

COSIMO BAMBI

Date and Place of Birth: 21 September 1980, Florence (Italy)

Citizenship: Italian (Passport), Chinese (Permanent Residence Permit)

Contact details Department of Physics, Fudan University, 2005 Songhu Road, Shanghai 200438, China
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 Webpage: <http://www.physics.fudan.edu.cn/tps/people/bambi/>

Current Academic Position

2016 – Present Xie Xide Junior Chair Professor of Physics. Fudan University (China)

Education

2007 Ph.D. in Physics. Ferrara University (Italy). Supervisor: Prof. Alexander D. Dolgov.

2003 Laurea in Physics *summa cum laude*. Florence University (Italy).

Previous Academic Positions

2015 – 2018 Humboldt Fellow (visiting position). University of Tübingen (Germany)

2013 – 2015 Full Professor. Fudan University (China)

2012 – 2013 Associate Professor. Fudan University (China)

2011 – 2012 Postdoctoral Research Fellow. Dvali's Group, LMU Munich (Germany)

2008 – 2011 Project Researcher. IPMU, The University of Tokyo (Japan)

2007 – 2008 Postdoctoral Research Fellow. Wayne State University (Michigan)

Editorial Positions

2022 – Present Founding Editor. [Springer Series in Astrophysics and Cosmology](#) (Springer Nature)

2018 – Present Editorial Advisory Board Member. [iScience](#) (CellPress), IF: 6.107

Honors and Awards (selected)

2019 Team Leader of an International ISSI Team, Switzerland

2019 Extraordinary 2025 Elite Award of Fudan University, China

2018 Magnolia Silver Award (for outstanding contributions to Shanghai's development), China

2018 Xu Guangqi Prize (best Italian scholar in China), Italy

2016 JSPS Invitation Fellowship for Research in Japan, Japan

2016 Named Xie Xide Junior Chair Professor of Physics at Fudan University, China

2015 Named Humboldt Fellow (Experienced Researcher), Germany

2012 Thousand Young Talents Award (Qingnian Qianren), China

Member

2021 – Present Athena Science Team

2019 – Present Insight-HXMT Science Team

2017 – Present American Physical Society

2015 – Present Association of Italian Scholars in China

2014 – Present XTP/eXTP Science Team

2013 – Present Chinese Physical Society

2013 – Present International Society on General Relativity and Gravitation

Publication Summary

Books: 1 monograph, 2 textbooks, 1 encyclopedia, 2 edited books, 1 popular science book
 Total number of SCI papers: 206 SCI papers as first/corresponding author: 185
 Total number of citations: 8,560 (Google Scholar) h-index: 50 (Google Scholar)
[Google Scholar Profile](#)

Among the 185 SCI papers as first/corresponding author:

1 Reviews of Modern Physics (single author)
 2 Physical Review Letters
 63 PRD, 27 ApJ, 26 JCAP, 23 EPJC, 10 PLB, 8 MNRAS, 7 CQG, 2 JHEP, 1 SSRv

Representative publications (* is to indicate the corresponding author)

1. **C. Bambi***, L.W. Brenneman, T. Dauser, J.A. Garcia, V. Grinberg, et al., *Towards precision measurements of accreting black holes using X-ray reflection spectroscopy*, [Space Sci. Rev. **217**, 65 \(2021\)](#).
2. A. Tripathi, Y. Zhang, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, J. Jiang, H. Liu and M. Zhou, *Testing General Relativity with NuSTAR data of Galactic Black Holes*, [Astrophys. J. **913**, 79 \(2021\)](#).
3. Z. Cao, S. Nampalliwar, **C. Bambi***, T. Dauser and J.A. Garcia, *Testing general relativity with the reflection spectrum of the supermassive black hole in 1H0707–495*, [Phys. Rev. Lett. **120**, 051101 \(2018\)](#).
4. **C. Bambi***, A. Cardenas-Avendano, T. Dauser, J.A. Garcia and S. Nampalliwar, *Testing the Kerr black hole hypothesis using X-ray reflection spectroscopy*, [Astrophys. J. **842**, 76 \(2017\)](#).
5. **C. Bambi**, *Testing black hole candidates with electromagnetic radiation*, [Rev. Mod. Phys. **89**, 025001 \(2017\)](#).
6. **C. Bambi** and L. Modesto, *Rotating regular black holes*, [Phys. Lett. B **721**, 329-334 \(2013\)](#).
7. **C. Bambi** and K. Freese, *Apparent shape of super-spinning black holes*, [Phys. Rev. D **79**, 043002 \(2009\)](#).

Student Supervision Summary

Supervised 51 theses (32 Bachelor theses, 8 Master theses, and 11 Doctoral theses)

Service

Referee Astronomy & Astrophysics, Astroparticle Physics, Chinese Physics C, Classical and Quantum Gravity, Europhysics Letters, General Relativity and Gravitation, International Journal of Modern Physics D, JCAP, JHEP, MNRAS, **Nature**, Nuclear Physics B, Physical Review D, **Physical Review Letters**, Physics Letters B, Physics of the Dark Universe, Scientific Reports, **The Astrophysical Journal**, The European Physical Journal C

Proposal Reviewer Chang Jiang Scholars Program (China)
 Czech Science Foundation (Czech Republic)
 German Academic Exchange Service, DAAD (Germany)
 German Research Foundation, DFG (Germany)
 National Research Foundation (South Africa)
 Natural Sciences and Engineering Research Council of Canada, NSERC (Canada)

