



Arghya Chatterjee

Curriculum Vitae

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CURRENT POSITION:

Assistant Professor 2022-
Department of Physics, National Institute of Technology Durgapur, Durgapur 713209, India.

ACADEMIC APPOINTMENTS:

Research Associate 2021-2022
*Department of Physics, Warsaw University of Technology, Poland with Prof. Daniel Kikola.
Research on study of QCD Critical Point search and onset of Phase transition in the STAR
Collaboration at Brookhaven National Laboratory (BNL), New York.*

Postdoctoral Research Associate 2019-2021
*Key Laboratory of Quark & Lepton Physics (MOE) and Institute of Particle Physics (IOPP),
Central China Normal University, China with Prof. Xiaofeng Luo.
Research on heavy-ion collision experiment and phenomenology, event-by-event particle multiplicity
fluctuation, QCD phase diagram*

EDUCATION:

- **PhD (High Energy Nuclear Physics)** 2013-2019
University: Variable Energy Cyclotron Centre, Homi Bhabha National Institute, Kolkata
Thesis title: “Study of conserved quantities and their correlations in the RHIC Beam Energy Scan Program.”
Thesis topics: Study the properties of quark-gluon-plasma to hadronic phase transition through off-diagonal cumulant analysis of net-particle multiplicity distribution in the STAR experiment at BNL, New York.

Thesis advisor: Prof. Tapan Kumar Nayak

- **Master of Science (Physics) (1st class)** 2011-2013
University: National Institute of Technology, Durgapur
Subject: Academic Courses
Specialization course: Optoelectronics
Final semester project: Short review in black hole astronomy
Project advisor: Dr. Soumen Basu
- **Bachelor of Science (1st class)** 2008-2011
University: The University of Burdwan, Katwa College
Subject: Physics (Honours) Academic Courses
Chemistry(general): Academic Courses
Mathematics: Academic Courses
- **Higher Secondary (+2) (1st class)** 2006-2008
Katwa Bharati Bhavan High School
Board: West Bengal Council of Higher Secondary Education
- **Secondary (10th) (1st class)** 2006
Katwa Janakilal Siksha Sadan High School
Board: West Bengal Board of Secondary Education

RESEARCH AREAS:

- Experimental Nuclear and High Energy Physics.
- Search and studies of Quark Gluon Plasma (QGP), probing the Critical Point

CURRENT FIELD OF RESEARCH:

Presently I am working in the field of Quark Gluon Plasma (QGP) phase of nuclear matter, as it relates to fundamental questions in high energy nuclear physics as well as makes a connection to the Early Universe and involves many branches of physics. My focus is on study of particle number fluctuations and correlations among different observables in the system created in Relativistic Heavy Ion collisions as it can help to map the QCD phase diagram. I am analysing the data from the STAR experiment at RHIC to have a precision measurement of the freeze-out parameters and to obtain signals for the search of QCD critical point.

TEACHING AND ADMINISTRATIVE RESPONSIBILITIES

Details: <https://nitdgp.ac.in/department/physics/faculty-14/arghya-chatterjee>

PUBLICATIONS

For full publication list, please refer to:

- ORCID: [0000-0002-2895-6085](https://orcid.org/0000-0002-2895-6085)
- Scopus ID: [35221149100](https://scopus.com/authid/detail.url?authorID=35221149100)
- Web of Science: [AAR-9237-2020](https://www.webofscience.com/wos/author/uri?uri=AAR-9237-2020)
- Google Scholar: scholar.google.co.in/citations?user=BGhz1aYAAAAJhl=en