

Nikolaos Stergioulas

List of Publications by Year in descending order

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112
papers

7,908
citations

57631

44
h-index

49773

87
g-index

118
all docs

118
docs citations

118
times ranked

4431
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Design concepts for the Cherenkov Telescope Array CTA: an advanced facility for ground-based high-energy gamma-ray astronomy. <i>Experimental Astronomy</i> , 2011, 32, 193-316. | 1.6 | 640 |
| 2 | Introducing the CTA concept. <i>Astroparticle Physics</i> , 2013, 43, 3-18. | 1.9 | 504 |
| 3 | Neutron-star Radius Constraints from GW170817 and Future Detections. <i>Astrophysical Journal Letters</i> , 2017, 850, L34. | 3.0 | 469 |
| 4 | Black holes, gravitational waves and fundamental physics: a roadmap. <i>Classical and Quantum Gravity</i> , 2019, 36, 143001. | 1.5 | 451 |
| 5 | Comparing models of rapidly rotating relativistic stars constructed by two numerical methods. <i>Astrophysical Journal</i> , 1995, 444, 306. | 1.6 | 406 |
| 6 | Rotating Stars in Relativity. <i>Living Reviews in Relativity</i> , 2003, 6, 3. | 8.2 | 369 |
| 7 | Three-dimensional relativistic simulations of rotating neutron-star collapse to a Kerr black hole. <i>Physical Review D</i> , 2005, 71, . | 1.6 | 275 |
| 8 | On the Relevance of the r -Mode Instability for Accreting Neutron Stars and White Dwarfs. <i>Astrophysical Journal</i> , 1999, 516, 307-314. | 1.6 | 185 |
| 9 | The Large Observatory for X-ray Timing (LOFT). <i>Experimental Astronomy</i> , 2012, 34, 415-444. | 1.6 | 168 |
| 10 | Three-dimensional numerical general relativistic hydrodynamics. II. Long-term dynamics of single relativistic stars. <i>Physical Review D</i> , 2002, 65, . | 1.6 | 163 |
| 11 | Towards a stable numerical evolution of strongly gravitating systems in general relativity: The conformal treatments. <i>Physical Review D</i> , 2000, 62, . | 1.6 | 156 |
| 12 | Gravitational waves and non-axisymmetric oscillation modes in mergers of compact object binaries. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 418, 427-436. | 1.6 | 156 |
| 13 | Rotating stars in relativity. <i>Living Reviews in Relativity</i> , 2017, 20, 7. | 8.2 | 137 |
| 14 | Torsional oscillations of relativistic stars with dipole magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 375, 261-277. | 1.6 | 127 |
| 15 | Observing gravitational waves from the post-merger phase of binary neutron star coalescence. <i>Classical and Quantum Gravity</i> , 2016, 33, 085003. | 1.5 | 122 |
| 16 | Unified picture of the post-merger dynamics and gravitational wave emission in neutron star mergers. <i>Physical Review D</i> , 2015, 91, . | 1.6 | 121 |
| 17 | Revealing the high-density equation of state through binary neutron star mergers. <i>Physical Review D</i> , 2014, 90, . | 1.6 | 110 |
| 18 | Non-linear pulsations in differentially rotating neutron stars: mass-shedding-induced damping and splitting of the fundamental mode. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 352, 1089-1101. | 1.6 | 106 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Exploring properties of high-density matter through remnants of neutron-star mergers. <i>European Physical Journal A</i> , 2016, 52, 1. | 1.0 | 101 |
| 20 | Upper Limits Set by Causality on the Rotation and Mass of Uniformly Rotating Relativistic Stars. <i>Astrophysical Journal</i> , 1997, 488, 799-806. | 1.6 | 100 |
| 21 | Rapidly rotating neutron stars in scalar-tensor theories of gravity. <i>Physical Review D</i> , 2013, 88, . | 1.6 | 98 |
| 22 | [CLC] [ITAL]r[/ITAL] [/CLC]-Mode Runaway and Rapidly Rotating Neutron Stars. <i>Astrophysical Journal</i> , 2000, 534, L75-L78. | 1.6 | 98 |
| 23 | Nonaxisymmetric Neutral Modes in Rotating Relativistic Stars. <i>Astrophysical Journal</i> , 1998, 492, 301-322. | 1.6 | 96 |
| 24 | Nonlinear Resonance in the Accretion Disk of a Millisecond Pulsar. <i>Astrophysical Journal</i> , 2004, 603, L89-L92. | 1.6 | 93 |
| 25 | Collapse of differentially rotating neutron stars and cosmic censorship. <i>Physical Review D</i> , 2011, 84, . | 1.6 | 93 |
| 26 | BREAKDOWN OF $\langle i \rangle$ -LOVE- $\langle i \rangle$ Q $\langle i \rangle$ UNIVERSALITY IN RAPIDLY ROTATING RELATIVISTIC STARS. <i>Astrophysical Journal Letters</i> , 2014, 781, L6. | 3.0 | 93 |