Book Proposal Reviewer Cambridge University Press
 Springer Nature

External Grants as PI

1. Science and Technology Commission of Shanghai Municipality (China). General Grant
Studying the accretion process of Galactic black holes with Insight-HXMT data, Grant No. 22ZR1403400
Budget: 200k CNY (28k EUR). Period: 2022-2025 (3 years)
2. NSFC (China). General Grant
Testing Einstein's gravity using the continuum-fitting method, Grant No. 11973019
Budget: 630k CNY (80k EUR). Period: 2020-2023 (4 years)
3. ISSI (Switzerland), International ISSI Team
Can we use X-ray reflection spectroscopy for precision measurements of accreting black holes?, Team ID 458
Budget: 24k CHF (22k EUR). Period: 2019-2021 (2 years)
4. Shanghai Municipal Education Commission (China). Grant for Innovative Programs
Testing Einstein's gravity using X-ray reflection spectroscopy, Grant No. 2019-01-07-00-07-E00035
Budget: 3M CNY (400k EUR). Period: 2019-2023 (5 years)
5. NSFC (China). Grant for Astrophysics
Testing astrophysical black holes with X-ray observations, Grant No. U1531117
Budget: 450k CNY (60k EUR). Period: 2016-2018 (3 years)
6. Alexander von Humboldt Foundation (Germany). Humboldt Fellowship for Experienced Researchers
Budget: 43k EUR. Period: 2015-2018 (12 months)
7. Shanghai Municipal Education Commission (China), Grants for Innovative Programs
A study to explore the possibility of observing quantum gravity effects in the gravitational collapse of very massive stars, Grant No. 14ZZ001
Budget: 160k CNY (20k EUR). Period: 2014-2016 (3 years)
8. NSFC (China). Grant for Young Scientists
A numerical study to investigate the possibility of testing the gravitational collapse and the cosmic censorship with observations, Grant No. 11305038
Budget: 220k CNY (27k EUR). Period: 2014-2016 (3 years)
9. State Council of PRC (China). Thousand Young Talents Program (Qingnian Qianren Jihua)
Budget: 1.5M CNY (180k EUR). Period: 2012-2015 (3 years)
10. JSPS (Japan). Grant-in-Aid for Young Scientists B
Study of the accretion flow onto super-spinars, Grant No. 22740147
Budget: 3.12M JPY (30k EUR). Period: 2010-2012 (2 years)

Internal Grants as PI

1. Fudan University (China). Excellence 2025 Grant. Grant No. JIH1512604
Budget: 300k CNY (40k EUR). Period: 2020-2023 (3 years)
2. Fudan University (China). First Class Construction Project
Testing the Kerr Paradigm using X-ray reflection spectroscopy, Grant No. IDH1512060
Budget: 300k CNY (40k EUR). Period: 2017-2019 (3 years)
3. Department of Physics, Fudan University (China). Seed Funding
Astrophysical implications of quantum gravity
Budget: 100k CNY (12k EUR). Period: 2013-2014 (1 year)
4. Department of Physics, Fudan University (China). Start-Up Research Grant
Grant No. EZH1512600/010
Budget: 400k CNY (50k EUR). Period: 2012-
5. Fudan University (China). Start-Up Research Grant
Testing the Kerr Black Hole Hypothesis, Grant No. EZH1512514
Budget: 800k CNY (100k EUR). Period: 2012-
6. IPMU, The University of Tokyo (Japan). Start-Up Research Grant
Budget: 1.5M JPY (15k EUR). Period: 2008-2011 (3 years)

Conference/Workshop/School Organization

- Chair *Modeling black hole X-ray emission: recent progress and future developments*
8–10 June 2022, online meeting
- Chair *Recent Progress on Gravity Tests*
16–18 February 2022, online meeting. INSPIRE ID: C22-02-16
- Chair *2nd China-India Workshop on High Energy Astrophysics*
6–10 December 2021, online meeting
- SOC Member *International Workshop on Relativistic Astrophysics and Gravitation*
12–14 May 2021, online meeting
- Chair *China-India Workshop on High Energy Astrophysics*
6–7 November 2020, online meeting. INSPIRE ID: C20-11-06
- Chair *Accretion 2020 @ Fudan*
21–23 October 2020, online meeting. INSPIRE ID: C20-07-01
- Chair *Recent Progress in Relativistic Astrophysics*
6–8 May 2019, Shanghai, China. INSPIRE ID: C19-05-06.1
- Chair *International Conference on Quantum Gravity*
26–28 March 2018, Shenzhen, China. INSPIRE ID: C18-03-26.1
- Chair *Winter School on X-ray Data Analysis*
22 January–2 February 2018, Shanghai, China
- SOC Member *High-throughput X-ray Astronomy in the eXTP era*
6–8 February 2017, Rome, Italy
- Chair *Mini-Workshop on Black Holes*
6–11 November 2017, Shanghai, China
- Chair *2nd Fudan Winter School on Astrophysical Black Holes*
9–14 January 2017, Shanghai, China. INSPIRE ID: C17-01-09.2
- LOC Chair *eXTP Science Workshop*
14–15 April 2016, Shanghai, China
- Chair *Black Holes and Friends 2*
11–13 April 2016, Shanghai, China. INSPIRE ID: C16-04-11.1
- Chair *Mini-Workshop on Black Holes*
24 November 2015, Shanghai, China
- Chair *Black Holes and Friends*
30 March–1 April 2015, Shanghai, China. INSPIRE ID: C15-03-30
- Chair *Fudan Winter School on Astrophysical Black Holes*
10–15 February 2014, Shanghai, China. INSPIRE ID: C14-02-10
- Chair *Workshop on Collapsing Objects*
21–24 October 2013, Shanghai, China. INSPIRE ID: C13-10-21
- Chair *Testing Gravity with Astrophysical and Cosmological Observations*
23 January–3 February 2012, Kashiwa, Japan. INSPIRE ID: C12-01-23
- Chair *IPMU Workshop on Black Holes*
21–25 February 2011, Kashiwa, Japan. INSPIRE ID: C11-02-21

LIST OF PUBLICATIONS: BOOKS

Monographs

1. **C. Bambi**, *Black Holes: A Laboratory for Testing Strong Gravity* (Springer Singapore, 2017). Hardcover ISBN: 9789811045233. eBook ISBN: 9789811045240.

