

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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Current Academic Positions

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

2023 – Present Editor-in-Chief. [Handbook of Quantum Gravity](#) (Springer Singapore)

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

2022 – Present Editor-in-Chief. [Handbook of X-ray and Gamma-ray Astrophysics](#) (Springer Singapore)

2020 – Present Editor-in-Chief. [Handbook of Gravitational Wave Astronomy](#) (Springer Singapore)

2018 – Present Editorial Advisory Board Member. [iScience](#) (CellPress), IF: 4.6

Honors and Awards (selected)

2023 National Teaching Achievement Award from the Ministry of Education, China

2022 Magnolia Gold Award from the Municipality of Shanghai, China

2022 International Excellent Young Scientists Award from NSFC, China

2019 Team Leader of an International ISSI Team, Switzerland

2019 Extraordinary 2025 Elite Award from Fudan University, China

2018 Magnolia Silver Award from the Municipality of Shanghai, China

2018 Xu Guangqi Prize from the Embassy of Italy in Beijing, Italy

2016 Invitation Fellowship for Research in Japan from JSPS, Japan

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

2015 Humboldt Fellowship (Experienced Researcher) from Humboldt Foundation, Germany

2012 Thousand Young Talents Award (Qingnian Qianren) from the State Council of PRC, China

Publication Summary

Books: 1 monograph, 2 textbooks, 3 encyclopedias, 6 edited books, 1 popular science book
 Total number of SCI papers: 232 SCI papers as first/corresponding author: 208
 Total number of citations: 12,744 (Google Scholar) h-index: 59 (Google Scholar)
[Google Scholar Profile](#)

Among the 208 SCI papers as first/corresponding author:

1 Reviews of Modern Physics (single author)
 2 Physical Review Letters
 68 PRD, 35 ApJ, 27 JCAP, 27 EPJC, 11 MNRAS, 10 PLB, 7 CQG, 2 JHEP, 1 SSRv

Representative publications (* is to indicate the corresponding author)

1. T. Mirzaev, **C. Bambi***, A.B. Abdikamalov, J. Jiang, H. Liu, S. Riaz and S. Shashank, *X-ray spectra of black hole X-ray binaries with returning radiation*, [Astrophys. J. **976**, 229 \(2024\)](#).
2. **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 \(2021\)](#).
3. 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 \(2021\)](#).
4. 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 \(2018\)](#).
5. **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 \(2017\)](#).
6. **C. Bambi**, *Testing black hole candidates with electromagnetic radiation*, [Rev. Mod. Phys. **89**, 025001 \(2017\)](#).
7. **C. Bambi**, D. Malafarina and L. Modesto, *Non-singular quantum-inspired gravitational collapse*, [Phys. Rev. D **88**, 044009 \(2013\)](#).
8. **C. Bambi** and L. Modesto, *Rotating regular black holes*, [Phys. Lett. B **721**, 329-334 \(2013\)](#).
9. **C. Bambi** and K. Freese, *Apparent shape of super-spinning black holes*, [Phys. Rev. D **79**, 043002 \(2009\)](#).

Student Supervision Summary

Supervised 64 theses (37 Bachelor theses, 11 Master theses, and 16 Doctoral theses)

Member

2023 – Present	Einstein Probe Science Team	2022 – Present	TianQin Science Team
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		

FUNDING

External Grants as PI

1. NSFC (China). Research Fund for International Excellent Young Scientists
Advanced reflection models for precision measurements of accreting black holes, Grant No. 12250610185
Budget: 1M CNY (150k EUR). Period: 2023-2024 (2 years)
2. 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)
3. 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)
4. 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)
5. 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)
6. 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)
7. Alexander von Humboldt Foundation (Germany). Humboldt Fellowship for Experienced Researchers
Budget: 43k EUR. Period: 2015-2018 (12 months)
8. 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)
9. 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)
10. State Council of PRC (China). Thousand Young Talents Program (Qingnian Qianren Jihua)
Budget: 1.5M CNY (180k EUR). Period: 2012-2015 (3 years)
11. 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)

External Grants as co-PI

1. COSPAR and IAU. Grant for IAU Hands-On Workshops (I-HOW)
A New Era of High-Resolution X-ray Spectroscopy (PI: Junjie Mao)
Budget: 32k EUR. Grant to organize a Summer school in 2024
2. NSFC (China). Grant for International Collaborations; NSFC-RSF Joint Grant (China-Russia)
Theoretical Studies of Nonlinear Primordial Perturbations and its Testing in Cosmological Observations (PI: Yang Zhang), Grant No. 12261131497
Budget: 1.05M CNY (140k EUR). Period: 2023-2025 (3 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)

MEETING ORGANIZATION

- SOC Member *China-India-Thailand Workshop on High Energy Astrophysics*
November 2025, Nakhon Ratchasima, Thailand
- SOC Member *5th China-India Workshop on High Energy Astrophysics*
16–20 December 2024, online meeting
- Chair *Mini-Workshop on Machine Learning Techniques for High Energy Astrophysics*
25–26 November 2024, Shanghai, China
- LOC Chair *Fudan-Tuebingen-(and Friends) Workshop on the Relativistic and Exotic Universe*
18–20 September 2024, Shanghai, China
- LOC Chair *I-HOW/COSPAR Workshop: A New Era of High-Resolution X-Ray Spectroscopy*
19–30 August 2024, Shanghai, China
- SOC Member 45th COSPAR Scientific Assembly, Scientific Event E1.9:
Spectral/Timing Properties of AGN: Theory and Observations
13–21 July 2024, Busan, South Korea
- SOC Member *International Conference on Theoretical Physics and Astrophysics*
13–17 May 2024, Tashkent, Uzbekistan
- Chair *4th China-India Workshop on High Energy Astrophysics*
21–23 October 2023, Shanghai, China
- Chair *New Frontiers in GRMHD Simulations of Accreting Black Holes*
3–6 April 2023, online meeting
- Chair *3rd China-India Workshop on High Energy Astrophysics*
28 November–2 December 2022, online meeting
- 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*
6–8 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

MAIN RESEARCH ACHIEVEMENTS

My main research achievements are in the area of tests of General Relativity (GR) in the strong field regime with black hole observations and in theoretical studies of gravitational collapse and black hole interior in models beyond GR. Recently I am interested in the development of theoretical models with machine learning techniques for the analysis of black hole X-ray data.

New tests of GR (2009-2017)

I was the first to study black hole shadows beyond GR and discuss how to test GR with the Event Horizon Telescope (EHT) when this was not yet a hot topic (Bambi & Freese PRD 79, 043002, 2009; 300+ citations). For several years, I studied how to test the Kerr black hole hypothesis, namely that the spacetime around black holes is described by the Kerr solution as predicted by GR, with electromagnetic data. Thanks to my contributions in the field, in 2015 I was invited to write a review article on Reviews of Modern Physics, eventually published as Bambi, Rev. Mod. Phys. 89, 025001, 2017.