| 27 | Non-linear axisymmetric pulsations of rotating relativistic stars in the conformal flatness approximation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 368, 1609-1630. | 1.6 | 91 |
| 28 | Alfvén quasi-periodic oscillations in magnetars. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2008, 385, L5-L9. | 1.2 | 84 |
| 29 | Nonlinear Modes in Rapidly Rotating Relativistic Stars. <i>Physical Review Letters</i> , 2001, 86, 1148-1151. | 2.9 | 82 |
| 30 | New horizons for fundamental physics with LISA. <i>Living Reviews in Relativity</i> , 2022, 25, . | 8.2 | 82 |
| 31 | Equation of State Constraints from the Threshold Binary Mass for Prompt Collapse of Neutron Star Mergers. <i>Physical Review Letters</i> , 2020, 125, 141103. | 2.9 | 80 |
| 32 | Non-linear hydrodynamical evolution of rotating relativistic stars: numerical methods and code tests. <i>Monthly Notices of the Royal Astronomical Society</i> , 2000, 313, 678-688. | 1.6 | 79 |
| 33 | Magnetoelastic oscillations of neutron stars with dipolar magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 421, 2054-2078. | 1.6 | 74 |
| 34 | Stability of general-relativistic accretion disks. <i>Physical Review D</i> , 2011, 83, . | 1.6 | 70 |
| 35 | Magneto-elastic oscillations and the damping of crustal shear modes in magnetars. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2011, 410, L37-L41. | 1.2 | 70 |
| 36 | Prospects for high frequency burst searches following binary neutron star coalescence with advanced gravitational wave detectors. <i>Physical Review D</i> , 2014, 90, . | 1.6 | 70 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Approximate matching of analytic and numerical solutions for rapidly rotating neutron stars. Monthly Notices of the Royal Astronomical Society, 2004, 350, 1416-1430. | 1.6 | 66 |
| 38 | Rotating black holes in higher order gravity. Physical Review D, 2019, 100, . | 1.6 | 60 |
| 39 | Alfvén QPOs in magnetars in the anelastic approximation. Monthly Notices of the Royal Astronomical Society, 2009, 397, 1607-1620. | 1.6 | 58 |
| 40 | Magneto-elastic oscillations of neutron stars: exploring different magnetic field configurations. Monthly Notices of the Royal Astronomical Society, 2013, 430, 1811-1831. | 1.6 | 56 |
| 41 | Semi-analytic derivation of the threshold mass for prompt collapse in binary neutron-star mergers. Monthly Notices of the Royal Astronomical Society, 2017, 471, 4956-4965. | 1.6 | 49 |
| 42 | Axisymmetric modes of rotating relativistic stars in the Cowling approximation. Monthly Notices of the Royal Astronomical Society, 2001, 325, 1463-1470. | 1.6 | 48 |
| 43 | Torsional oscillations of magnetized relativistic stars. Monthly Notices of the Royal Astronomical Society, 2001, 328, 1161-1168. | 1.6 | 47 |
| 44 | The runaway instability in general relativistic accretion discs. Monthly Notices of the Royal Astronomical Society, 2013, 431, 349-354. | 1.6 | 46 |
| 45 | Equation-of-state constraints and the QCD phase transition in the era of gravitational-wave astronomy. AIP Conference Proceedings, 2019, , . | 0.3 | 45 |
| 46 | Rotating Stars in Relativity. Living Reviews in Relativity, 1998, 1, 8. | 8.2 | 44 |
| 47 | Spectral classification of gravitational-wave emission and equation of state constraints in binary neutron star mergers. Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 113002. | 1.4 | 41 |
| 48 | Empirical relations for gravitational-wave asteroseismology of binary neutron star mergers. Physical Review D, 2020, 101, . | 1.6 | 41 |
| 49 | Quasi-normal Modes of Rotating Relativistic Stars: Neutral Modes for Realistic Equations of State. Astrophysical Journal, 1999, 510, 854-861. | 1.6 | 40 |
| 50 | Gravitational waves from nonlinear couplings of radial and polar nonradial modes in relativistic stars. Physical Review D, 2007, 75, . | 1.6 | 38 |
| 51 | Nonlinear modes in neutron stars: Instability of an unstable mode. Physical Review D, 2002, 66, . | 1.6 | 36 |
| 52 | Frequency band of the f -mode Chandrasekhar-Friedman-Schutz instability. Physical Review D, 2010, 81, . | 1.6 | 36 |
| 53 | CW190814: on the properties of the secondary component of the binary. Monthly Notices of the Royal Astronomical Society, 2021, 505, 1600-1606. | 1.6 | 36 |
| 54 | AN IMPROVED METHOD FOR CONSTRUCTING MODELS OF SELF-GRAVITATING TORI AROUND BLACK HOLES. International Journal of Modern Physics D, 2011, 20, 1251-1263. | 0.9 | 35 |

