

Anirban Saha

Department of Physics
West Bengal State University
Berunanpukuria, Malikapur, Barasat,
24th Paraganas (North), Kolkata - 700 126.

Designation: Assistant Professor

Education:

1. Ph.D. : Calcutta University, India, 2009;
2. M.Sc. : Physics, University of Pune, India, 2003;
3. B.Sc. : Physics (honours), Calcutta University (St. Xaviers College), India, 2001;
4. Higher Secondary : Barasat Govt. High School, WBBHSE, 1998;
5. Secondary : Barasat Govt. High School, WBBSE, 1996.

Fellowship/Membership:

1. Joint CSIR-UGC Junior Research Fellowship (JRF) and Eligibility for lectureship in Physical Sciences, National Eligibility Test, India, Dec, 2002.
2. Visiting Associateship in Inter University Centre for Astronomy and Astrophysics, Pune for the period 1st Aug, 2007 to 31st July, 2010. Extended upto 31st July, 2013.
3. Member ship: Indian Association for General Relativity & Gravitation (IAGRG), (Dec, 2007 - till date).

Teaching experience:

1. B. Sc. physics (honours and general) in Sovarani Memorial College, Jagatballavpur, Howrah, West Bengal, India; (Dec, 2006 to Feb, 2009)
2. M. Sc. physics in the Department of Physics, West Bengal State University, Barasat (Feb, 2009 - till date).

Ongoing projects – DST-SERB Fast Track (WBSU/DST-1/SR/FTP/PS-208/2012).

Talks delivered/Posters presented:

1. Talk given in XVI DAE-BRNS High Energy Symposium, (Nov, 2004)}, held at Saha Institute of Nuclear Physics.
2. Talk given in {\bf 24th IPS Colloquium (YPC 2006)}, held at Saha Institute of Nuclear Physics (SINP), Salt Lake, Kolkata.

3. Talk given in XVII DAE-BRNS High Energy Symposium, (Dec, 2006), held at Indian Institute of Technology, Kharagpur.
4. Talk given in International Conference on Gravitation and Cosmology (ICGC -2007) (Dec, 2007), held at Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India.
5. Talk given in the 25th Meeting of the Indian Association for General Relativity & Gravitation (IAGRG), (January, 2009), held at Saha Institute of Nuclear Physics (SINP), Salt Lake, Kolkata.
6. Poster presented in the 27th Meeting of the Astronomical Society of India (ASI), (Feb, 2009), held at Indian Institute of Astrophysics (IIA), Bangalore, India.
7. Talk given in the VIIth International Conference on Gravitation and Cosmology, 14-19 December, 2011 held at Goa, India.
8. Talk given in the International Conference on Modern Perspective of Cosmology and Gravitation, February 7 - 11, 2012, held at Indian Statistical Institute, Kolkata, India.
9. Talk given in the Workshop on Statistical Applications to Cosmology and Astrophysics (STATCOSMO15) during 10th - 13th February 2015, at Indian Statistical Institute, Kolkata, India.
10. Talk given in the Topical Conference on Gravity and Cosmology (Eastern Region) (TCGC ER) on 28th Feb 2015, held at [CTS, IIT Kharagpur](#).
11. Talk given in the Indian Association for General Relativity and Gravitation (IAGRG) - 2015 meeting during March 18-20, 2015 held at Raman Research Institute

Areas of interest:

1. Classical Field theory, Constrained Hamiltonian Formalism
2. General Relativity and Cosmology, Gravitational Wave
3. Noncommutative field theories, Noncommutative Gravity

Publication:

1) Sunandan Gangopadhyay, Anirban Saha, Swarup Saha
 Interaction of a circularly polarised gravitational wave with a charged particle in a static magnetic background,
 e-Print: arXiv:1412.7632, Gen.Rel.Grav. (In Press)