Towards precision tests of GR with X-ray data (2017-Present)

A breakthrough in testing GR in the strong field regime was the development of the reflection model `relxill_nk` (Bambi et al. ApJ 842, 76, 2017). `relxill_nk` is specifically designed to test the spacetime geometry around accreting black holes from the study of the relativistically blurred reflection features in their X-ray spectra. With my students at Fudan, we were the first to test the spacetime geometry around black holes with electromagnetic data (Cao et al. PRL 120, 051101, 2018). In the past years, we have further developed this model and our method currently provides the most stringent tests on the spacetime geometry around black holes (Tripathi et al. ApJ 907, 31, 2021; ApJ 913, 79, 2021; Zhang et al. ApJ 924, 72, 2022), somewhat stronger than current tests possible with gravitational wave data from the LIGO-Virgo-KAGRA Collaboration and significantly stronger than the current tests with black hole imaging data from the Event Horizon Telescope experiment.

Development of a new generation of reflection models (2023-Present)

The analysis of the relativistically blurred reflection features in the X-ray spectra of accretion black holes can be a powerful tool to study the physics and astrophysics of these systems. While the past decade has seen remarkable improvements in our capability to analyze these reflection features, current reflection models are still based on a number of simplifications and the analysis of data from the next generation of X-ray missions (e.g., *Athena*) will necessary require more sophisticated synthetic spectra than those available today. With my students at Fudan, we are developing a new generation of reflection models for precise and accurate measurements of accreting black holes (Mirzaev et al. ApJ 965, 66, 2024; ApJ 976, 229, 2024).

Solutions to the problem of spacetime singularities (2013-Present)

One of the most puzzling and longstanding problems in GR is the presence of spacetime singularities in almost all physically relevant solutions of the Einstein Equations. At a singularity, predictability is lost and standard physics breaks down. With my collaborator Leonardo Modesto, I proposed a number of quantum-inspired models in which it is possible to avoid the formation of singularities when a body collapses under its own weight. Depending on how we want to modify/violate GR, the singularity may be replaced by a bounce (e.g., Bambi et al. PRD 88, 044009, 2013), which can lead either to the creation of a baby universe inside the black hole or to the evaporation of the black hole itself, or we can have the formation of a frozen matter core inside an event horizon (Bambi et al. JHEP 04, 147, 2016). We have also proposed a scenario in which the fundamental theory of gravity would be invariant under conformal transformations but conformal symmetry would be broken in the Universe today: in such a framework, the spacetime singularities in the solutions of the Einstein Equations would not be physical and could be removed by a conformal transformation (Bambi et al. JCAP, 05, 003, 2017).

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.
C. Bambi, *Introduction to General Relativity: A Course for Undergraduate Students of Physics* [in Uzbek] (Renessans Press, in press).
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, 2024](#)). Hardcover ISBN: 9789819976805. eBook ISBN: 9789819976812.
[Living Edition ISBN: 9789811930799](#).
96 chapters, 163 authors, XXXIX+4,328 pages (6 volumes).
2. **C. Bambi** and A. Santangelo (Editors), *Handbook of X-ray and Gamma-ray Astrophysics* ([Springer Singapore, 2024](#)). Hardcover ISBN: 9789811969591. eBook ISBN: 9789811969607.
[Living Edition ISBN: 9789811645440](#).
156 chapters, 373 authors, LVII+5,950 pages (8 volumes).
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, XXVII+1,899 pages (2 volumes).

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, 2024](#)). Softcover ISBN: 9787309166262.

Edited Books

1. A. Akil and **C. Bambi** (Editors), *The Black Hole Information Paradox* (Springer Singapore, in preparation, expected in 2025).
2. **C. Bambi**, Y. Mizuno, S. Shashank and F. Yuan (Editors), *New Frontiers in GRMHD Simulations* (**Springer Singapore, 2024**). Hardcover ISBN: 9789819785216. eBook ISBN: 9789819785223.
3. **C. Bambi** and A. Cardenas-Avendano (Editors), *Recent Progress on Gravity Tests: Challenges and Future Perspectives* (**Springer Singapore, 2024**). Hardcover ISBN: 9789819728701. eBook ISBN: 9789819728718.
4. **C. Bambi** and J. Jiang (Editors), *High Resolution X-Ray Spectroscopy: Instrumentation, Data Analysis, and Science* (**Springer Singapore, 2023**). Hardcover ISBN: 9789819944088. eBook ISBN: 9789819944095.
5. **C. Bambi** (Editor), *Regular Black Holes: Towards a New Paradigm of Gravitational Collapse* (**Springer Singapore, 2023**). Hardcover ISBN: 9789819915958. eBook ISBN: 9789819915965.
6. **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.
7. **C. Bambi** (Editor), *Astrophysics of Black Holes: From Fundamental Aspects to Latest Developments* (**Springer-Verlag Heidelberg Berlin, 2016**). Hardcover ISBN: 9783662528570. eBook ISBN: 9783662528594.

Videos

1. **C. Bambi**, *Astrophysical Black Holes* (**Springer, 2022**). Online ISBN: 9783031179167.

LIST OF PUBLICATIONS: ARTICLES

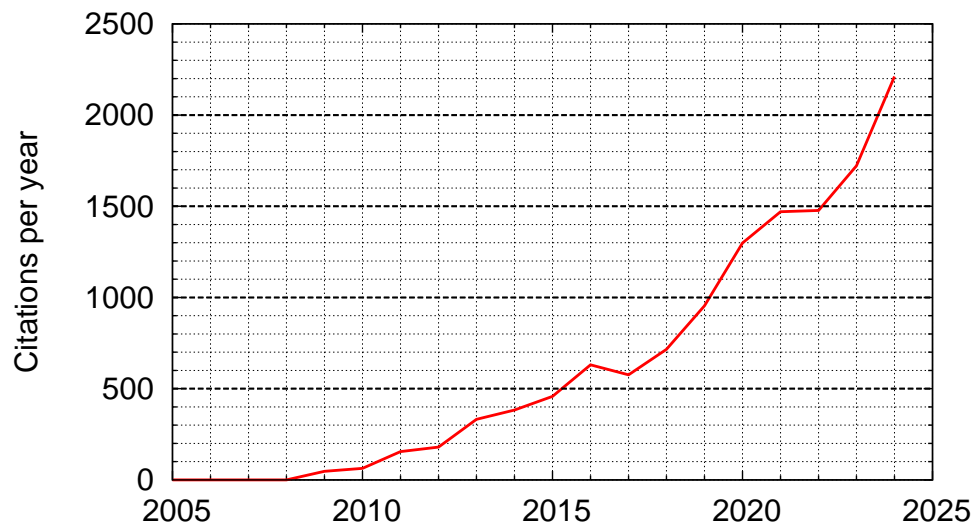
(In the list below, * is to indicate the corresponding author)

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 December 15, 2024.

