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Publications in the second reporting period (1/10/23-30/9/25)

N.	Title	Authors	Journal	Repository	DOI
1	Tidal effects up to next-to-next-to-leading post-Newtonian order in massless scalar-tensor theories	Laura Bernard, Eve Dones, Stavros Mougiakakos	Physical Review D	https://arxiv.org/abs/2310.19672	10.1103/physrevd.109.044006
2	Tidal Love numbers and approximate universal relations for fermion soliton stars	Emanuele Berti, Valerio De Luca, Loris Del Grosso, Paolo Pani	Physical Review D	https://arxiv.org/abs/2404.06979	10.1103/physrevd.109.124008
3	Tidal deformability of black holes surrounded by thin accretion disks	Enrico Cannizzaro, Valerio De Luca, Paolo Pani	Physical Review D	https://arxiv.org/abs/2408.14208	10.1103/physrevd.110.123004
4	Black holes, multiple propagation speeds, and energy extraction	Vitor Cardoso, Shinji Mukohyama, Naritaka Oshita, Kazufumi Takahashi	Physical Review D	https://arxiv.org/abs/2404.05790	10.1103/physrevd.109.124036
5	From regular black holes to horizonless objects: quasi-normal modes, instabilities and spectroscopy	Edgardo Franzin, Stefano Liberati, Vania Vellucci	Journal of Cosmology and Astroparticle Physics	https://arxiv.org/abs/2310.11990	10.1088/1475-7516/2024/01/020
6	Physical significance of the black hole quasinormal mode spectra instability	Vitor Cardoso, Shilpa Kasta, Rodrigo Panosso Macedo	Physical Review D	https://arxiv.org/abs/2404.01374	10.1103/physrevd.110.024016
7	Hushing black holes: Tails in dynamical spacetimes	Vitor Cardoso et al.	Physical Review D	https://arxiv.org/abs/2405.12290	10.1103/physrevd.109.1121502
8	Rotating metrics and new multipole moments from scattering amplitudes in arbitrary dimensions	Claudio Gambino, Paolo Pani, Fabio Riccioni	Physical Review D	https://arxiv.org/abs/2403.16574	10.1103/physrevd.109.124018
9	Phenomenology of ultralight bosons around compact objects: In-medium suppression	Enrico Cannizzaro, Thomas F. M. Spieksma	Physical Review D	https://arxiv.org/abs/2406.17016	10.1103/physrevd.110.084021
10	Forecasting the sensitivity of pulsar timing arrays to gravitational wave backgrounds	Stanislav Babak, Mikel Falxa, Gabriele Franciolini, Mauro Pieroni	Physical Review D	https://arxiv.org/abs/2404.02864	10.1103/physrevd.110.063022
11	The dynamical tides of spinning Newtonian stars	P Pnigouras, F Gittins, A Nanda, N Andersson, D I Jones	Monthly Notices of the Royal Astronomical Society	https://arxiv.org/abs/2205.07577	10.1093/mnras/stad3593

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12	Fermion soliton stars with asymmetric vacua	Loris Del Grosso, Paolo Pani	Physical Review D	https://arxiv.org/abs/2308.15921	10.1103/physrevd.108.064042
13	Black holes as fermion factories	Yifan Chen, Xiao Xue, and Vitor Cardoso	Journal and Cosmology And Astroparticle Physics	https://arxiv.org/abs/2308.00741	1475-7516/2025/02/035
14	Perturbativity in the presence of ultraslow-roll dynamics	Gabriele Franciolini, Antonio Junior Iovino, Marco Taoso, Alfredo Urbano	Physical Review D	https://arxiv.org/abs/2305.03491	10.1103/physrevd.109.123550
15	Superradiant instability of magnetic black holes	David Pereñíguez, Marina de Amicis, Richard Brito, Rodrigo Panosso Macedo	Physical Review D	https://arxiv.org/abs/2402.05178	10.1103/physrevd.110.104001
