullsbacken 21 A 10691 Stockholm, Sweden.  
Email: [lbe@fysik.su.se](mailto:lbe@fysik.su.se).

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## Additional references

**Frank Wilczek** **Full Professor,**  
• Department of Physics, Massachusetts Institute of Technology  
77 Massachusetts Ave, 6-301. Cambridge, MA 02139, United States of America;  
• Department of Physics and Origins Project, Arizona State University  
Tempe, AZ 25287, United States of America.  
Tel. +1 617 253 0284, Email: [wilczek@mit.edu](mailto:wilczek@mit.edu).  
Secretary [for reference letters]: [Anne.Dominic@asu.edu](mailto:Anne.Dominic@asu.edu).

**Javier Redondo** **Associate Professor,**  
Theoretical physics dept., Zaragoza University,  
C/ Pedro Cerbuna 12 E-50009, Zaragoza, Spain.  
Tel. +34 876 553312, Email: [jredondo@unizar.es](mailto:jredondo@unizar.es).