	All years	Since 2019
Citations	12,744	9,144
h-index	59	49
i10-index	207	179



Papers in refereed journals

1. H. Liu, A.B. Abdikamalov, T. Mirzaev, **C. Bambi***, T. Dauser, J.A. Garcia and Z. Zhang, *About the accuracy of the relxill/relxill_nk models in view of the next generation of X-ray missions*, MNRAS (in press).
2. **C. Bambi**, *A Tutorial on the Strong Gravity Effects in Black Hole X-Ray Spectra*, Universe **10**, 451 (2024).
3. D. Das, S. Shashank and **C. Bambi***, *Non-Kerr Constraints using Binary Black Hole inspirals considering phase modifications up to 4 PN order*, Eur. Phys. J. C **84**, 1237 (2024).
4. T. Mirzaev, **C. Bambi***, A.B. Abdikamalov, J. Jiang, H. Liu, S. Riaz and S. Shashank, *X-ray spectra of black hole X-ray binaries with returning radiation*, Astrophys. J. **976**, 229 (2024).
5. Z. Zhang, **C. Bambi***, H. Liu, J. Jiang, F. Shi, Y. Zhang, A.J. Young, J.A. Tomsick, B.M. Coughenour and M. Zhou, *A variable ionized disk wind in MAXI J1803–298 revealed by NICER*, Astrophys. J. **975**, 22 (2024).

6. B. Narzilloev, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Observed jet power and radiative efficiency of black hole candidates in Kerr + PFDM model*, Eur. Phys. J. C **84**, 909 (2024).
7. Z. Zhang, H. Liu, D. Rawat, **C. Bambi***, R. Misra, P. Wang, L. Ji, S. Zhang and S. Zhang, *Evolution of QPOs in GX 339–4 and EXO 1846–031 with Insight-HXMT and NICER*, Astrophys. J. **971**, 148 (2024).
8. S. Li, H. Liu, **C. Bambi***, J.F. Steiner and Z. Zhang, *Impact of reflection Comptonization on X-ray reflection spectroscopy: the case of EXO 1846–031*, Phys. Rev. D **110**, 043021 (2024).
9. O. Mukazhanov, R. Roy, T. Mirzaev and **C. Bambi***, *Numerical parameterization of stationary axisymmetric black holes in a theory agnostic framework*, Phys. Rev. D **110**, 024060 (2024).
10. N. Fan, S. Li, R. Zhan, H. Liu, Z. Zhang, **C. Bambi***, L. Ji, X. Ma, J.F. Steiner, S. Zhang and M. Zhou, *The 2018 outburst of MAXI J1820+070 as seen by Insight-HXMT*, Astrophys. J. **969**, 61 (2024).
11. T. Mirzaev, S. Riaz, A.B. Abdikamalov, **C. Bambi***, T. Dauser, J.A. Garcia, J. Jiang, H. Liu and S. Shashank, *Towards more accurate synthetic reflection spectra: improving the calculations of returning radiation*, Astrophys. J. **965**, 66 (2024).
12. S. Zhao, S. Riaz and **C. Bambi***, *About the ability of agnostic X-ray tests of the Kerr hypothesis to discover new physics*, Phys. Rev. D **109**, 064059 (2024).
13. G. Mall, H. Liu, **C. Bambi***, J.F. Steiner and J.A. Garcia, *Measuring Black Hole Spins through X-ray Reflection Spectroscopy and the Relativistic Precession Model: the case of XTE J1859+226*, MNRAS **527**, 12053-12064 (2024).
14. B. Narzilloev, A. Abdujabbarov, B. Ahmedov and **C. Bambi***, *Kerr-Taub-NUT spacetime to explain the jet power and the radiative efficiency of astrophysical black holes*, Phys. Rev. D **108**, 103013 (2023).
15. J. Tao, S. Riaz, B. Zhou, A.B. Abdikamalov, **C. Bambi*** and D. Malafarina, *Testing the δ -Kerr metric with black hole X-ray data*, Phys. Rev. D **108**, 083036 (2023).
16. S. Riaz, A.B. Abdikamalov and **C. Bambi***, *Impact of the returning radiation in current tests of the Kerr black hole hypothesis using X-ray reflection spectroscopy*, Eur. Phys. J. C **83**, 838 (2023).
17. T. Mirzaev, A.B. Abdikamalov, A.A. Abdujabbarov, D. Ayzenberg, B. Ahmedov and **C. Bambi***, *Observational appearance of Kaluza-Klein black holes*, Eur. Phys. J. C **83**, 800 (2023).
18. Q. Yuan, P. Kushwaha, A.C. Gupta, A. Tripathi, P.J. Wiita, M. Zhang, X. Liu, A. Lähteenmäki, M. Tornikoski, J. Tammi, V. Ramakrishnan, L. Cui, X. Wang, M.F. Gu, **C. Bambi** and A.E. Volvach, *Multi-wavelength temporal variability of the blazar PKS 1510–089*, Astrophys. J. **953**, 47 (2023).
19. S. Vagnozzi, R. Roy, Y.D. Tsai, L. Visinelli, M. Afrin, A. Allahyari, P. Bambhaniya, D. Dey, S.G. Ghosh, P.S. Joshi, K. Jusufi, M. Khodadi, R.K. Walia, A. Övgün and **C. Bambi**, *Horizon-scale tests of gravity theories and fundamental physics from the Event Horizon Telescope image of Sagittarius A**, Class. Quantum Grav. **40**, 165007 (2023).
20. H. Liu, J. Jiang, Z. Zhang, **C. Bambi***, A.C. Fabian, J.A. García, A. Ingram, E. Kara, J.F. Steiner, J.A. Tomsick, D.J. Walton and A.J. Young, *High-density reflection spectroscopy for black hole X-ray binaries in the hard state*, Astrophys. J. **951**, 145 (2023).
21. **C. Bambi***, *X-Ray Tests of General Relativity with Black Holes*, Symmetry **15**, 1277 (2023).
22. H. Liu, **C. Bambi***, J. Jiang, J.A. García, L. Ji, L. Kong, X. Ren, S. Zhang and S. Zhang, *The hard to soft transition of GX 339–4 as seen by Insight-HXMT*, Astrophys. J. **950**, 5 (2023).
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2. S. Shashank, **C. Bambi** and R. Roy, *Testing the Kerr nature with binary black hole inspirals*, talk given at the “7th International Workshop on the TianQin Science Mission” (25-26 April 2024, Hong Kong, China).
3. **C. Bambi**, *Testing General Relativity with black hole X-ray data*, *Physics of Particles and Nuclei* **55**, 1420-1425 (2024).
4. **C. Bambi***, A.B. Abdikamalov, H. Liu, S. Riaz, S. Shashank and M. Zhou, *Testing General Relativity with Black Hole X-Ray Data and ABHModels*, *PoS MULTIF2023* (2024) 016.
5. **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>
6. **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.
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9. 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).
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15. **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.
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19. **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.
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23. **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.
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Conference proceedings (as editor)