16	Mini boson stars in higher dimensions are radially unstable	Edgardo Franzin	General Relativity and Gravitation	https://arxiv.org/abs/2408.07651	10.1007/s10714-024-03287-9
17	Extreme-Mass-Ratio Inspirals in Ultralight Dark Matter	Francisco Duque, Caio F. B. Macedo, Rodrigo Vicente, Vitor Cardoso	Physical Review Letters	https://arxiv.org/abs/2312.06767	10.1103/physrevlett.133.121404
18	Quadratic quasinormal modes of a Schwarzschild black hole	Bruno Bucciotti, Leonardo Juliano, Adrien Kuntz, Enrico Trincerini	Physical Review D	https://arxiv.org/abs/2405.06012	10.1103/physrevd.110.104048
19	Recent Gravitational Wave Observation by Pulsar Timing Arrays and Primordial Black Holes: The Importance of Non-Gaussianities	Gabriele Franciolini, Antonio Junior Iovino, Ville Vaskonen, Hardi Veermäe	Physical Review Letters	https://arxiv.org/abs/2306.17149	10.1103/physrevlett.131.201401
20	Parametrized quasinormal mode framework for modified Teukolsky equations	Pablo A. Cano, Lodovico Capuano, Nicola Franchini, Simon Maenaut, Sebastian H. Völkel	Physical Review D	https://arxiv.org/abs/2407.15947	10.1103/physrevd.110.104007
21	Implications of the pulsar timing array detections for massive black hole mergers in the LISA band	Enrico Barausse, Kallol Dey, Marco Crisostomi, Akshay Panayada, Sylvain Marsat, Soumen Basak	Physical Review D	https://arxiv.org/abs/2307.12245	10.1103/physrevd.108.103034
22	Neural density estimation for Galactic binaries in the LISA data analysis	Natalia Korsakova, Stanislav Babak, Michael L. Katz, Nikolaos Karnesis, Sviatoslav Khukhlaev, Jonathan R. Gair	Physical Review D	https://arxiv.org/abs/2402.13701	10.1103/physrevd.110.104069
23	Using the motion of S2 to constrain vector clouds around Sgr A*	A Foschi et al.	Monthly Notices of the Royal Astronomical Society	https://arxiv.org/abs/2312.02653	10.1093/mnras/stae423

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24	Perturbations of the Vaidya metric in the frequency domain: Quasinormal modes and tidal response	Lodovico Capuano, Luca Santoni, Enrico Barausse	Physical Review D	https://arxiv.org/abs/2407.06009	10.1103/physrevd.110.084081
25	Radiation reaction in weakly magnetized black holes: Can the tail term be ignored in the strong field regime?	João S. Santos, Vitor Cardoso, José Natário	Physical Review D	https://arxiv.org/abs/2404.02195	10.1103/physrevd.109.124032
26	Amplitudes and polarizations of quadratic quasi-normal modes for a Schwarzschild black hole	Bruno Bucciotti, Leonardo Juliano, Adrien Kuntz, Enrico Trischerini	Journal of High Energy Physics	https://arxiv.org/abs/2406.14611	10.1007/jhep09(2024)119
27	Scalar-induced gravitational wave interpretation of PTA data: the role of scalar fluctuation propagation speed	Shyam Balaji, Guillem Domènech, Gabriele Franciolini	Journal of Cosmology and Astroparticle Physics	https://arxiv.org/abs/2307.08552	10.1088/1475-7516/2023/10/041
28	Full analysis of the scalar-induced gravitational waves for the curvature perturbation with local-type non-Gaussianities	Chen Yuan, De-Shuang Meng, Qing-Guo Huang	Journal of Cosmology and Astroparticle Physics	https://arxiv.org/abs/2308.07155	10.1088/1475-7516/2023/12/036
29	Fixing the dynamical evolution of self-interacting vector fields	Marcelo Rubio, Guillermo Lara, Miguel Bezares, Marco Crisostomi, Enrico Barausse	Physical Review D	https://arxiv.org/abs/2407.08774	10.1103/physrevd.110.063015
