Winter 11-8-2022

General Relativity with Applications to Astrophysics / Relativistic Astrophysics

Chandrachur Chakraborty Dr.

Complete list of publication

Chandrachur Chakraborty

Link to : Google Scholar, INSPIRE, arXiv, ADS, Web of Science

CITATIONS: 341 H-INDEX: 12

(A) Publications with peer review process (in *reverse chronological order*)

1. Gravitational analog of Faraday rotation in the magnetized Kerr and Reissner-Nordström spacetimes
C. Chakraborty, Phys. Rev. D 105, 064072 (2022) **Citations** : 3

2. Spin Precession in the Gravity Wave Analogue Black Hole Spacetime
C. Chakraborty, B. Mukhopadhyay, Universe 8, 193 (2022) **Citations** : 0

3. Investigating the existence of gravitomagnetic monopole in M87*
M. Ghasemi-Nodehi[1], **C. Chakraborty**[1], Q. Yu, Y. Lu, Eur. Phys. J. C 81, 939 (2021) **Citations** : 3

4. Spinning Gyroscope in an Acoustic Black Hole : Precession Effects and Observational Aspects
C. Chakraborty, P. Majumdar, Eur. Phys. J. C 80, 493 (2020) **Citations** : 3

5. Estimation of the jet inclination angle for the TDE Swift J1644+57
S. Chakraborty, S. Bhattacharyya, **C. Chakraborty**, A. R. Rao, MNRAS 492, 1634 (2020) **Citations** : 1

6. Gravitomagnetism and Pulsar Beam Precession near a Kerr Black Hole
P. Kocherlakota, P. S. Joshi, S. Bhattacharyya, **C. Chakraborty**, A. Ray, S. Biswas, MNRAS 490, 3262 (2019) **Citations** : 12

7. Circular orbits in Kerr-Taub-NUT spacetime and their implications for accreting black holes and naked singularities
C. Chakraborty, S. Bhattacharyya, JCAP 05 (2019) 034 **Citations** : 26

8. Alignment and precession of a black hole misaligned with its accretion disc: Application to Low Mass X-ray Binaries
S. Banerjee, **C. Chakraborty**, S. Bhattacharyya, MNRAS 487, 3488 (2019) **Citations**: 3

9. A study of a tilted thin inner accretion disk around a spinning black hole
S. Banerjee, **C. Chakraborty**, S. Bhattacharyya, Astrophys. J. 870, 95 (2019) **Citations**: 9

10. Does the gravitomagnetic monopole exist? A clue from a black hole x-ray binary
C. Chakraborty, S. Bhattacharyya, Phys. Rev. D 98, 043021(2018) **Citations**: 25

11. Inertial Frame Dragging in an Acoustic Analogue spacetime
C. Chakraborty, O.Ganguly,P.Majumdar, Ann.Phys.(Berlin)530,1700231 (2018) **Citations**: 11

12. A tilted and warped inner accretion disc around a spinning black hole: an analytical solution
C. Chakraborty, S. Bhattacharyya, MNRAS 469, 3062 (2017) **Citations** : 13

13. Distinguishing Kerr naked singularities and black holes using the spin precession of a test gyro in strong gravitational fields
C. Chakraborty, P. Kocherlakota, M. Patil, S. Bhattacharyya, P. S. Joshi, A. Królak, Phys. Rev. D 95, 084024 (2017) **Citations** : 50

[1] equal contribution

14. Spin precession in a black hole and naked singularity spacetimes
C. Chakraborty, P.Kocherlakota, P.S.Joshi, Phys. Rev. D 95, 044006 (2017) **Citations**: 30

15. Behavior of a test gyroscope moving towards a rotating traversable wormhole
C. Chakraborty, P. Pradhan, JCAP 03 (2017) 035 **Citations** : 19

16. Gravitomagnetic effect in magnetized neutron stars
D. Chatterjee, **C. Chakraborty**, D. Bandyopadhyay, JCAP 01 (2017) 062 **Citations** : 10

17. Anomalous Lense-Thirring precession in Kerr-Taub-NUT spacetimes
C. Chakraborty, Eur. Phys. J. C 75, 572 (2015) **Citations** : 13

18. Dragging of inertial frames inside the rotating neutron stars
C. Chakraborty, K.P. Modak, D. Bandyopadhyay, Astrophys. J. 790, 2 (2014) **Citations**: 15

19. Inner-most stable circular orbits in extremal and non-extremal Kerr-Taub-NUT spacetimes
C. Chakraborty, Eur. Phys. J. C 74, 2759 (2014) **Citations** : 33

20. Strong gravity Lense-Thirring Precession in Kerr and Kerr-Taub-NUT spacetimes
C. Chakraborty, P. Majumdar, Class. Quantum Grav. 31, 075006 (2014) : **Citations** : 45

21. Lense-Thirring Precession in Plebański-Demiański spacetimes
C. Chakraborty, P. Pradhan, Eur. Phys. J. C 73, 2536 (2013) **Citations** : 17

(D) Conference proceedings

1. First observational indication of the gravitomagnetic monopole
C. Chakraborty, S. Bhattacharyya, The Fifteenth Marcel Grossmann Meeting, 824 (2022): Rome, Italy, July 01-07, 2018.

2. Probing the inner accretion disk around a spinning black hole: Revisiting the Bardeen-Petterson effect
S. Banerjee, S. Bhattacharyya, **C. Chakraborty**, The Fifteenth Marcel Grossmann Meeting, 310 (2022): Rome, Italy, July 01-07, 2018.

3. Frame-dragging effect in strong gravity regime
C. Chakraborty, arXiv:1603.04303 [gr-qc], *Proceedings of the 28th Texas Symposium on Relativistic Astrophysics*, Geneva, Switzerland, December 13-18, 2015