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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. E.-K. Li, S. Liu, A. Torres-Orjuela, X. Chen, K. Inayoshi, L. Wang, Y.-M. Hu, P. Amaro-Seoane, A. Askar, **C. Bambi**, et al., *Gravitational Wave Astronomy With TianQin*, TianQin Gravitational Wave White Paper [arXiv:2409.19665 [astro-ph.HE]].
2. 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]].
3. 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. Chuiyang Kong (B.S. in Physics 2024, Fudan University) → Brown University (M.S. student)
2. Yuanbing Yang (B.S. in Physics 2024, Fudan University)
3. Rui Zhan (B.S. in Physics 2024, Fudan University) → Heidelberg University (M.S. student)
4. Jing Zhou (B.S. in Physics 2024, Fudan University) → Fudan University (M.S. student)
5. Qunfeng Jiang (B.S. in Physics 2023, Fudan University) → The University of Hong Kong (M.S. student)
6. Jiale Gu (B.S. in Physics 2022, Liaoning University) → Fudan University (Ph.D. student)
7. Kexin Huang (B.S. in Physics 2022, Fudan University) → Fudan University (M.S. student)
8. Qichun Liu (B.S. in Physics 2022, Fudan University) → Tsinghua University (Ph.D. student)
9. Haiyang Wang (B.S. in Physics 2022, Fudan University) → Cambridge University (M.S. student)
10. Zichao Wang (B.S. in Physics 2022, Fudan University) → Fudan University (M.S. student)
11. Zhibo Yu (B.S. in Physics 2022, Fudan University) → Penn State University (Ph.D. student)
12. Yao Zhang (B.S. in Physics 2022, Fudan University) → Tsinghua University (Ph.D. student)
13. Shuaitongze Zhao (B.S. in Physics 2022, SAU) → Fudan University (Ph.D. student)
14. Nan Li (B.S. in Physics 2021, Fudan University) → Fudan University (M.S. student)
15. Feiyang Liu (B.S. in Physics 2021, Fudan University) → Fudan University (Ph.D. student)
16. Dongnuo Lv (B.S. in Physics 2021, Fudan University) → Duke University (M.S. student)
17. Ziyu Ding (B.S. in Physics 2020, Fudan University) → LMU Munich (M.S. student)
18. Yuhui Lu (B.S. in Physics 2020, Fudan University) → University of Edinburgh (M.S. student)
19. Jelen Wong (B.S. in Physics 2020, Fudan University) → University of Chicago (M.S. student)
20. Honghui Liu (B.S. in Physics 2019, Fudan University) → Fudan University (Ph.D. student)
21. Jinli Yan (B.S. in Physics 2019, Fudan University) → Georgia Tech (M.S. student)
22. Yunfeng Yan (B.S. in Physics 2019, Fudan University) → Columbia University (M.S. student)
23. Yuchan Yang (B.S. in Physics 2019, Fudan University) → Northwestern University (M.S. student)
24. Yu Yao (B.S. in Physics 2019, Fudan University) → University of Edinburgh (M.S. student)
25. Yuexin Zhang (B.S. in Physics 2019, Fudan University) → University of Groningen (Ph.D. student)
26. Zheng Cao (B.S. in Physics 2018, Fudan University) → University of Amsterdam (M.S. student)
27. Chenyang Qian (B.S. in Physics 2018, Fudan University) → Industry
28. Jingyi Wang (B.S. in Physics 2018, Fudan University) → **MIT** (Ph.D. student)
29. Jinye Yang (B.S. in Physics 2018, Fudan University) → University of Florida Gainesville (Ph.D. student)
30. Yueying Ni (B.S. in Physics 2017, Fudan University) → Carnegie Mellon University (Ph.D. student)
31. Fangzheng Shi (B.S. in Physics 2017, Fudan University) → Nanjing University (Ph.D. student)
32. Menglei Zhou (B.S. in Physics 2017, Fudan University) → Fudan University (M.S. student)
33. Jiachen Jiang (B.S. in Physics 2016, Fudan University) → **Cambridge University** (Ph.D. student)
34. Qingling Ni (B.S. in Physics 2016, Fudan University) → Penn State University (Ph.D. student)
35. Muyun Liu (B.S. in Optical Information Science and Technology 2015, Fudan University) → Industry
36. Yue Liu (B.S. in Physics 2014, Fudan University) → Boston University (Ph.D. student)
37. Yiyang Zhang (B.S. in Physics 2014, Fudan University) → Washington University St. Louis (Ph.D. student)

Master Students (followed by the position found after the Master)

1. Olzhas Mukazhanov (M.S. in Physics 2024, Fudan University)
2. Rittick Roy (M.S. in Physics 2023, Fudan University) → University of Amsterdam (Ph.D. student)
3. Jiahao Tao (M.S. in Physics 2023, Fudan University) → Industry
4. Jiachen Zhu (M.S. in Physics 2021, Fudan University) → Industry
5. Menglei Zhou (M.S. in Physics 2020, Fudan University) → University of Tübingen (Ph.D. student)
6. Alex Charlesworth* (M.S. in Physics 2018, Nottingham University) → Industry
7. Marcus Garnham* (M.S. in Physics 2018, Nottingham University) → Industry
8. Yifan Cheng (M.S. in Physics 2016, Fudan University) → Industry
9. Jake Arthur* (M.S. in Physics 2015, Nottingham University) → Nottingham University (Ph.D. student)
10. Rachel Asquith* (M.S. in Physics 2015, Nottingham University) → Nottingham University (Ph.D. student)
11. Dan Liu (M.S. in Physics 2015, Fudan University) → Industry

* Co-supervision within the exchange program Fudan-Nottingham

Current Students	Jiale Gu (Fudan University)
	Kexin Huang (Fudan University)
	Yimin Huang (Fudan University)

Doctoral Students (followed by the position found after the Ph.D.)

