

MD HASANUJJAMAN

Curriculum vitae



Basic informations

Name	Dr. Md Hasanujjaman.
Designation	Assistant Professor in Physics.
Highest Qualification	Ph.D. in theoretical Physics.
Contact/Office details	Department of Physics, Acharya Prafulla Chandra Roy (APCR) Government College, Himachal Bihar, Matigara, Siliguri, Darjeeling-734010, West Bengal..
Vidwan ID	522326.
ORCID ID	0000-0002-4265-610X.
e-mail id	jaman.mdh@gmail.com.
Date of Joining W.B.E.S.	24-11-2015.
Date of Joining this college	10-01-2025.
Previously served Institution	Darjeeling Government College, from 24-11-2015 to 09-01-2025.

Academics

Ph.D.	University of Calcutta (2019-2023).
Masters (M.Sc.)	St. Xavier's College (University of Calcutta), Kolkata, 2012, with special emphasis on Astroparticle physics.
Bachelors (B.Sc)	Surendranath College, University of Calcutta, Physics Honours, 2010.
Higher Secondary	Chanchal Siddheswari Institution WBCHSE, 2008.
Madhyamik	Chanchal Siddheswari Institution, WBBSE, 2006.

Awards & fellowships

- CSIR-UGC NET Qualified National Eligibility Test (NET) June, 2013 and awarded Junior Research Fellowship (JRF, AIR-101) in Physical Science under the University Grants Commission (UGC) Fellowship Schemes.
- JEST Qualified Joint Entrance Screen Test (JEST-2013, AIR-191) and awarded Junior Research Fellowship (JRF) in Physical Science under the Department of Atomic Energy (DAE).
- GATE Qualified Graduate Aptitude Test for Engineering (GATE-2013, AIR-98 (98.67 percentile)).

Teaching

- Teaching experience **9+ years as on (01.01.2025).**
- Course taught **(1) Mechanics, (2) Thermodynamics, (3) Waves & Acoustics, (4) Quantum Mechanics, (5) Atomic & Nuclear Physics, (6) Particle Physics, (7) Astrophysics, (8) Python programming.**

Research

- Ph.D. **Work station: Variable Energy Cyclotron Centre (VECC, Kolkata),** degree awarded by University of Calcutta, Thesis title: Effects of critical point on Quark Gluon Plasma, ([click here to see the full thesis](#)).
- Research Interest **High Energy Nuclear Physics (Theoretical),** *Physics of Quark Gluon Plasma, QCD Phase diagram and the critical point, Spin-hydrodynamics, Fluctuations.*

Publications

- 1, Nonlinear pulse dynamics in a magnetized and nonextensive Quark-Gluon Plasma, T. Bhattacharyya, and M. Hasanujjaman, [arXiv:2403.11630 \(2024\)](#).
- 2, Correlation of density fluctuation in a magnetized QCD matter near the critical end point, M. Rahaman, M. Hasanujjaman, A. Bhattacharyya, G. Sarwar, J-e Alam, [Eur. Phys. J. C 84, 279 \(2024\)](#).
- 3, Causality and stability of relativistic spin hydrodynamics, G. Sarwar, M. Hasanujjaman, J. R. Bhatt, H. Mishra, J-e Alam, [Phys. Rev. D 107, 054031 \(2023\)](#).
- 4, Role of slow out-of-equilibrium modes on the dynamic structure factor near the QCD critical point, G. Sarwar, M. Hasanujjaman, J-e Alam, [Phys. Rev. D 106, 074029 \(2022\)](#).
- 5, Nonlinear waves in a hot, viscous and non-extensive quark-gluon plasma, G. Sarwar, M. Hasanujjaman, T. Bhattacharyya, M. Rahaman, A. Bhattacharyya, J-e Alam, [Eur. Phys. J. C, 82, 189 \(2022\)](#).
- 6, The fate of nonlinear perturbations near the QCD critical point, G. Sarwar, M. Hasanujjaman, M. Rahaman, A. Bhattacharyya, J-e Alam, [Phys. Lett. B 820, 136583 \(2021\)](#).