- 2) Gour Bhattacharya, Pradip Mukherjee, Anirban Saha, Amit Singha Roy
The role of potential in the ghost-condensate dark energy model
e-Print: arXiv:1401.6745 [gr-qc], Eur.Phys.J. C75 (2015) 2, 84
- 3) Sunandan Gangopadhyay, Anirban Saha, Swarup Saha
Noncommutative quantum mechanics of simple matter systems interacting with circularly polarized gravitational waves
e-Print: arXiv:1409.3378 [gr-qc], Gen.Rel.Grav. 47 (2015) 3, 28
- 4) Sunandan Gangopadhyay, Anirban Saha, Swarup Saha
Trace of phase-space noncommutativity in the response of a free particle to linearized gravitational waves
e-Print: arXiv:1301.2981 [gr-qc], Mod.Phys.Lett. A28 (2013) 35, 1350161
- 5) Sunandan Gangopadhyay, Abhijit Dutta, Anirban Saha
Generalized uncertainty principle and black hole thermodynamics
e-Print: arXiv:1307.7045 [gr-qc], Gen.Rel.Grav. 46 (2014) 1661
- 6) Anirban Saha
Colella-Overhauser-Werner test of the weak equivalence principle: A low-energy window to look into the noncommutative structure of space-time?
e-Print: arXiv:1306.4202 [hep-th], Phys.Rev. D89 (2014) 2, 025010
- 7) Sunandan Gangopadhyay, Anirban Saha
Quantum mechanics of a charged particle in a background magnetic field interacting with linearized gravitational waves
e-Print: arXiv:1204.0337 [gr-qc], Mod.Phys.Lett. A27 (2012) 1250192
- 8) Sunandan Gangopadhyay, Anirban Saha, Frederik G. Scholtz
Voros product and the Pauli principle at low energies.
e-Print: arXiv:1011.3301 [hep-th], J. Phys. A: Math. Theor. 44 (2011) 175401.
- 9) Anirban Saha, Sunandan Gangopadhyay, Swarup Saha,
Noncommutative quantum mechanics of a harmonic oscillator under linearized gravitational waves.
e-Print: arXiv:1005.3373 [hep-th], Phys. Rev. D 83, 025004 (2011).
- 10) Anirban Saha,
Galilean symmetry in noncommutative Gravitational Quantum Well.
Phys. Rev. D 81 125002 (2010), e-Print: arXiv:0803.3957 [hep-th].
- 11) Sourav Bhattacharya, Anirban Saha,
Gödel black hole, closed timelike horizon, and the study of particle emissions.
Gen Relativ Gravit 42 1809 (2010), e-Print: arXiv: 0904.3441 [gr-qc].
- 12) Anirban Saha, Sunandan Gangopadhyay,
Noncommutative quantum mechanics of a test particle under linearized gravitational waves.
Phys. Lett. B 681 96 (2009), e-Print: arXiv:0908.4319 [hep-th].

- 13) Pradip Mukherjee, Anirban Saha,
Gauge invariances vis-a-vis diffeomorphisms in second order metric gravity.
Int. J. Mod. Phys. A 24 4305 (2009), e-Print: arXiv:0705.4358 [hep-th].
- 14) Anirban Saha, Anisur Rahaman, Pradip Mukherjee,
On the question of deconfinement in noncommutative Schwinger model.
Mod. Phys. Lett. A 23 2947 (2008), e-Print: [hep-th/0611059].
- 15) Pradip Mukherjee, Anirban Saha,
Rissner–Nordstrom solutions in noncommutative gravity.
Phys. Rev. D 77 064014 (2008), e-Print: arXiv:0710.5847 [hep-th].
- 16) Pradip Mukherjee, Anirban Saha,
On the question of regular solitons in a noncommutative Maxwell-Chern-Simons-Higgs
model.
Mod. Phys. Lett. A 22 1113 (2007), e-Print: arXiv: [hep-th/0605123].
- 17) Anirban Saha,
Time-space noncommutativity in gravitational quantum well scenario.
Eur. Phys. J. C 51 199 (2007), e-Print: arXiv: [hep-th/0609195].
- 18) Sunandan Gangopadhyay, Arindam Ghosh Hazra, Anirban Saha,
Noncommutativity in interpolating string: A study of gauge symmetries in noncommutative
framework.
Phys. Rev. D 74 125023 (2006), e-Print: arXiv: [hep-th/0701012].
- 19) Pradip Mukherjee, Anirban Saha,
A Note on the noncommutative correction to gravity.
Phys. Rev. D 74 027702 (2006), e-Print: arXiv: [hep-th/0605287].
- 20) Anirban Saha, Anisur Rahaman, Pradip Mukherjee,
Schwinger model in noncommutating space-time.
Phys. Lett. B 638 292, 2006, [hep-th/0603050].
- 21) Pradip Mukherjee, Anirban Saha,
A New approach to the analysis of a noncommutative Chern-Simons theory.
Mod. Phys. Lett. A 21 (2006) 821, e-Print: arXiv: [hep-th/0409248].
- 22) Rabin Banerjee, Pradip Mukherjee, Anirban Saha,
Bosonic p-brane and A-D-M decomposition.
Phys. Rev. D 72 066015, 2005, e-Print: arXiv: [hep-th/0501030].
- 23) Biswajit Chakraborty, Sunandan Gangopadhyay, Anirban Saha,
Seiberg-Witten map and Galilean symmetry violation in a non-commutative planar system.
Phys. Rev. D 70 107707 (2004), e-Print: arXiv: [hep-th/0312292].
- 24) Rabin Banerjee, Pradip Mukherjee, Anirban Saha,
Interpolating action for strings and membranes: A Study of symmetries in the constrained
Hamiltonian approach.
Phys. Rev. D 70 026006 (2004), e-Print: arXiv: [hep-th/0403065].