1. Honghui Liu (Ph.D. in Physics 2024, Fudan University) → University of Tübingen (assistant to the Chair)
2. Gitika Mall (Ph.D. in Physics 2024, Fudan University) → Industry
3. Zuobin Zhang (Ph.D. in Physics 2024, Fudan University) → Oxford University (postdoc)
4. Swarnim Shashank (Ph.D. in Physics 2023, Fudan University) → Fudan University (postdoc)
5. Biao Zhou (Ph.D. in Physics 2022, Fudan University) → High school teacher
6. Bakhtiyor Narzilloev (Ph.D. in Physics 2021, Fudan University) → UBAI Tashkent (researcher)
7. Shafqat Riaz (Ph.D. in Physics 2021, Fudan University) → Fudan University (postdoc)
8. Askar Abdikamalov (Ph.D. in Physics 2020, Fudan University) → Fudan University (postdoc)
9. Carlos A. Benavides-Gallego (Ph.D. in Physics 2020, Fudan University) → SHAO/CAS (postdoc)
10. Hrishikesh Chakrabarty (Ph.D. in Physics 2020, Fudan University) → UCAS Beijing (postdoc)
11. Kishalay Choudhury (Ph.D. in Physics 2019, Fudan University) → IUCAA Pune (visiting researcher)
12. Ashutosh Tripathi (Ph.D. in Physics 2019, Fudan University) → Fudan University (postdoc)
13. Masoumeh Ghasemi-Nodehi (Ph.D. in Physics 2017, Fudan University) → NAOC/CAS (postdoc)
14. Guancheng Pei (Ph.D. in Physics 2016, Fudan University) → Industry
15. Zilong Li (Ph.D. in Physics 2015, Fudan University) → Industry
16. Lingyao Kong (Ph.D. in Physics 2014, Fudan University) → Institute of Fluid Physics/CAEP (faculty)

Current Students	Debtroy Das (Fudan University)
	Songcheng Li (Fudan University)
	Temurbek Mirzaev (Fudan University)
	Abdurakhmon Nosirov (Fudan University)
	Hassam Umer (Fudan University)
	Shuaitongze Zhao (Fudan University)
	Zhe Zhao (Fudan University)

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

1. Swarnim Shashank (2023 – Present, Fudan University)
2. Shafqat Riaz (2021 – 2023, Fudan University) → University of Tübingen (postdoc)
3. Askar Abdikamalov (2020 – 2024, Fudan University) → New Uzbekistan University (faculty)
4. Ashutosh Tripathi (2019 – 2022, Fudan University) → XAO/CAS (faculty)
5. Dimitry Ayzenberg (2017 – 2020, Fudan University) → University of Tübingen (postdoc)
6. Ahmadjon Abdujabbarov (2017 – 2019, Fudan University) → National University of Uzbekistan (faculty)
7. Sourabh Nampalliwar (2015 – 2017, Fudan University) → University of Tübingen (postdoc)
8. Shangyu Sun (2015 – 2017, Fudan University) → SHAO/CAS (postdoc)
9. Yu Wang (2015 – 2017, Fudan University) → Shanghai Normal University (faculty)
10. Diego Rubiera-Garcia (2014 – 2015, Fudan University) → Lisbon University (postdoc)
11. Naoki Tsukamoto (2013 – 2015, Fudan University) → HUST Wuhan (postdoc)
12. Daniele Malafarina (2013 – 2014, Fudan University) → Nazarbayev University (faculty)

TEACHING EXPERIENCE

Introduction to Astrophysics

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

Fall 2024, Fall 2023, Fall 2022, Spring 2021, Spring 2020, Spring 2019, Spring 2016

General Relativity

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

Spring 2024, Spring 2023, 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

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

LIST OF TALKS

Talks at international meetings

* invited plenary speaker

1. *Towards a new generation of reflection models for precision measurements of accreting black holes**,
“Frontier Research in Astrophysics - IV” (09-14.09.2024, Palermo, Italy).
2. *Towards a new generation of reflection models for precision measurements of accreting black holes**,
“42nd SPP Physics Conference” (03-06.07.2024, Batangas City, Philippines).
3. *Towards a new generation of reflection models for precision measurements of accreting black holes**,
“Latin American Conference on Astrophysics and Relativity” (LACAR) (24-27.06.2024, Bogota, Colombia).
4. *Towards a new generation of reflection models for precision measurements of accreting black holes**,
“International Conference on Theoretical Physics and Astrophysics” (13-18.05.2024, Tashkent, Uzbekistan).
5. *Towards a new generation of reflection models for precision measurements of accreting black holes*,
“32nd Texas Symposium on Relativistic Astrophysics” (11-15.12.2023, Shanghai, China).
6. *Testing General Relativity with Black Hole X-ray Data**,
“XXXV International Workshop on High Energy Physics” (28.11-01.12.2023, Protvino, Russia).
7. *Towards a new generation of reflection models for precision measurements of accreting black holes**,
“4th China-India Workshop on High Energy Astrophysics” (21-23.10.2023, Shanghai, China).
8. *Testing General Relativity with Black Hole X-ray Data**,
“Multifrequency Behaviour of High Energy Cosmic Sources - XIV” (12-17.06.2023, Palermo, Italy).
9. *Testing General Relativity with Black Hole X-ray Data: A Progress Report*,
“APS April Meeting” (15-18.04.2023, Minneapolis, Minnesota).
10. *Testing Lorentz-Violating Models with Black Hole X-ray Data**,
“Second IUCSS Workshop on Gravitational Aspects of Lorentz Violation” (13-14.03.2023, online).
11. *Testing General Relativity with Black Hole X-ray Data**,
“Recent Research in Gravity” (30.11.2022, online).
12. *Testing General Relativity with Black Hole X-ray Data*,
“Exploring the Hot and Energetic Universe” (7-10.11.2022, Barcelona, Spain).
13. *Testing Fundamental Physics with Black Holes**,
“TianQin Astrophysics Workshop” (22-25.08.2022, online).
14. *Testing General Relativity with Black Hole X-ray Data*,
“23rd International Conference on General Relativity and Gravitation” (GR23) (3-8.07.2022, online).
15. *Testing GR with NuSTAR observations of Galactic black holes*,
“Ten Years of the High-Energy Universe in Focus: NuSTAR 2022” (20-22.06.2022, Cagliari, Italy).
16. *Towards Precision Measurements of Accreting Black Holes Using X-Ray Reflection Spectroscopy**,
“The 60th Anniversary of X-Ray Astronomy” (15-18.06.2022, online).