Textbooks

1. **C. Bambi**, *Introduction to General Relativity: A Course for Undergraduate Students of Physics* (Springer Singapore, 2018). Softcover ISBN: 9789811310898. eBook ISBN: 9789811310904.
C. Bambi, *Introduction to General Relativity: A Course for Undergraduate Students of Physics* [in Chinese] (Fudan University Press, 2020). Softcover ISBN: 9787309151503.
C. Bambi, *Introducción a la relatividad general: Un curso para estudiantes de física* [in Spanish] (Editorial Reverté, 2021). Softcover ISBN: 9788429144376. eBook ISBN: 9788429196351.
C. Bambi, *Introduction to General Relativity: A Course for Undergraduate Students of Physics* [in Persian] (Jahan-Adib, 2021). Softcover ISBN: 9786005440546.
2. **C. Bambi** and A.D. Dolgov, *Introduction to Particle Cosmology: The Standard Model of Cosmology and its Open Problems* (Springer-Verlag Heidelberg Berlin, 2016). Hardcover ISBN: 9783662480779. eBook ISBN: 9783662480786.
C. Bambi and A.D. Dolgov, *Introduction to Particle Cosmology: The Standard Model of Cosmology and its Open Problems* [in Chinese] (Fudan University Press, 2017). Softcover ISBN: 9787309127942.

Encyclopedias

1. **C. Bambi**, L. Modesto and I.L. Shapiro (Editors), *Handbook of Quantum Gravity* (Springer Singapore, in preparation, expected in 2023). Hardcover ISBN: TBA. eBook ISBN: TBA.
 Living Edition ISBN: 9789811930799.
 Expected 109 chapters, about 200 authors, about 4,000 pages.
2. **C. Bambi** and A. Santangelo (Editors), *Handbook of X-ray and Gamma-ray Astrophysics* (Springer Singapore, in preparation, expected in 2023). Hardcover ISBN: TBA. eBook ISBN: TBA.
 Living Edition ISBN: 9789811645440.
 Expected 167 chapters, about 400 authors, about 6,000 pages.
3. **C. Bambi**, S. Katsanevas and K. Kokkotas (Editors), *Handbook of Gravitational Wave Astronomy* (Springer Singapore, 2022). Hardcover ISBN: 9789811643057. eBook ISBN: 9789811643064.
 Living Edition ISBN: 9789811547027.
 45 chapters, 101 authors, 1,926 pages.

Popular Science Books

1. **C. Bambi**, *Niente é impossibile: Viaggiare nel tempo, attraversare i buchi neri e altre sfide scientifiche* [in Italian] (il Saggiatore, 2020). Softcover ISBN: 9788842826941. eBook ISBN: 9788865768391.
C. Bambi, *Nothing is impossible* [in Chinese] (Fudan University Press, in press, expected in 2022).

Edited Books

1. **C. Bambi** and A. Cardenas-Avendano (Editors), *Recent Progress on Gravity Tests: Challenges and Future Perspectives* (Springer Singapore, in preparation, expected in 2024).
2. **C. Bambi** and J. Jiang (Editors), *High Resolution X-Ray Spectroscopy: Instrumentation, Data Analysis, and Science* (Springer Singapore, in preparation, expected in 2023).
3. **C. Bambi** (Editor), *Regular Black Holes: Towards a New Paradigm of Gravitational Collapse* (Springer Singapore, in preparation, expected in 2023).
4. **C. Bambi** (Editor), *Tutorial Guide to X-ray and Gamma-ray Astronomy: Data Reduction and Analysis* (Springer Singapore, 2020). Hardcover ISBN: 9789811563362. eBook ISBN: 9789811563379.
5. **C. Bambi** (Editor), *Astrophysics of Black Holes: From Fundamental Aspects to Latest Developments* (Springer-Verlag Heidelberg Berlin, 2016). Hardcover ISBN: 9783662528570. eBook ISBN: 9783662528594.

LIST OF PUBLICATIONS: ARTICLES

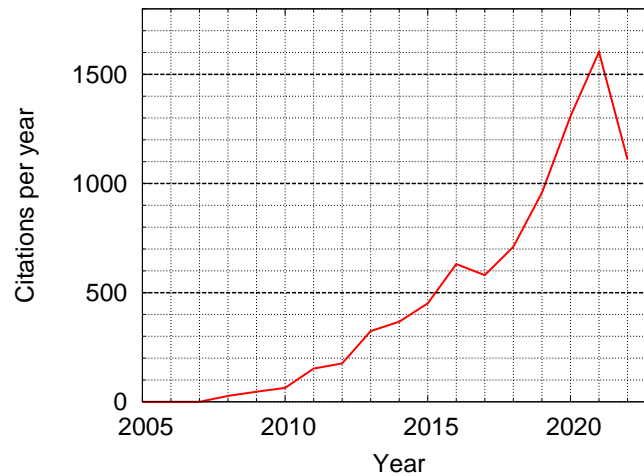
(In the list below, * is to indicate the corresponding author)

Citation Summary (from Google Scholar)

Google Scholar Profile: <https://scholar.google.com/citations?user=W9EMTqIAAAAJ&hl=en>

Citations of this year in the table and in the plot are updated to August 17, 2022.