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|----|---|-----|-----------|
| 55 | Universal relations for differentially rotating relativistic stars at the threshold to collapse. Monthly Notices of the Royal Astronomical Society, 2018, 474, 3557-3564. | 1.6 | 35 |
| 56 | Parametrized equation of state for neutron star matter with continuous sound speed. Physical Review D, 2020, 102, . | 1.6 | 35 |
| 57 | Systematics of prompt black-hole formation in neutron star mergers. Physical Review D, 2021, 103, . | 1.6 | 35 |
| 58 | Orbital and epicyclic frequencies around rapidly rotating compact stars in scalar-tensor theories of gravity. Physical Review D, 2014, 90, . | 1.6 | 34 |
| 59 | Imprints of Superfluidity on Magnetoelastic Quasiperiodic Oscillations of Soft Gamma-Ray Repeaters. Physical Review Letters, 2013, 111, 211102. | 2.9 | 30 |
| 60 | LOFT: the Large Observatory For X-ray Timing. Proceedings of SPIE, 2012, , . | 0.8 | 29 |
| 61 | Probing the nature of black holes: Deep in the mHz gravitational-wave sky. Experimental Astronomy, 2021, 51, 1385-1416. | 1.6 | 29 |
| 62 | Nonaxisymmetric instability and fragmentation of general relativistic quasitoroidal stars. Physical Review D, 2007, 76, . | 1.6 | 28 |
| 63 | Convective Excitation of Inertial Modes in Binary Neutron Star Mergers. Physical Review Letters, 2018, 120, 221101. | 2.9 | 27 |
| 64 | Numerical-relativity simulations of long-lived remnants of binary neutron star mergers. Physical Review D, 2020, 101, . | 1.6 | 27 |
| 65 | Differentially rotating neutron stars in scalar-tensor theories of gravity. Physical Review D, 2018, 98, . | 1.6 | 26 |
| 66 | Frequency deviations in universal relations of isolated neutron stars and postmerger remnants. Physical Review D, 2021, 104, . | 1.6 | 24 |
| 67 | Time evolution of the linear perturbations of a rotating Newtonian polytrope. Monthly Notices of the Royal Astronomical Society, 2002, 334, 933-940. | 1.6 | 22 |
| 68 | Formation of Supermassive Black Holes through Fragmentation of Toroidal Supermassive Stars. Physical Review Letters, 2006, 96, 161101. | 2.9 | 22 |
| 69 | Numerical relativity simulations of thick accretion disks around tilted Kerr black holes. Physical Review D, 2016, 93, . | 1.6 | 22 |
| 70 | Constraining properties of high-density matter in neutron stars with magneto-elastic oscillations. Monthly Notices of the Royal Astronomical Society, 2018, 476, 4199-4212. | 1.6 | 22 |
| 71 | Modulating the magnetosphere of magnetars by internal magneto-elastic oscillations. Monthly Notices of the Royal Astronomical Society, 2014, 443, 1416-1424. | 1.6 | 19 |
| 72 | Coherent magneto-elastic oscillations in superfluid magnetars. Monthly Notices of the Royal Astronomical Society, 2016, 460, 4242-4257. | 1.6 | 18 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 73 | Universal and approximate relations for the gravitational-wave damping timescale of f-modes in neutron stars. <i>General Relativity and Gravitation</i> , 2018, 50, 1. | 0.7 | 17 |
| 74 | Astrophysical implications of neutron star inspiral and coalescence. <i>International Journal of Modern Physics D</i> , 2020, 29, 2041015. | 0.9 | 17 |
| 75 | Analytic models of the spectral properties of gravitational waves from neutron star merger remnants. <i>Physical Review D</i> , 2022, 105, . | 1.6 | 17 |
| 76 | XIPE: the x-ray imaging polarimetry explorer. , 2016, , . | | 16 |
| 77 | Stationary, axisymmetric neutron stars with meridional circulation in general relativity. <i>Physical Review D</i> , 2011, 84, . | 1.6 | 14 |
| 78 | On the dynamics of tilted black hole–torus systems. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 461, 2480-2489. | 1.6 | 13 |
| 79 | Epicyclic frequencies for rotating strange quark stars: Importance of stellar oblateness. <i>Physical Review D</i> , 2014, 89, . | 1.6 | 12 |
| 80 | The Large Observatory for x-ray timing. <i>Proceedings of SPIE</i> , 2014, , . | 0.8 | 10 |
| 81 | The LOFT mission concept: a status update. <i>Proceedings of SPIE</i> , 2016, , . | 0.8 | 9 |
| 82 | On the accuracy of the IWM–CFC approximation in differentially rotating relativistic stars. <i>General Relativity and Gravitation</i> , 2014, 46, 1. | 0.7 | 8 |
| 83 | Equilibrium sequences of differentially rotating stars with post-merger-like rotational profiles. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 503, 850-866. | 1.6 | 8 |
| 84 | Black hole spacetimes with self-gravitating, massive accretion tori. <i>Journal of Physics: Conference Series</i> , 2011, 283, 012036. | 0.3 | 7 |
| 85 | Magnetized neutron stars with superconducting cores: effect of entrainment. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 452, 3246-3255. | 1.6 | 7 |
| 86 | Nonlinear dynamics of oscillating neutron stars in scalar-tensor gravity. <i>Physical Review D</i> , 2021, 104, . | 1.6 | 5 |
| 87 | Models of binary neutron star remnants with tabulated equations of state. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 510, 2948-2967. | 1.6 | 5 |
| 88 | The IWM–CFC approximation in differentially rotating relativistic stars. <i>Journal of Physics: Conference Series</i> , 2013, 453, 012004. | 0.3 | 3 |
| 89 | Modulating magnetar emission by magneto–elastic oscillations. <i>Astronomische Nachrichten</i> , 2014, 335, 240-245. | 0.6 | 3 |
| 90 | Neutron-star properties from the postmerger gravitational wave signal of binary neutron stars. <i>Physics of Particles and Nuclei</i> , 2015, 46, 835-838. | 0.2 | 3 |