17. *Testing the Weak Equivalence Principle near black holes*,
“APS April Meeting” (9-12.04.2022, New York, New York).
18. *Testing General Relativity with black hole X-ray data**,
“Recent Progress on Gravity Tests” (16-18.02.2022, online).
19. *Testing regular black hole metrics with X-ray data**,
“Regular black holes in quantum gravity and beyond: from theory to shadow observations”
(18-21.10.2021, online).
20. *Testing fundamental physics with black hole X-ray data**,
“Timing X-ray Binaries” (7-8.10.2021, online).
21. *Testing General Relativity with black hole X-ray data: a progress report**,
“Supermassive Black Hole and Fundamental Physics” (26.09.2021, Beijing, China).
22. *Testing General Relativity with black hole X-ray data: recent progress and future developments**,
“International Workshop on Relativistic Astrophysics and Gravitation” (12-14.05.2021, online).
23. *Testing General Relativity with Black Hole X-ray Data*,
“APS April Meeting” (17-20.04.2021, online).
24. *Testing General Relativity with Black Hole X-ray Data**,
“China-India Workshop on High Energy Astrophysics” (6-8.11.2020, Shanghai, China – online).
25. *Testing general relativity using black holes with X-ray observations*,
“4th Zeldovich Virtual Meeting” (7-11.09.2020, Minsk, Belarus – online).
26. *Testing general relativity using black holes with X-ray observations*,
“14th International Conference on Gravitation, Astrophysics and Cosmology”
(17-21.08.2020, Jhongli, Taiwan – online).
27. *Astrophysical Black Holes: A Review**,
“Multifrequency Behaviour of High Energy Cosmic Sources - XIII” (03-08.06.2019, Palermo, Italy).
28. *Testing general relativity using X-ray reflection spectroscopy**,
“1st International Symposium on Precision Measurement Physics” (28.04-01.05.2019, Wuhan, China).
29. *Testing black holes using X-ray reflection spectroscopy*,
“2019 CCNU-USTC Junior Cosmology Symposium” (26-29.04.2019, Wuhan, China).
30. *Testing strong gravity using X-ray reflection spectroscopy*,
“Accretion in strong gravity” (4-8.2.2019, Bad Honnef, Germany).
31. *Testing the Kerr black hole hypothesis using X-ray reflection spectroscopy**,
“8th FEROS Meeting” (23-25.5.2018, Heraklion, Greece).
32. *Testing astrophysical black holes using X-ray reflection spectroscopy*,
“APS April Meeting” (14-17.04.2018, Columbus, Ohio).
33. *Testing the Kerr black hole hypothesis using X-ray reflection spectroscopy**,
“International Conference on Quantum Gravity” (26-28.03.2018, Shenzhen, China).

34. *Testing the Kerr black hole hypothesis using X-ray reflection spectroscopy*,
“BRICS AGAC 2017” (26-28.09.2017, Yangzhou, China).
35. *Testing the Kerr metric using X-ray reflection spectroscopy*,
“3rd Karl Schwarzschild Meeting” (24-28.07.2017, Frankfurt, Germany).
36. *Testing the Kerr black hole hypothesis using X-ray reflection spectroscopy*,
“The 5th Galileo-Xu Guangqi Meeting” (25-28.06.2017, Chengdu, China).
37. *Testing the Kerr metric using X-ray reflection spectroscopy**,
“Symposium of High Energy Astrophysics” (21-23.10.2016, Guangzhou, China).
38. *Testing the Kerr metric via X-ray reflection spectroscopy**,
“Phenomenology of Strong Gravity” (14-16.09.2016, Astana, Kazakhstan).
39. *Constraining capability of GWs, iron line, and QPOs to test the Kerr metric**,
“White Paper eXTP Meeting” (14-15.04.2016, Shanghai, China).
40. *Testing astrophysical black holes**,
“Black Holes and Friends 2” (11-13.04.2016, Shanghai, China).
41. *Testing black hole candidates**,
“eXTP workshop” (26-27.10.2015, Beijing, China).
42. *GR or alternatives?**,
“Black Hole and Strong Gravity Field workshop of eXTP” (23-24.10.2015, Beijing, China).
43. *Testing the Kerr Paradigm with the Black Hole Shadow*,
“14th Marcel Grossmann Meeting” (12-18.7.2015, Rome, Italy).
44. *Testing the Kerr Paradigm with X-ray Observations*,
“14th Marcel Grossmann Meeting” (12-18.7.2015, Rome, Italy).
45. *Testing astrophysical black holes**,
“Compact Stars & Black Holes” (7-9.7.2015, Tübingen, Germany).
46. *Testing astrophysical black holes: state of the art and opportunities with XTP**,
“XTP Meeting” (22.1.2015, Beijing, China).
47. *Testing the nature of astrophysical black hole candidates**,
“7th FEROS Meeting” (28-30.8.2014, Krakow, Poland).
48. *Testing the nature of astrophysical black hole candidates*,
“558th WE-Heraeus-Seminar: The Strong Gravity Regime of Black Holes and Neutron Stars”
(31.3-4.4.2014, Bad Honnef, Germany).
49. *Testing the nature of astrophysical black hole candidates**,
“Prague Synergy 2013: Accreting Relativistic Compact Objects and their Environment”
(22.11-1.12.2013, Prague, Czech Republic).
50. *Terminating black holes in quantum gravity*,
“PASCOS 2013” (20-26.11.2013, Taipei, Taiwan).

51. *Testing the nature of astrophysical black hole candidates**,
“Workshop on Collapsing Objects” (21-24.10.2013, Shanghai, China).
52. *Looking for a signature of quantum gravity in the gravitational collapse of an astrophysical object*,
“20th International Conference on General Relativity and Gravitation” (GR20) & “Amaldi10”
(8-13.07.2013, Warsaw, Poland).
53. *Testing the Kerr-nature of black hole candidates*,
“20th International Conference on General Relativity and Gravitation” (GR20) & “Amaldi10”
(8-13.07.2013, Warsaw, Poland).
54. *Testing the Kerr-nature of black hole candidates with VLBI facilities*,
“East Asia VLBI Workshop 2013” (17-19.06.2013, Jeju Island, South Korea).
55. *Testing the Kerr-nature of black hole candidates**,
“6th FERO Meeting” (30-31.08.2012, Prague, Czech Republic).
56. *Testing the Kerr black hole hypothesis with the continuum-fitting method**,
“Testing Gravity with Astrophysical and Cosmological Observations” (23.01-3.02.2012, Kashiwa, Japan).
57. *Testing the nature of astrophysical black hole candidates*,
“12th International Symposium: Frontiers of Fundamental Physics” (21-23.11.2011, Udine, Italy).
58. *Testing the Kerr black hole paradigm with electromagnetic radiation*,
“Stellar and Intermediate Mass Black Holes” (5-26.06.2011, Aspen, Colorado).
59. *Compact objects with spin parameter $a_* > 1$* ,
“46th Rencontres de Moriond” (20-27.03.2011, La Thuile, Italy).
60. *Probing the space-time around astrophysical black hole candidates with future VLBI experiments*,
“Summer Institute 2010” (4-14.08.2010, Fuji-Yoshida, Japan).
61. *Searching for quantum gravity effects in astrophysical black hole candidates*,
“Experimental Search for Quantum Gravity” (12-16.07.2010, Stockholm, Sweden).
62. *Violation of the Carter-Israel conjecture and its astrophysical implications*,
“19th International Conference on General Relativity and Gravitation” (GR19)
(5-9.07.2010, Mexico City, Mexico).
63. *Violation of the Carter-Israel conjecture and its astrophysical implications*,
“NEB 14: Recent Developments in Gravity” (8-11.06.2010, Ioannina, Greece).
64. *Numerical simulations of the accretion process in Kerr spacetimes with arbitrary value of the Kerr parameter*,
“JGRG19” (30.11-4.12.2009, Tokyo, Japan).
65. *Testing the black hole paradigm with future observations of SgrA**,
“Galactic Center Workshop 2009” (19-23.10.2009, Shanghai, China).
66. *Is the Carter-Israel conjecture correct?*,
“XXI Rencontres de Blois: Windows on the Universe” (21-26.06.2009, Blois, France).
67. *Super-spinning black holes: motivations and observational signatures*,
“Workshop on Tests of Gravity and Gravitational Physics” (19-21.05.2009, Cleveland, Ohio).