	All years	Since 2017
Citations	8,560	6,271
h-index	50	43
i10-index	171	148



Papers in refereed journals

— 2022 (10 papers; 10 SCI papers; 8 SCI papers as first/corresponding author) —

1. J. Gu, S. Riaz, A.B. Abdikamalov, D. Ayzenberg and **C. Bambi***, *Probing bumblebee gravity with black hole X-ray data*, Eur. Phys. J. C **82**, 708 (2022).
2. K. Jusufi, Saurabh K., M. Azreg-Aïnou, M. Jamil, Q. Wu and **C. Bambi**, *Constraining Wormhole Geometries using the Orbit of S2 Star and the Event Horizon Telescope*, Eur. Phys. J. C **82**, 633 (2022).
3. H. Liu, Y. Fu, **C. Bambi***, J. Jiang, M.L. Parker, L. Ji, L. Kong, L. Zhang, S. Zhang and Y. Zhang, *The disk wind in GRS 1915+105 as seen by Insight-HXMT*, Astrophys. J. **933**, 122 (2022). [arXiv:2203.02659 [astro-ph.HE]].
4. J. Jiang, A.B. Abdikamalov, **C. Bambi** and C.S. Reynolds, *Black Hole Spin Measurements Based on a Thin Disc Model with Finite Thickness I. An example study of MCG-06-30-15*, MNRAS **514**, 3246-3259 (2022).
5. H. Liu, J. Jiang, Z. Zhang, **C. Bambi***, L. Ji, L. Kong and S. Zhang, *Rapidly alternating flux states of GX 339-4 during its 2021 outburst captured by Insight-HXMT*, MNRAS **513**, 4308-4317 (2022).

6. S. Shashank and **C. Bambi***, *Constraining the Konoplya-Rezzolla-Zhidenko deformation parameters III: limits from stellar-mass black holes using gravitational-wave observations*, Phys. Rev. D **105**, 104004 (2022).
 7. Q. Liu, H. Liu, **C. Bambi*** and L. Ji, *The spins of the Galactic black holes in MAXI J1535–571 and 4U 1630–472 from Insight-HXMT*, MNRAS **512**, 2082-2092 (2022).
 8. S. Riaz, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, H. Wang and Z. Yu, *Reflection spectra of accretion disks illuminated by disk-like coronae*, Astrophys. J. **925**, 51 (2022).
 9. Z. Zhang, H. Liu, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi*** and M. Zhou, *Testing the Kerr black hole hypothesis with GRS 1716–249 by combining the continuum-fitting and the iron-line methods*, Astrophys. J. **924**, 72 (2022).
 10. A. Tripathi, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, V. Grinberg, H. Liu and M. Zhou, *Testing the Kerr black hole hypothesis with the continuum-fitting and the iron line methods: the case of GRS 1915+105*, JCAP 01 (2022) 019.
- 2021 (22 papers; 22 SCI papers; 20 SCI papers as first/corresponding author) —
11. A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, H. Liu and A. Tripathi, *A reflection model with a radial disk density profile*, Astrophys. J. **923**, 175 (2021).
 12. B. Narzilloev, I. Hussain, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Dynamics and Fundamental Frequencies of Test Particles Orbiting Kerr-Newman-NUT-Kiselev Black Hole in Rastall Gravity*, Eur. Phys. J. Plus **136**, 1032 (2021).
 13. Z. Yu, Q. Jiang, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, H. Liu, S. Nampalliwar and A. Tripathi, *Constraining the Konoplya-Rezzolla-Zhidenko deformation parameters II: limits from stellar-mass black hole X-ray data*, Phys. Rev. D **104**, 084035 (2021).
 14. B. Narzilloev, S. Shaymatov, I. Hussain, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Motion of particles and gravitational lensing around the (2+1)-dimensional BTZ black holes in Gauss-Bonnet gravity*, Eur. Phys. J. C **81**, 849 (2021).
 15. B. Narzilloev, D. Malafarina, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Particle motion around a static axially symmetric wormhole*, Phys. Rev. D **104**, 064016 (2021).
 16. H. Liu, M.L. Parker, J. Jiang, E. Kara, **C. Bambi**, D. Grupe and S. Komossa, *A systematic study of photoionized emission and warm absorption signatures of the NLS1 Mrk 335*, MNRAS **506**, 5190-5200 (2021).
 17. R. Roy, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, S. Riaz and A. Tripathi, *Testing the Weak Equivalence Principle near black holes*, Phys. Rev. D **104**, 044001 (2021).
 18. A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, S. Nampalliwar and A. Tripathi, *Constraining the Konoplya-Rezzolla-Zhidenko deformation parameters: Limits from supermassive black hole X-ray data*, Phys. Rev. D **104**, 024058 (2021).
 19. **C. Bambi***, L.W. Brenneman, T. Dauser, J.A. Garcia, V. Grinberg, A. Ingram, J. Jiang, H. Liu, A.M. Lohfink, A. Marinucci, G. Mastroserio, R. Middei, S. Nampalliwar, A. Niedzwiecki, J.F. Steiner, A. Tripathi and A.A. Zdziarski, *Towards precision measurements of accreting black holes using X-ray reflection spectroscopy*, Space Sci. Rev. **217**, 65 (2021).
 20. A. Tripathi, B. Zhou, A.B. Abdikamalov, D. Ayzenberg and **C. Bambi***, *Constraints on Einstein-Maxwell dilaton-axion gravity from X-ray reflection spectroscopy*, JCAP 07 (2021) 002.
 21. S. Shaymatov, B. Narzilloev, A. Abdujabbarov and **C. Bambi**, *Charged particle motion around magnetized Reissner-Nordström black hole*, Phys. Rev. D **103**, 124066 (2021).