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| 91 | Stability of relativistic stars. , 2011, , 75-100. | | 2 |
| 92 | Magneto-elastic torsional oscillations of magnetars. Journal of Physics: Conference Series, 2011, 283, 012013. | 0.3 | 2 |
| 93 | Radiation from charged particles on eccentric orbits in a dipolar magnetic field around a Schwarzschild black hole. General Relativity and Gravitation, 2015, 47, 1. | 0.7 | 2 |
| 94 | Magneto-elastic oscillations modulating the emission of magnetars. Astronomische Nachrichten, 2017, 338, 1105-1108. | 0.6 | 2 |
| 95 | The gravitational wave damping timescales of f-modes in neutron stars. Journal of Physics: Conference Series, 2020, 1667, 012026. | 0.3 | 2 |
| 96 | Instabilities of Relativistic Stars. , 2014, , 427-458. | | 2 |
| 97 | Numerical Simulations of Black Hole Formation. Lecture Notes in Physics, 2009, , 177-208. | 0.3 | 2 |
| 98 | Dynamics and gravitational-wave emission of neutron-star merger remnants. , 2017, , . | | 2 |
| 99 | Autoencoder-driven spiral representation learning for gravitational wave surrogate modelling. Neurocomputing, 2022, 491, 67-77. | 3.5 | 2 |
| 100 | W-Modes in Rotating Relativistic Stars. AIP Conference Proceedings, 2006, , . | 0.3 | 1 |
| 101 | ALFVÉN QPOS IN MAGNETARS IN THE ANELASTIC APPROXIMATION. , 2012, , . | | 1 |
| 102 | Relativistic astrophysics at GR20. General Relativity and Gravitation, 2014, 46, 1. | 0.7 | 1 |
| 103 | THREE-DIMENSIONAL RELATIVISTIC SIMULATIONS OF ROTATING NEUTRON-STAR COLLAPSE TO A KERR BLACK HOLE. , 2006, , 75-82. | | 1 |
| 104 | Nonlinear Pulsations of Rotating Relativistic Stars. AIP Conference Proceedings, 2006, , . | 0.3 | 0 |
| 105 | Supermassive Black Hole Formation through Rotational Instabilities. Journal of Physics: Conference Series, 2007, 68, 012050. | 0.3 | 0 |
| 106 | Magnetic Torsional Oscillations in Magnetars. , 2009, , . | | 0 |
| 107 | Alfvén QPOs in Magnetars. Journal of Physics: Conference Series, 2009, 189, 012038. | 0.3 | 0 |
| 108 | Relativistic MHD simulations of stellar core collapse and magnetars. Journal of Physics: Conference Series, 2011, 283, 012011. | 0.3 | 0 |

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| 109 | Differentially Rotating Relativistic Stars beyond the J-Constant Law. Physical Sciences Forum, 2021, 2, . | 0.3 | 0 |
| 110 | SPACETIME MODES OF RAPIDLY ROTATING RELATIVISTIC STARS. , 2008, , . | | 0 |
| 111 | FRAGMENTATION OF GENERAL RELATIVISTIC QUASI-TOROIDAL POLYTROPES. , 2008, , . | | 0 |
| 112 | Neutron-star Mergers and Nuclear Physics. Acta Physica Polonica B, 2017, 48, 651. | 0.3 | 0 |