30	Novel tests of gravity using nano-Hertz stochastic gravitational-wave background signals	Enrico Cannizzaro, Gabriele Franciolini, Paolo Pani	Journal of Cosmology and Astroparticle Physics	https://arxiv.org/abs/2307.11665	10.1088/1475-7516/2024/04/056
31	Resonant dynamics of extreme mass-ratio inspirals in a perturbed Kerr spacetime	Zhen Pan, Huan Yang, Laura Bernard, Béatrice Bonga	Physical Review D	https://arxiv.org/abs/2306.06576	10.1103/physrevd.108.104026
32	Compact objects in and beyond the standard model from nonperturbative vacuum scalarization	Loris Del Grosso, Paolo Pani, Alfredo Urbano	Physical Review D	https://arxiv.org/abs/2401.06716	10.1103/physrevd.109.095006
33	Spectral instability of quasinormal modes and strong cosmic censorship	Aubin Courty, Kyriakos Destounis, Paolo Pani	Physical Review D	https://arxiv.org/abs/2307.11155	10.1103/physrevd.108.104027
34	Constraints on massive gravity from dipolar mode excitations	Vitor Cardoso, Francisco Duque, Andrea Maselli, David Pereñíguez	Physical Review D	https://arxiv.org/abs/2304.01252	10.1103/physrevd.108.124003

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35	Height-function-based 4D reference metrics for hyperboloidal evolution	Alex Vañó-Viñuales, Tiago Valente	General Relativity and Gravitation	https://arxiv.org/abs/2408.08952	10.1007/s10714-024-03323-8
36	Tidal Love numbers of static black holes in anti-de Sitter	Edgardo Franzin, Antonia M. Frassino, Jorge V. Rocha	Journal of High Energy Physics	https://arxiv.org/abs/2410.23545	10.1007/jhep12(2024)224
37	Probing time-dependent scalar wigs with extreme-mass-ratio inspirals	Matteo Della Rocca, Georgios Antoniou, Leonardo Gualtieri, Andrea Maselli	Physical Review D	https://arxiv.org/abs/2412.15131	10.1103/j83z-bn8b
38	Tidal response beyond vacuum general relativity with a canonical definition	Takuya Katagiri, Vitor Cardoso, Tact Ikeda, Kent Yagi	Physical Review D	https://arxiv.org/abs/2410.02531	10.1103/physicsrevd.111.084081
39	Reconstruction of ringdown with excitation factors	Naritaka Oshita, Vitor Cardoso	Physical Review D	https://arxiv.org/abs/2407.02563	10.1103/physicsrevd.111.104043
40	Superradiant amplification by rotating viscous compact objects	Jaime Redondo-Yuste, Vitor Cardoso	Physical Review D	https://arxiv.org/abs/2506.13850	10.1103/gvd3-lqkv
41	Hyperboloidal neutron star and black hole initial data in spherical symmetry	Alex Vañó-Viñuales	Classical and Quantum Gravity	https://arxiv.org/abs/2506.05467	10.1088/1361-6382/ae05e4
42	Gravitational quasinormal modes of black holes in quadratic gravity	Georgios Antoniou, Leonardo Gualtieri, Paolo Pani	Physical Review D	https://arxiv.org/abs/2412.15037	10.1103/physicsrevd.111.064059
43	Lagrangian reverse engineering for regular black holes	Ana Bokulić, Edgardo Franzin, Tajron Jurić, Ivica Smolić	Physics Letters B	https://arxiv.org/abs/2311.17151	10.1016/j.physletb.2024.138750
44	Unstable Chords and Destructive Resonant Excitation of Black Hole Quasinormal Modes	Naritaka Oshita, Emanuele Berti, Vitor Cardoso	Physical Review Letters	https://arxiv.org/abs/2503.21276	10.1103/ht2n-vvvh
45	Parametrized Love numbers of nonrotating black holes	Takuya Katagiri, Tact Ikeda, Vitor Cardoso	Physical Review D	https://arxiv.org/abs/2310.19705	10.1103/physicsrevd.109.044067