22. A. Tripathi, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi*** and H. Liu, *Impact of the disk thickness on X-ray reflection spectroscopy measurements*, *Astrophys. J.* **913**, 129 (2021).
 23. A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, H. Liu and Y. Zhang, *Implementation of a radial disk ionization profile in the `relxill_nk` model*, *Phys. Rev. D* **103**, 103023 (2021).
 24. A. Tripathi, Y. Zhang, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, J. Jiang, H. Liu and M. Zhou, *Testing General Relativity with NuSTAR data of Galactic Black Holes*, *Astrophys. J.* **913**, 79 (2021).
 25. **C. Bambi*** and D. Stojkovic, *Astrophysical Wormholes*, *Universe* **7**, 136 (2021).
 26. B. Narzilloev, J. Rayimbaev, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Dynamics of charged particles and magnetic dipoles around magnetized quasi-Schwarzschild black holes*, *Eur. Phys. J. C* **81**, 269 (2021).
 27. S. Riaz, M. Szanecki, A. Niedźwiecki, D. Ayzenberg and **C. Bambi***, *Impact of the returning radiation on the analysis of the reflection spectra of black holes*, *Astrophys. J.* **910**, 49 (2021).
 28. H. Liu, L. Ji, **C. Bambi***, P. Jain, R. Misra, D. Rawat, J.S. Yadav and Y. Zhang, *Testing evolution of LFQPOs with mass accretion rate in GRS 1915+105 with Insight-HXMT*, *Astrophys. J.* **909**, 63 (2021).
 29. Z. Zhang, H. Liu, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi*** and M. Zhou, *Probing the near-horizon region of Cygnus X-1 with Suzaku and NuSTAR*, *Phys. Rev. D* **103**, 024055 (2021).
 30. B. Zhou, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, S. Nampalliwar and A. Tripathi, *Shining X-rays on asymptotically safe quantum gravity*, *JCAP* 01 (2021) 047.
 31. A. Tripathi, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, V. Grinberg and M. Zhou, *Testing the Kerr Black Hole Hypothesis with GX 339-4 by a combined analysis of its thermal spectrum and reflection features*, *Astrophys. J.* **907**, 31 (2021).
 32. A. Tripathi, A.C. Gupta, M.F. Aller, P.J. Wiita, **C. Bambi***, H. Aller and M. Gu, *Quasi-Periodic Oscillations in the long term radio light curves of the blazar AO 0235+164*, *MNRAS* **501**, 5997-6006 (2021).
- 2020 (25 papers; 25 SCI papers; 21 SCI papers as first/corresponding author) —
33. S. Nampalliwar, S. Xin, S. Srivastava, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi**, T. Dauser, J.A. Garcia and A. Tripathi, *Testing General Relativity with X-ray reflection spectroscopy: The Konoplya-Rezzolla-Zhidenko parametrization*, *Phys. Rev. D* **102**, 124071 (2020).
 34. B. Narzilloev, J. Rayimbaev, S. Shaymatov, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Dynamics of test particles around a Bardeen black hole surrounded by perfect fluid dark matter*, *Phys. Rev. D* **102**, 104062 (2020).
 35. B. Narzilloev, J. Rayimbaev, A. Abdujabbarov and **C. Bambi***, *Charged particle motion around non-singular black holes in conformal gravity in the presence of external magnetic field*, *Eur. Phys. J. C* **80**, 1074 (2020).
 36. A. Tripathi, B. Zhou, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi*** and S. Nampalliwar, *Testing the Keplerian disk hypothesis using X-ray reflection spectroscopy*, *Phys. Rev. D* **102**, 103009 (2020).
 37. A. Tripathi, H. Liu and **C. Bambi***, *Impact of the reflection model on the estimate of the properties of accreting black holes*, *MNRAS* **498**, 3565-3577 (2020).
 38. B. Narzilloev, D. Malafarina, A. Abdujabbarov and **C. Bambi***, *On the properties of a deformed extension of the NUT space-time*, *Eur. Phys. J. C* **80**, 784 (2020).
 39. A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, T. Dauser, J.A. Garcia, S. Nampalliwar, A. Tripathi and M. Zhou, *Testing the Kerr black hole hypothesis using X-ray reflection spectroscopy and a thin disk model with finite thickness*, *Astrophys. J.* **899**, 80 (2020).