- 7, *Dynamical spectral structure of density fluctuation near the QCD critical point*, M. Hasanujjaman, G. Sarwar, M. Rahaman, A. Bhattacharyya, J-e Alam, *Eur. Phys. J. A* **57**, 283 (2021).
- 8, *Dispersion and suppression of sound near the QCD critical point*, M. Hasanujjaman, M. Rahaman, A. Bhattacharyya, J-e Alam, *Phys. Rev. C* **102**, 034910 (2020).
- 9, *Initial conditions from the shadowed Glauber model*, S. Chatterjee, S. K. Singh, S. Ghosh, M. Hasanujjaman, S. Sarkar, J-e Alam, *Phys. Lett. B* **758**, 269-273 (2016).

Conference Proceedings

- 1, *The study of propagation of nonlinear wave in QGP: a possible tool to distinguish the extensive and non-extensive thermodynamic background*, M. Hasanujjaman, G. Sarwar, M. Rahaman, A. Bhattacharyya, J. Alam, 65th DAE BRNS Symposium on nuclear physics, 636-637, **vol: 65, pages: 636-639, ISBN: 818372084-6**, 1-5 December, 2021.
- 2, *Nonlinear waves in search for QCD critical Point*, G. Sarwar, M. Hasanujjaman, M. Rahaman, A. Bhattacharyya, J. Alam, 65th DAE BRNS Symposium on nuclear physics, 638-639, **vol: 65, pages: 638-639, ISBN: 818372084-6**, 1-5 December, 2021.
- 3, *Initial Condition dependence of hydrodynamic flow of Quark Gluon Plasma*, M. Hasanujjaman, S. K. Singh, S. Ghosh, S. Chatterjee, G. Sarwar, 65th DAE BRNS Symposium on nuclear physics, 808-809, **vol: 60, pages: 808-809, ISBN: 81-8372-077-3**, 7-11 December, 2015.
- 4, *Cold Nuclear matter effects on the correlation between eccentricity and multiplicity*, S. K. Singh, S. Chatterjee, M. Hasanujjaman, S. Ghosh, J. Alam, *DAE Symp.Nucl.Phys.* **60** (2015) 804-805, **vol: 60, pages: 804-805, ISBN: 81-8372-077-3**, 7-11 December, 2015.
- 5, *Nucleon shadowing in Glauber model*, S. Chatterjee, S. Ghosh, S. K. Singh, M. Hasanujjaman, J. Alam, *Acta Phys.Polon.Supp.* **197**, Vol-9, No-2 (2016), **PL ISSN 1509-5770**, 3-7 November, 2015.

Talks & conferences

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| India-JINR Meet- 2023 | Critical effects on the evolution of Quark Gluon Plasma , India-JINR workshop on elementary particle and nuclear physics, and condensed matter research 2023, Oct 16- 19, 2023, Russia, (Talk online), Slides . |
| CPOD-2022 | Correlation of fluctuation with parametric slow modes: a signature of the QCD critical point? , Critical Point and Onset of Deconfinement 2022, Nov 28- Dec 02, 2022, Europe, (Talk online), Slides . |
| ATHIC-2021 | Suppressed flow harmonics: a signature of the QCD critical point? , 8th The Asian Triangle Heavy-ion Conference (ATHIC 2021), Inha University, Incheon, South Korea , 05 -09 November, 2021 (Talk online), Slides . |
| DAE Symposium- 2021 | The study of the propagation of nonlinear waves in QGP: a possible tool to distinguish the extensive and non-extensive thermodynamic background , 65th DAE BRNS Symposium on nuclear physics 01-05 December, 2021 (Talk online). |

Details regarding participation in FIP/OP/RC

- OP **Participated in the UGC sponsored Orientation Course (online) organized by the UGC-HRDC, Mizoram University, 28.07.2020 to 17.08.2020.**
- RC **Participated in the UGC sponsored online Refresher Course in “Teacher Education” organized by the UGC-HRDC, Aligarh Muslim University, 21.08.2021 to 04.09.2021.**
- RC **Participated in the UGC sponsored online Refresher Course on 'Ecology and Environmental Sciences' organized by Malaaviya Mission Teacher Training Centre (MMTTC) Maulana Azad National Urdu University, Hyderabad, 16.01.2024 to 30.01.2024.**
- STC **Participated in the UGC sponsored online Short-term course on 'NEP 2020 ORIENTATION & SENSITIZATION PROGRAMME' by Malaaviya Mission Teacher Training Centre (MMTTC) Maulana Azad National Urdu University, Hyderabad, 18.03.2024 to 27.03.2024.**

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