46	Fast detection and reconstruction of merging massive black hole binary signals	Senwen Deng, Stanislav Babak, Sylvain Marsat	Physical Review D	https://arxiv.org/abs/2504.11322	10.1103/jy7-fcgp
47	Relativistic dynamical tides: Subtleties and calibration	Takuya Katagiri, Kent Yagi, Vitor Cardoso	Physical Review D	https://arxiv.org/abs/2409.18034	10.1103/physicsrevd.111.084080

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48	Decoupled gravitational wave equations in spherical symmetry from curvature wave equations	Gowtham Rishi Mukkamala, David Pereñiguez	Journal of Cosmology and Astroparticle Physics	https://arxiv.org/abs/2408.13557	10.1088/1475-7516/2025/01/122
49	Black holes as fermion factories	Yifan Chen, Xiao Xue, Vitor Cardoso	Journal of Cosmology and Astroparticle Physics	https://arxiv.org/abs/2308.00741	10.1088/1475-7516/2025/02/035
50	Modular global-fit pipeline for LISA data analysis	Senwen Deng, Stanislav Babak, Maude Le Jeune, Sylvain Marsat, Éric Plagnol, Andrea Sartirana	Physical Review D	https://arxiv.org/abs/2501.10277	10.1103/physrevd.111.103014
51	Ringdown of a dynamical spacetime	Jaime Redondo–Yuste, David Pereñiguez, Vitor Cardoso	Physical Review D	https://arxiv.org/abs/2312.04633	10.1103/physrevd.109.044048
52	Exploring the presence of a fifth force at the Galactic Center	K. Abd El Dayem et al.	Astronomy & Astrophysics	https://arxiv.org/abs/2504.02908	10.1051/0004-6361/202554676
53	Simultaneous resonant and broadband detection of ultralight dark matter and high-frequency gravitational waves via cavities and circuits	Yifan Chen, Chunlong Li, Yuxin Liu, Jing Shu, Yuting Yang, Yanjie Zeng	Reports on Progress in Physics	https://arxiv.org/abs/2309.12387	10.1088/1361-6633/add050
54	Higher-derivative corrections to the Kerr quasinormal mode spectrum	Pablo A. Cano, Lodovico Capuano, Nicola Franchini, Simon Maenaut, Sebastian H. Völkel	Physical Review D	https://arxiv.org/abs/2409.04517	10.1103/physrevd.110.124057
55	Dynamical Lensing Tomography of Black Hole Ringdowns	Zhen Zhong, Vitor Cardoso and Yifan Chen	Physical Review Letters	https://arxiv.org/abs/2408.10303	https://doi.org/10.1103/PhysRevLett.134.211402
56	Black Hole Spectroscopy in Environments: Detectability Prospects	Thomas Spieksma, Vitor Cardoso, Gregorio Carullo, Matteo Della Rocca and Francisco Duque	Physical Review Letters	https://arxiv.org/abs/2409.05950	https://doi.org/10.1103/PhysRevLett.134.081402
57	Dynamical Response of Viscous Objects to Gravitational Waves	Valentin Boyanov, Vitor Cardoso, Kostas Kokkotas and Jaime Redondo-Yuste	Physical Review Letters	https://arxiv.org/abs/2411.16861	https://doi.org/10.1103/smlr-v7b2
58	Late-Time Tails in Nonlinear Evolutions of Merging Black Holes	Marina De Amicis et al	Physical Review Letters	https://arxiv.org/abs/2412.06887	https://doi.org/10.1103/2brx-xn-yr

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59	Nonlinear quasinormal mode detectability with next-generation gravitational wave detectors	Sophia Yi, Adrien Kuntz, Enrico Barausse, Emanuele Berti, Mark Ho-Yeuk Cheung, Konstantinos Kritos, Andrea Maselli	Physical Review D	https://arxiv.org/abs/2403.09767	https://doi.org/10.1103/PhysRevD.109.124029
