

RESUME



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Jayanta Dey

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(a) Education & Research

- 2018 – present Ph.D. in High Energy Physics, IIT Bhilai
- 2016 – 2018 Teaching in School
- 2014 – 2016 M.Sc. in Physics, Tripura University
- 2011 – 2014 B.Sc. in Physics, Tripura University

(b) Research works

Research Area

Quark-gluon plasma (QGP), Magneto-hydrodynamics (MHD), Transport properties, Spin-puzzle, Thermal field theory (TFT), Quantum chromodynamics (QCD), Quark stars.

Journals- (Published)

1. *From Non-interacting to Interacting Picture of Quark Gluon Plasma in presence of magnetic field and its fluid property.*
Jayanta Dey, Sarthak Satapathy, Ankita Mishra, Souvik Paul, Sabyasachi Ghosh, [arXiv:1908.04335](#).
[IJMPE 30, 06, 2150044 \(2021\)](#)
2. *Shear viscosity and electrical conductivity of relativistic fluid in presence of magnetic field: a massless case.*
Jayanta Dey, Sarthak Satapathy, Prasanta Murmu, Sabyasachi Ghosh, [Pramana- J Phys 95, 125 \(2021\)](#).
3. *Impact of different extended components of mean field models on transport coefficients of quark matter.*
Chowdhury Aminul Islam, Jayanta Dey, Sabyasachi Ghosh, [Phys. Rev. C 103, 034904 \(2021\)](#)
4. *Anisotropic electrical conductivity of magnetized hot quark matter.*
Aritra Bandyopadhyay, Sabyasachi Ghosh, Ricardo L. S. Farias, Jayanta Dey, Gastao Krein, [Phys. Rev. D 102, 114015 \(2020\)](#)
5. *Anisotropic transport properties of Hadron Resonance Gas in magnetic field.*
Ashutosh Dash, Subhasis Samanta, Jayanta Dey, Utsab Gangopadhyaya, Sabyasachi Ghosh, Victor Roy, [Phys. Rev. D 102, 016016 \(2020\)](#)

Journals- (Communicated)

1. *Electrical conductivity of strongly magnetized dense quark matter – possibility of quantum hall effect.*

- Jayanta Dey, Aritra Bandyopadhyay, Akash Gupta, Naman Pujari, Sabyasachi Ghosh, [arXiv:2103.15364](#)
2. *Quantum expression of electrical conductivity from massless quark matter to hadron resonance gas in presence of magnetic field.*
Subhasis Samanta, Jayanta Dey, Sarthak Satapathy, Sabyasachi Ghosh, [arXiv:2002.04434](#)

Conference proceedings

1. *Dynamics of QCD matter — current status*
IJMPE, DOI: [10.1142/S0218301321300010](#), arXiv:2007.14959
2. *Causal aspects of effective QCD models.*
Jayanta Dey, Sabyasachi Ghosh, Chowdhury Aminul Islam, 64th DAE-BRNS Symposium on Nuclear Physics. **DAE Symp.Nucl.Phys.** 64 (2020) 732-733, arXiv:2001.08991
3. *NJL model estimation of anisotropic electrical conductivity for quark matter in presence of magnetic field.* Jayanta Dey, Sabyasachi Ghosh, Aritra Bandyopadhyay, Ricardo L.S. Farias, Gastao Krein **DAE Symp.Nucl.Phys.** 64 (2020) 764-765
4. S. Debata, T. Das, J. Dey, D. P. Singh, S. Vempati, S. Ghosh. In: Nair R.G., Seban L., Ningthoukhongjam P. *Flow of Medium Constituent with Charged Magnetic Particles in Presence of External Magnetic Field.* (eds) Proceedings of 28th National Conference on Condensed Matter Physics. Springer Proceedings in Physics, vol 269. Springer, Singapore. Doi:[https://doi.org/10.1007/978-981-16-5407-7_18](#)
5. Das T., Pradhan D., Tamang A., Dey J., Ghosh S., Vempati S. (2021). *Electrical Conductivity for Quasiparticle Graphene-Like System.* In: Nair R.G., Seban L., Ningthoukhongjam P. (eds) Proceedings of 28th National Conference on Condensed Matter Physics. Springer Proceedings in Physics, vol 269. Springer, Singapore. DOI: [https://doi.org/10.1007/978-981-16-5407-7_23](#)
6. Pradhan D., Das T., Tamang A., Dey J., Ghosh S., Vempati S. (2021). *Quantum Hall Conductivity in Degenerate Electron Gas in Graphene-Like System.* In: Nair R.G., Seban L., Ningthoukhongjam P. (eds) Proceedings of 28th National Conference on Condensed Matter Physics. Springer Proceedings in Physics, vol 269. Springer, Singapore. DOI: [https://doi.org/10.1007/978-981-16-5407-7_24](#)

Attended School/ conference

1. *The 8th Asian Triangle Heavy-Ion Conference (ATHIC2021).* November 5 – 9, 2021. 60th Anniversary Hall , Inha Univ. Incheon, South Korea. *Contributed talk.* (**ONLINE**)
2. *DAE-BRNS HIGH ENERGY PHYSICS SYMPOSIUM 2020.* December 14-18, 2020. NISER, India. *Poster presentation.* (**ONLINE**)
3. *XXXII International Workshop on High Energy Physics : Hot problems of Strong Interactions.* 9-13 November, 2020. Logunov Institute for High Energy Physics (IHEP) of National Research Centre "Kurchatov Institute". (**ONLINE**)
4. *LHCP 2020: The 8 th annual Large Hadron Collider Physics conference.* 25-30 May, 2020. (**ONLINE**)
5. *64th DAE-BRNS Symposium on Nuclear Physics.* December 23-27, 2019. Lucknow University, India. *Poster presentation.* (**OFFLINE**).
6. *DAE-BRNS symposium on "Contemporary and Emerging Topics in High Energy Nuclear Physics (CETHENP 2019)".*
25-27 November, 2019. Variable Energy Cyclotron Centre, India. *Poster presentation.*

(OFFLINE)

7. *SERB Preparatory School in Theoretical High Energy Physics, 2019*
OCT 14 - NOV 9, 2019. TEZPUR UNIVERSITY, India. **(OFFLINE)**
8. *Workshop on Dynamics of QCD matter.*
15-17 August, 2019. NISER, India. *Poster presentation.* **(OFFLINE)**.
9. *International Workshop on Forward and Jet Physics at LHC.*
February 11 - 12, 2019. Bose Institute, Kolkata, India. *Poster presentation.* **(OFFLINE)**.

Numerical Expertise: Fortran, Mathematica, Python

(c) Experiences

Co-mentorship of

Intern students: Ankita Mishra, Souvik Paul, Prasanta Murmu

B.tech students: Naman Pujari, Akash Gupta

M.Sc. students: Debakeenandan Pradhan, Anita Tamang