40. B. Narzilloev, J. Rayimbaev, S. Shaymatov, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Can the dynamics of test particles around charged stringy black holes mimic the spin of Kerr black holes?*, Phys. Rev. D **102**, 044013 (2020).
41. J. Zhu, A.B. Abdikamalov, D. Ayzenberg, M. Azreg-Aïnou, **C. Bambi***, M. Jamil, S. Nampalliwar, A. Tripathi and M. Zhou, *X-ray reflection spectroscopy with Kaluza-Klein black holes*, Eur. Phys. J. C **80**, 622 (2020).
42. A. Tripathi, M. Zhou, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, L. Gou, V. Grinberg, H. Liu and J.F. Steiner, *Testing general relativity with the stellar-mass black hole in LMC X-1 using the continuum-fitting method*, Astrophys. J. **897**, 84 (2020).
43. H. Liu, H. Wang, A.B. Abdikamalov, D. Ayzenberg and **C. Bambi***, *Reflection features in the X-ray spectrum of Fairall 9 and implications for tests of general relativity*, Astrophys. J. **896**, 160 (2020).
44. A. Cardenas-Avendano, M. Zhou and **C. Bambi***, *Modeling uncertainties in X-ray reflection spectroscopy measurements. II. Impact of the radiation from the plunging region*, Phys. Rev. D **101**, 123014 (2020).
45. C.A. Benavides-Gallego, A. Abdujabbarov, D. Malafarina and **C. Bambi***, *Quasi-harmonic oscillations of charged particles in static axially symmetric space-times immersed in a uniform magnetic field*, Phys. Rev. D **101**, 124024 (2020).
46. M. Zhou, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, V. Grinberg and A. Tripathi, *Thermal spectra of thin accretion disks of finite thickness around Kerr black holes*, MNRAS **496**, 497-503 (2020).
47. S. Riaz, D. Ayzenberg, **C. Bambi*** and S. Nampalliwar, *Modeling bias in supermassive black hole spin measurements*, Astrophys. J. **895**, 61 (2020).
48. J. Wang, A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, T. Dauser, J.A. Garcia, S. Nampalliwar and J.F. Steiner, *Testing the Kerr metric using X-ray reflection spectroscopy: spectral analysis of GX 339-4*, JCAP **05** (2020) 026.
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183. **C. Bambi**, T. Harada, R. Takahashi and N. Yoshida, *Outflows from accreting superspinars*, Phys. Rev. D **81**, 104004 (2010).
— 2009 (6 papers; 6 SCI papers; 6 SCI papers as first/corresponding author) —
184. **C. Bambi**, K. Freese, T. Harada, R. Takahashi and N. Yoshida, *Accretion process onto super-spinning objects*, Phys. Rev. D **80**, 104023 (2009).
185. **C. Bambi**, D. Spolyar, A.D. Dolgov, K. Freese and M. Volonteri, *Implications of primordial black holes on the first stars and origin of the super-massive black holes*, MNRAS **399**, 1347-1356 (2009).
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187. **C. Bambi**, M. Kawasaki and F.R. Urban, *Axion braneworld cosmology*, Phys. Rev. D **80**, 023533 (2009).
188. **C. Bambi**, *A note on the black hole information paradox in de Sitter spacetimes*, Commun. Theor. Phys. **52**, 78-80 (2009).
189. **C. Bambi** and K. Freese, *Apparent shape of super-spinning black holes*, Phys. Rev. D **79**, 043002 (2009).
— 2008 (7 papers; 7 SCI papers; 7 SCI papers as first/corresponding author) —
190. **C. Bambi** and F.R. Urban, *Gravitational production of KK states*, Phys. Rev. D **78**, 103515 (2008).
191. **C. Bambi**, A.D. Dolgov and A.A. Petrov, *Primordial black holes and the observed Galactic 511 keV line*, Phys. Lett. B **670**, 174-178 (2008) [Erratum-ibid. **681**, 504 (2009)].
192. **C. Bambi**, *Gravitomagnetism in superconductors and compact stars*, IJMPD **17**, 327-336 (2008).
193. **C. Bambi** and K. Freese, *Dangerous implications of a minimum length in quantum gravity*, Class. Quantum Grav. **25**, 195013 (2008).
194. **C. Bambi**, *A revision of the Generalized Uncertainty Principle*, Class. Quantum Grav. **25**, 105003 (2008).
195. **C. Bambi** and F.R. Urban, *Natural extension of the Generalised Uncertainty Principle*, Class. Quantum Grav. **25**, 095006 (2008).
196. **C. Bambi** and A. Drago, *Constraints on temporal variation of fundamental constants from GRBs*, Astropart. Phys. **29**, 223-227 (2008).
— 2007 (7 papers; 7 SCI papers; 7 SCI papers as first/corresponding author) —
197. **C. Bambi** and F.R. Urban, *Gravitational particle production in braneworld cosmology*, Phys. Rev. Lett. **99**, 191302 (2007).
198. **C. Bambi** and F.R. Urban, *Brane cosmology and KK gravitinos*, JCAP 09 (2007) 018.
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200. **C. Bambi**, *Strange stars and the cosmological constant problem*, JCAP 06 (2007) 006.
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202. **C. Bambi**, A.D. Dolgov and K. Freese, *Baryogenesis from gravitational decay of TeV-particles in theories with low scale gravity*, JCAP 04 (2007) 005.
203. **C. Bambi**, A.D. Dolgov and K. Freese, *A black hole conjecture and rare decays in theories with low scale gravity*, Nucl. Phys. B **763**, 91-114 (2007).
— 2005 (1 paper; 1 SCI paper; 1 SCI paper as first/corresponding author) —
204. **C. Bambi**, M. Giannotti and F.L. Villante, *Response of primordial abundances to a general modification of G_N and/or of the early universe expansion rate*, Phys. Rev. D **71**, 123524 (2005).

Conference proceedings (refereed and non-refereed articles)

(4 SCI papers; 3 SCI papers as first/corresponding author)