68. *Strange Stars: a laboratory to investigate the problem of the cosmological constant*,
“New Horizon for Modern Cosmology” (19.01-13.03.2009, Florence, Italy).
69. *Brane cosmology and weakly interacting particles**,
“SW2: Hot Topics in Modern Cosmology” (12-17.05.2008, Cargese, France).
70. *Rare decays in theories with LGS*,
“Search for Baryon and Lepton Number Violation” (20-22.09.2007, Berkeley, California).
71. *Primordial antimatter in the contemporary universe*,
“SciNeGHE07” (18-20.06.2007, Frascati, Italy).

Colloquia and research seminars

2024

Radboud University (Nijmegen, The Netherlands), 7 November 2024
 University of Groningen (Groningen, The Netherlands), 6 November 2024
 SRON Netherlands Institute for Space Research (Leiden, The Netherlands), 5 November 2024
 ESTEC, European Space Agency (Noordwijk, The Netherlands), 5 November 2024
 Niels Bohr Institute, University of Copenhagen (Copenhagen, Denmark), 1 November 2024
 University of Warwick (Coventry, UK), 30 October 2024
 University of Southampton (Southampton, UK), 29 October 2024
 COMSATS University Islamabad, Lahore Campus (Lahore, Pakistan), 4 October 2024
 Abdus Salam School of Mathematical Sciences, GCU (Lahore, Pakistan), 3 October 2024
 University of the Punjab (Lahore, Pakistan), 2 October 2024
 University of the Punjab (Lahore, Pakistan), 1 October 2024
 INAF-IASF Palermo (Palermo, Italy), 11 September 2024
 Astronomical Institute/CAS (Prague, Czech Republic), 18 July 2024
 University of Cambridge (Cambridge, UK), 11 June 2024
 Newcastle University (Newcastle, UK), 11 June 2024
 University of Bristol (Bristol, UK), 7 June 2024
 Suranaree University of Technology (Nakhon Ratchasima, Thailand), 15 May 2024
 Tsukuba University (Tsukuba, Japan), 8 May 2024
 Kavli IPMU/The University of Tokyo (Kashiwa, Japan), 7 May 2024
 Rikkyo University (Tokyo, Japan), 6 May 2024
 National University of Science & Technology (Islamabad, Pakistan), 18 April 2024
 Quaid-i-Azam University (Islamabad, Pakistan), 17 April 2024
 Yangzhou University (Yangzhou, China), 9 April 2024
 Sun Yat-Sen University (Zhuhai, China), 28 March 2024
 TDLI/Shanghai Jiao Tong University (Shanghai, China), 28 February 2024
 MIT Kavli Institute/MIT (Cambridge, Massachusetts), 8 February 2024
 Harvard-Smithsonian Center for Astrophysics (Cambridge, Massachusetts), 7 February 2024
 Perimeter Institute for Theoretical Physics (Waterloo, Canada), 1 February 2024
 The University of Texas, Austin (Austin, Texas), 31 January 2024
 City University of Hong Kong (Hong Kong, China), 18 January 2024
 The University of Hong Kong (Hong Kong, China), 17 January 2024
 National Taiwan University (Taipei, Taiwan), 10 January 2024

2023

Institute of Fundamental and Applied Research (Tashkent, Uzbekistan), 7 December 2023
 New Uzbekistan University (Tashkent, Uzbekistan), 6 December 2023
 KIAA/Peking University (Beijing, China), 30 November 2023
 Nanjing University (Nanjing, China), 2 November 2023
 National Astronomical Observatories of China/CAS (Beijing, China), 18 October 2023
 SISSA (Trieste, Italy), 15 June 2023
 University of Illinois Urbana-Champaign (Urbana, Illinois), 26 April 2023
 Black Hole Initiative/Harvard University (Cambridge, Massachusetts), 24 April 2023
 Princeton University (Princeton, New Jersey), 20 April 2023

Caltech (Pasadena, California), 14 April 2023
Guangxi University (Nanning, China), 28 March 2023
Shanghai Normal University (Shanghai, China), 16 March 2023
University of Science and Technology of China (Hefei, China), 7 March 2023
Zhejiang University of Technology (Hangzhou, China), 1 March 2023
Institute of Theoretical Physics/CAS (Beijing, China), 23 February 2023

2022

Aveiro University (Aveiro, Portugal), 28 September 2022
The University of Hong Kong (Hong Kong, China), 7 September 2022
Proca Seminars Series (online seminar series), 27 January 2022
Technion (Haifa, Israel), 26 January 2022

2021

Sichuan University (Chengdu, China), 17 June 2021
Wuhan University (Wuhan, China), 25 May 2021
Beijing Normal University (Beijing, China), 18 May 2021
Tsinghua University (Beijing, China), 18 May 2021
TDLI/Shanghai Jiao Tong University (Shanghai, China), 28 April 2021

2020

Sun Yat-Sen University (Zhuhai, China), 13 November 2020
Guangzhou University (Guangzhou, China), 11 November 2020
HEP Virtual Seminar Series (online seminar series), 19 May 2020
IISER Kolkata (Mohanpur, India), 22 January 2020
IIT Guwahati (Guwahati, India), 20 January 2020
IIT Kanpur (Kanpur, India), 17 January 2020
IIT Kharagpur (Kharagpur, India), 15 January 2020
IIT Bombay (Mumbai, India), 13 January 2020

2019

Institute of Physics/CAS (Prague, Czech Republic), 10 October 2019
Nicolaus Copernicus Astronomical Center (Warsaw, Poland), 9 October 2019
Silesian University in Opava (Opava, Czech Republic), 4 October 2019
Astronomical Institute/CAS (Prague, Czech Republic), 30 September 2019
Universidad de Antioquia (Medellín, Colombia), 19 September 2019
National Astronomical Observatory of Colombia (Bogota, Colombia), 17 September 2019
La Sapienza University (Rome, Italy), 22 July 2019
Xinjiang Astronomical Observatory/CAS (Urumqi, China), 9 July 2019
SWIFAR/Yunnan University (Kunming, China), 26 June 2019
University of Amsterdam (Amsterdam, Netherlands), 14 June 2019
Zhejiang University of Technology (Hangzhou, China), 20 May 2019
SWIFAR/Yunnan University (Kunming, China), 18 April 2019
Institute of High Energy Physics/CAS (Beijing, China), 9 April 2019
Shanghai Astronomical Observatory/CAS (Shanghai, China), 4 April 2019
KIAA/Peking University (Beijing, China), 29 March 2019