60	Constraints on conformal ultralight dark matter couplings from the European Pulsar Timing Array	Clemente Smarra, Adrien Kuntz, Enrico Barausse, Boris Goncharov, Diana López Nacir, Diego Blas, Lijing Shao, J. Antoniadis, D.J. Champion, I. Cognard, L. Guillemot, H. Hu, M. Keith, M. Kramer, K. Liu, D. Perrodin, S.A. Sanidas, G. Theureau	Physical Review D	https://arxiv.org/abs/2405.01633	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.110.043033
61	Bayesian evidence estimation from posterior samples with normalizing flows	Rahul Srinivasan, Marco Crisostomi, Roberto Trotta, Enrico Barausse, Matteo Breschi	Physical Review D	https://arxiv.org/abs/2404.12294	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.110.123007
62	Possible Causes of False General Relativity Violations in Gravitational Wave Observations	Anuradha Gupta, K. G. Arun, Enrico Barausse, Laura Bernard, Emanuele Berti, et al.	SciPost Physics Community Reports	https://arxiv.org/abs/2405.02197	https://sci-post.org/10.21468/SciPostPhysCommRep.5
63	Binary vision: The merging black hole binary mass distribution via iterative density estimation	Jam Sadiq, Thomas Dent, Mark Gieles	Astrophysical Journal	https://arxiv.org/abs/2307.12092	https://iopscience.iop.org/article/10.3847/1538-4357/ad0ce6
64	Deep Learning solutions to singular ordinary differential equations: from special functions to spherical accretion	R. Cayuso, M. Herrero-Valea, E. Barausse	Physical Review D	https://arxiv.org/abs/2409.20150	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.111.064082
65	Scalar emission from neutron star-black hole binaries in scalar-tensor theories with kinetic screening	Ramiro Cayuso, Adrien Kuntz, Miguel Bezares, Enrico Barausse	Physical Review D	https://arxiv.org/abs/2410.16367	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.110.104071

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66	Reconstructing the LISA massive black hole binary population via iterative kernel density estimation	Jam Sadiq, Kallol Dey, Thomas Dent, Enrico Barausse	Physical Review D	https://arxiv.org/abs/2410.17056	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.111.063051
67	The implications of stochastic gas torques for asymmetric binaries in the LISA band	Lorenzo Copparoni, Lorenzo Speri, Laura Sberna, Andrea Derdzinski, Enrico Barausse	Physical Review D	https://arxiv.org/abs/2502.10087	https://doi.org/10.1103/PhysRevD.111.104079
68	Extreme mass-ratio inspirals as probes of scalar fields: Inclined circular orbits around Kerr black holes	Matteo Della Rocca, Susanna Barsanti, Leonardo Gualtieri, Andrea Maselli	Physical Review D	https://arxiv.org/abs/2401.09542	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.109.104079
69	Black hole spectroscopy beyond Kerr: Agnostic and theory-based tests with next-generation interferometers	Andrea Maselli, Sophia Yi, Lorenzo Pierini, Vania Vellucci, Luca Reali, Leonardo Gualtieri, Emanuele Berti	Physical Review D	https://arxiv.org/abs/2311.14803	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.109.064060
70	Tidal contributions to the full gravitational waveform to the second-and-a-half post-Newtonian order	Eve Dones, Quentin Henry, Laura Bernard	Physical Review D	https://arxiv.org/abs/2412.14249	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.111.084043
71	Waveform modelling for the Laser Interferometer Space Antenna	Niayesh Afshordi et al.	Living Reviews of Relativity	https://arxiv.org/abs/2311.01300	https://link.springer.com/article/10.1007/s41114-025-00056-1