1. **C. Bambi**, *Testing General Relativity with black hole X-ray data: a progress report*, Arab. J. Math **11**, 81-90 (2022). <https://doi.org/10.1007/s40065-021-00336-y>
2. **C. Bambi**, *Testing General Relativity with black hole X-ray data: recent progress and future developments*, in *2021 Gravitation*, edited by E. Augé et al. (ARISF, 2021), pp. 69-72.
3. **C. Bambi**, *Testing General Relativity with Black Hole X-ray Data*, Astronomy Reports **65**, 902-905 (2021).
4. P. Uttley, R. den Hartog, **C. Bambi**, et al., *An x-ray interferometry concept for the ESA Voyage 2050 programme*, Proc. SPIE **11444**, 114441E (2020).
5. A.B. Abdikamalov, D. Ayzenberg, **C. Bambi** and S. Nampalliwar, *RELXILL_NK: A Black Hole Relativistic Reflection Model for Testing General Relativity*, Proceedings **17**, 7 (2019).
6. **C. Bambi**, *Astrophysical Black Holes: A Review*, PoS MULTIF2019 (2020) 028.
7. A.B. Abdikamalov, D. Ayzenberg, **C. Bambi***, et al., *Testing general relativity with supermassive black holes using X-ray reflection spectroscopy*, Proceedings **17**, 2 (2019).
8. **C. Bambi***, et al., *RELXILL_NK: a relativistic reflection model for testing Einstein's gravity*, Universe **4**, 79 (2018).
9. **C. Bambi**, *Testing the Kerr black hole hypothesis with RELXILL_NK*, J. Phys. Conf. Ser. **942**, 012004 (2017).
10. S.N. Zhang, et al., *eXTP – enhanced X-ray Timing and Polarimetry Mission*, Proc. SPIE **9905**, 99051Q (2016).
11. **C. Bambi**, *Testing the Kerr Paradigm with X-ray Observations*, in *Proceedings of the Fourteenth Marcel Grossmann Meeting on General Relativity*, edited by M. Bianchi, R.T. Jantzen and R. Ruffini, (World Scientific, Singapore, 2017), pp. 1546-1551.
12. **C. Bambi**, *Testing the Kerr Paradigm with the Black Hole Shadow*, in *Proceedings of the Fourteenth Marcel Grossmann Meeting on General Relativity*, edited by M. Bianchi, R.T. Jantzen and R. Ruffini, (World Scientific, Singapore, 2017), pp. 3494-3499.
13. I. Mandel, et al., *Relativistic astrophysics at GR20*, Gen. Rel. Grav. **46**, 1688 (2014).
14. **C. Bambi**, *Testing the nature of astrophysical black hole candidates*, Springer Proc. Phys. **145**, 81-87 (2014).
15. **C. Bambi**, *Compact objects with spin parameter $a_* > 1$* , in *2011 Gravitational Waves and Experimental Gravity*, edited by E. Augé et al. (The Gioi Publishers, Ha Noi, Vietnam, 2011), pp. 89-92.

16. **C. Bambi**, *Violation of the Carter-Israel conjecture and its astrophysical implications*, J. Phys. Conf. Ser. **283**, 012005 (2011).
17. **C. Bambi**, *Numerical simulations of the accretion process in Kerr spacetimes with arbitrary value of the Kerr parameter*, in *Proceedings of the Nineteenth Workshop on General Relativity and Gravitation*, edited by M. Saijo et al., pp. 109-112 (2010).
18. **C. Bambi**, *Testing the black hole paradigm with future observations of SgrA**, ASP Conf. Ser. **439**, 340-343 (2011).
19. **C. Bambi**, K. Freese and R. Takahashi, *Is the Carter-Israel conjecture correct?*, in *Windows on the Universe*, edited by L. Celnikier et al. (The Gioi Publishers, Ha Noi, Vietnam, 2010), pp. 575-578.
20. **C. Bambi**, *Primordial antimatter in the contemporary universe*, Frascati Phys. Ser. **45**, 129-136 (2007).

Conference proceedings (as editor)

1. **C. Bambi** and S. Nampalliwar (Editors), *Recent Progress in Relativistic Astrophysics*, Proceedings, Volume 17 (2019), proceedings of “Recent Progress in Relativistic Astrophysics” (6-8 May 2019, Shanghai, China).
2. G. Calcagni, **C. Bambi** and L. Modesto (Editors), *Gravity, Black Holes and Cosmology XXI*, special issue of Universe (2018), proceedings of “International Conference on Quantum Gravity” (26-28 March 2018, Shenzhen, China).

White Papers

1. P. Uttley, R. den Hartog, **C. Bambi**, et al., *The high energy universe at ultra-high resolution: the power and promise of X-ray interferometry*, ESA’s Voyage 2050 White Paper [arXiv:1908.03144 [astro-ph.HE]].
2. J. McEnery, et al., *All-sky Medium Energy Gamma-ray Observatory: Exploring the Extreme Multimessenger Universe*, Astro2020 APC White Paper [arXiv:1907.07558 [astro-ph.IM]].

SUPERVISION OF STUDENTS AND POSTDOCS

Undergraduate Students (followed by the position found after the Bachelor)