Huazhong University of Science and Technology (Wuhan, China), 12 March 2019
Roma Tre University (Rome, Italy), 15 February 2019
Arcetri Astronomical Observatory (Florence, Italy), 13 February 2019

2018

SUSTech (Shenzhen, China), 9 October 2018
Indian Institute of Technology Hyderabad (Sangareddy, India), 4 October 2018
Observatoire de Paris (Meudon, France), 20 September 2018
Lawphysics (Latin American Webinars on Physics), 18 July 2018
Dr. Karl Remeis Observatory (Bamberg, Germany), 10 July 2018
Goethe Universität Frankfurt am Main (Frankfurt, Germany), 3 July 2018
Technion (Haifa, Israel), 13 June 2018
Tsinghua University (Beijing, China), 17 May 2018
Washington University in St. Louis (St. Louis, Missouri), 18 April 2018
Nanjing University (Nanjing, China), 15 March 2018
Eberhard Karls Universität Tübingen (Tübingen, Germany), 8 February 2018
Sun Yat-Sen University (Zhuhai, China), 11 January 2018

2017

Xiamen University (Xiamen, China), 14 December 2017
SUSTech (Shenzhen, China), 7 December 2017
University of Amsterdam (Amsterdam, Netherlands), 22 September 2017
ESTEC/ESA (Noordwijk, Netherlands), 18 September 2017
University of Cambridge (Cambridge, UK), 14 July 2017
SUSTech (Shenzhen, China), 17 February 2017
Kyoto University (Kyoto, Japan), 7 February 2017
Kavli IPMU/The University of Tokyo (Kashiwa, Japan), 31 January 2017
Waseda University (Tokyo, Japan), 27 January 2017
Tokyo Institute of Technology (Tokyo, Japan), 26 January 2017
Osaka University (Osaka, Japan), 18 January 2017
Osaka City University (Osaka, Japan), 16 January 2017

2016

ISAF/INAF Bologna (Bologna, Italy), 21 September 2016
Eberhard Karls Universität Tübingen (Tübingen, Germany), 20 July 2016
Sun Yat-Sen University (Guangzhou, China), 27 April 2016
Guangzhou University (Guangzhou, China), 26 April 2016
Guangxi University (Nanning, China), 25 April 2016
University of Science and Technology of China (Hefei, China), 29 March 2016
Sichuan University (Chengdu, China), 25 March 2016

2015

University of Science and Technology of China (Hefei, China), 29 October 2015
Institute of High Energy Physics/CAS (Beijing, China), 25 October 2015
Padua University (Padua, Italy), 5 October 2015
University of Heidelberg (Heidelberg, Germany), 21 July 2015

Harvard-Smithsonian Center for Astrophysics (Cambridge, Massachusetts), 22 June 2015
National Central University (Jhongli, Taiwan), 17 April 2015
National Tsing Hua University (Hsinchu, Taiwan), 16 April 2015
University of Cambridge (Cambridge, UK), 13 February 2015
University of Nottingham (Nottingham, UK), 12 February 2015
University of Southampton (Southampton, UK), 9 February 2015

2014

Institute of High Energy Physics/CAS (Beijing, China), 10 December 2014
National Astronomical Observatories of China/CAS (Beijing, China), 9 December 2014
University of Nottingham Ningbo (Ningbo, China), 24 October 2014
Eberhard Karls Universität Tübingen (Tübingen, Germany), 14 July 2014
Friedrich-Schiller-Universität Jena (Jena, Germany), 10 July 2014
Max Planck Institute for Astrophysics (Garching, Germany), 8 July 2014
Sichuan University (Chengdu, China), 12 June 2014
Yunnan National Astronomical Observatory/CAS (Kunming, China), 10 June 2014
Huazhong University of Science and Technology (Wuhan, China), 5 June 2014
KIAA/Peking University (Beijing, China), 19 May 2014
Lanzhou University (Lanzhou, China), 14 May 2014
Ningbo University (Ningbo, China), 24 April 2014
Xiamen University (Xiamen, China), 11 April 2014
University of Science and Technology of China (Hefei, China), 18 March 2014
Zhejiang University (Hangzhou, China), 28 February 2014

2013

Beijing Normal University (Beijing, China), 27 September 2013
National Astronomical Observatories of China/CAS (Beijing, China), 26 September 2013
Shanghai Astronomical Observatory/CAS (Shanghai, China), 12 September 2013
Institut d'Astrophysique de Paris (Paris, France), 15 July 2013
Shanghai Normal University (Shanghai, China), 5 June 2013

2012

Virtual Institute of Astroparticle physics (Paris, France), 14 December 2012
Pisa University (Pisa, Italy), 26 September 2012
Albert Einstein Institute (Potsdam, Germany), 11 September 2012
Perimeter Institute for Theoretical Physics (Waterloo, Canada), 25 July 2012
European Space Astronomy Center/ESA (Madrid, Spain), 5 June 2012
Asia Pacific Center for Theoretical Physics (Pohang, South Korea), 15 May 2012
The University of New South Wales (Sydney, Australia), 13 April 2012
Shanghai Astronomical Observatory (Shanghai, China), 30 March 2012
Fudan University (Shanghai, China), 27 March 2012
Universitäts-Sternwarte München (Munich, Germany), 21 March 2012
Florence University (Florence, Italy), 14 March 2012

2011

Eberhard Karls University of Tübingen (Tübingen, Germany), 14 November 2011

Perimeter Institute for Theoretical Physics (Waterloo, Canada), 21 July 2011
Harvard-Smithsonian Center for Astrophysics (Cambridge, Massachusetts), 22 April 2011
Pennsylvania State University (State College, Pennsylvania), 18 April 2011
University of Mississippi (Oxford, Mississippi), 14 April 2011
New York University (New York, New York), 12 April 2011

2010

The University of Michigan, Ann Arbor (Ann Arbor, Michigan), 29 November 2010
Louisiana State University (Baton Rouge, Louisiana), 15 November 2010
The University of Texas, Austin (Austin, Texas), 12 November 2010
Simon Fraser University (Burnaby, Canada), 9 November 2010
University of British Columbia (Vancouver, Canada), 8 November 2010
SISSA (Trieste, Italy), 24 June 2010

2009

Tsukuba University (Tsukuba, Japan), 17 June 2009
Rikkyo University (Tokyo, Japan), 9 June 2009
Osaka City University (Osaka, Japan), 15 May 2009
Osaka University (Osaka, Japan), 13 May 2009
Aoyama Gakuin University (Sagamihara, Japan), 8 May 2009
Chiba University (Chiba, Japan), 27 April 2009
National Astronomical Observatory of Japan (Tokyo, Japan), 10 April 2009

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)