1. Jiale Gu (B.S. in Physics 2022, Liaoning University) → Fudan University (Ph.D. student)
2. Kexin Huang (B.S. in Physics 2022, Fudan University) → Fudan University (M.S. student)
3. Qichun Liu (B.S. in Physics 2022, Fudan University) → Tsinghua University (Ph.D. student)
4. Haiyang Wang (B.S. in Physics 2022, Fudan University) → Cambridge University (M.S. student)
5. Zichao Wang (B.S. in Physics 2022, Fudan University) → Fudan University (M.S. student)
6. Zhibo Yu (B.S. in Physics 2022, Fudan University) → Penn State University (Ph.D. student)
7. Yao Zhang (B.S. in Physics 2022, Fudan University) → Tsinghua University (Ph.D. student)
8. Shuaitongze Zhao (B.S. in Physics 2022, SAU) → Fudan University (Ph.D. student)
9. Nan Li (B.S. in Physics 2021, Fudan University) → Fudan University (M.S. student)
10. Feiyang Liu (B.S. in Physics 2021, Fudan University) → Fudan University (Ph.D. student)
11. Dongnuo Lv (B.S. in Physics 2021, Fudan University) → Duke University (M.S. student)
12. Ziyu Ding (B.S. in Physics 2020, Fudan University) → LMU Munich (M.S. student)
13. Yuhui Lu (B.S. in Physics 2020, Fudan University) → University of Edinburgh (M.S. student)
14. Jelen Wong (B.S. in Physics 2020, Fudan University) → University of Chicago (M.S. student)
15. Honghui Liu (B.S. in Physics 2019, Fudan University) → Fudan University (Ph.D. student)
16. Jinli Yan (B.S. in Physics 2019, Fudan University) → Georgia Tech (M.S. student)
17. Yunfeng Yan (B.S. in Physics 2019, Fudan University) → Columbia University (M.S. student)
18. Yuchan Yang (B.S. in Physics 2019, Fudan University) → Northwestern University (M.S. student)
19. Yu Yao (B.S. in Physics 2019, Fudan University) → University of Edinburgh (M.S. student)
20. Yuexin Zhang (B.S. in Physics 2019, Fudan University) → University of Groningen (Ph.D. student)
21. Zheng Cao (B.S. in Physics 2018, Fudan University) → University of Amsterdam (M.S. student)
22. Chenyang Qian (B.S. in Physics 2018, Fudan University)
23. Jingyi Wang (B.S. in Physics 2018, Fudan University) → **MIT** (Ph.D. student)
24. Jinye Yang (B.S. in Physics 2018, Fudan University) → University of Florida Gainesville (Ph.D. student)
25. Yueying Ni (B.S. in Physics 2017, Fudan University) → Carnegie Mellon University (Ph.D. student)
26. Fangzheng Shi (B.S. in Physics 2017, Fudan University) → Nanjing University (Ph.D. student)
27. Menglei Zhou (B.S. in Physics 2017, Fudan University) → Fudan University (M.S. student)
28. Jiachen Jiang (B.S. in Physics 2016, Fudan University) → **Cambridge University** (Ph.D. student)
29. Qingling Ni (B.S. in Physics 2016, Fudan University) → Penn State University (Ph.D. student)
30. Muyun Liu (B.S. in Optical Information Science and Technology 2015, Fudan University)
31. Yue Liu (B.S. in Physics 2014, Fudan University) → Boston University (Ph.D. student)
32. Yiyang Zhang (B.S. in Physics 2014, Fudan University) → Washington University St. Louis (Ph.D. student)

Postdoctoral Research Fellows (followed by the position found after the end of the contract)

1. Shafqat Riaz (2021 – Present, Fudan University)
2. Askar Abdikamalov (2020 – Present, Fudan University)
3. Ashutosh Tripathi (2019 – 2022, Fudan University) → XAO/CAS (faculty)
4. Dmitry Ayzenberg (2017 – 2020, Fudan University) → University of Tübingen (postdoc)
5. Ahmadjon Abdujabbarov (2017 – 2019, Fudan University) → National University of Uzbekistan (faculty)
6. Sourabh Nampalliwar (2015 – 2017, Fudan University) → University of Tübingen (postdoc)
7. Shangyu Sun (2015 – 2017, Fudan University) → SHAO/CAS (postdoc)
8. Yu Wang (2015 – 2017, Fudan University) → Shanghai Normal University (faculty)
9. Diego Rubiera-Garcia (2014 – 2015, Fudan University) → Lisbon University (postdoc)
10. Naoki Tsukamoto (2013 – 2015, Fudan University) → HUST Wuhan (postdoc)
11. Daniele Malafarina (2013 – 2014, Fudan University) → Nazarbayev University (faculty)

TEACHING EXPERIENCE

General Relativity

Course for undergraduate and graduate students of Physics, Fudan University (China)

Spring 2022, Spring 2020, Spring 2013

Introduction to Cosmology

Course for undergraduate and graduate students of Physics, Fudan University (China)

Fall 2021, Spring 2018, Spring 2017, Spring 2016, Spring 2015, Spring 2014

Introduction to Astrophysics

Course for undergraduate and graduate students of Physics, Fudan University (China)

Spring 2021, Spring 2020, Spring 2019, Spring 2016

Black Holes: A Laboratory for Testing Strong Gravity

Mini-course for students and researchers at Konrad Lorenz University (Colombia)

Fall 2019

Big Bang Nucleosynthesis as assistant of Prof. G. Fiorentini

Course for undergraduate and graduate students of Physics, Ferrara University (Italy)

Spring 2008, Spring 2007, Spring 2006

Classical Mechanics as assistant of Prof. F.L. Villante

Course for undergraduate students of Computer Science, Ferrara University (Italy)

Spring 2007, Spring 2006

PRESS COVERAGE (SELECTED)

1. *How doomed matter reveals the inner secrets of black holes*
Astronomy (20 October 2021)
2. *Scientist is in for the long run*
China Daily (14 September 2018)
3. *Foreign scientists in Shanghai: the Italian astronomer Bambi* (in Chinese)
The Paper (4 July 2018)
4. *Why an Italian astrophysicist decided to move to Shanghai*
Nature Jobs Career Guide (17 January 2018); Nature **553**, S31 (2018)
5. *Nel cuore della Via Lattea c'è un tunnel spazio-temporale* (in Italian)
Rai News (31 May 2014)
6. *Sagittarius A*: buco nero o wormhole* (in Italian)
Media INAF (29 May 2014)
7. *Il buco nero al centro della galassia è un sentiero per un altro universo?* (in Italian)
Il Corriere della Sera (21 May 2014)
8. *Black hole binge could test general relativity*
New Scientists (3 May 2013)
9. *Burrowing black holes devoured first stars from within*
New Scientists (19 December 2008)
10. *Milky Way's antimatter linked to exotic black holes*
New Scientists (22 January 2008)