

Dr. SUDIPA UPADHAYA**Address of Correspondence**

Flat 6, Debarati Apartment,
4A East Road, Jadavpur,
Kolkata, West Bengal,
Pin 700032.

Contact

Call me : 9830727538 / 8617754603 / (033)-29566656

Mail me : sudipa.09@gmail.com

Personal Details

DOB	11 th September, 1986
Nationality	Indian
Sex	Female
Marital Status	Married
Category	General
Physical disability	No

Job Experience

Designation	Office Address	Joining Date
Assistant Professor, Department of Physics, Ramsaday College.	College Road, Amta, Howrah, West Bengal, Pin - 711401	30 th December, 2019

Courses Taken

Semester	Parts of Courses taken
1	Mathematical Physics I(T), Mechanics(P)
2	Waves & Optics(T), Electricity & Magnetism(T)
3	Mathematical Physics II(P), Thermal Physics(T), Modern Physics(T), Thermal Physics & Statistical Mechanics(T & P), Scientific Writing(Project)
4	Mathematical Physics III(P), Quantum Mechanics(P), Electrical Circuits & Network

5	Skills(T), Waves & Optics(P) Statistical Mechanics(P), Nuclear & Particle Physics(T), Analog Electronics(T)
6	Digital Systems & Applications(T), Advanced Statistical Mechanics(T)

Courses and Webinars

1. Faculty Induction Programme	UGC-HRDC Bharathiar University	02.02.2021 – 03.03.2021
2. Webinar on Quantum Mechanics with Python	Dept. of Physics, Fakir Chand College	02.07.2021
3. Online Workshop on Python Computing	Teach Python Group & IISER, Kolkata	12.06.2020 – 24.06.2020
4. Webinar on “Onset of Deconfinement after Lockdown and Quark-Gluon Plasma”	Adamas University	31.05.2020
5. Webinar on “Zero”	New Alipore College	29.07.2020
6. Webinar on “Quantum Mathematical Modelling on Covid-19”	Derozio Memorial College	30.09.2020
7. Webinar on “Living in the World Of Neutrinos”	St. Xavier’s College	30.09.2020

Webinars organised

1. One-day Webinar on [“Online Teaching And Learning- Strategic insight into Physics”](#), 31-08-2020.
2. One-Day National Webinar on [“Recent Research and Opportunities in the field of Renewable Energy Sources”](#), 26-09-2020.

Academic Qualifications

Ph.D. (High Energy Physics - Theoretical)	Bose Institute	
M.Sc. (2009) (Spl. - Astroparticle Physics)	St. Xavier's College & Bose Institute, University of Calcutta	75.9%
B.Sc. (2007) (Physics Hons.)	St. Xavier's College, University of Calcutta	58.1%

Higher Secondary(2004) (English medium)	Loreto House W.B.C.H.S.E.	74.0%
--	------------------------------	--------------

I.C.S.E. (2002)	St. Joseph's Convent, C.I.S.C.E.	87.8%
------------------------	-------------------------------------	--------------

Other Examinations

Joint Entrance Screening Test (JEST) (conducted jointly by major Research Institutes in India for admission to their Ph. D. program)	<i>Percentile – 99.06.</i>
--	----------------------------

Graduate Aptitude Test in Engineering (GATE) (conducted jointly by the Indian Institute of Science and Indian Institutes of Technology)	<i>Percentile – 89.38.</i>
--	----------------------------

National Eligibility Test (NET) (conducted by Council of Scientific and Industrial Research (CSIR), Government of India)	<i>LS.</i>
--	------------

Research Experience

Post Doctorate	Variable Energy Cyclotron Center, Kolkata.	13th September, 2018 - 27th December, 2019
-----------------------	--	--

Visiting Fellow	University of Calcutta	6th March, 2018 - 5th May, 2018
------------------------	---------------------------	---

Visiting Fellow	Bose Institute	15th September, 2017 - 14th November, 2017
------------------------	----------------	--

Research Interest

My research interest lies in the field of **Theoretical** aspects of **High Energy Physics**, describing systems of **Strongly Interacting matter** like **Quark-Gluon Plasma (QGP)** in **High-Energy heavy ion collision experiments**. The background theory which describes such systems is **Quantum Chromo Dynamics**. These systems were supposedly

present in the **early Universe** or core of the **Neutron Stars**. **Phenomenological simulations** were also integrated parts of my entire work. These studies incorporate detailed knowledge on **Quantum Field Theory**, **Particle Physics** and **Nuclear Physics** of subatomic particles. For simulating the above, I made myself familiar with an accurate detailing of the numerical intricacies of the **Fortran and Python programming language**.

Computer Skills

- **Operating Systems – Windows,**
- **Text Editor – Latex, MS Word**
- **Programming Language – Python,**

Other skills and co-curricular activities

- Have a passion for Anchoring. Hosted a number of cultural programmes and also played the role of a quiz master.
- Painting images of life with the strokes of my pen, has always been close to my heart. Capturing different stories of life with the crooked scribblings of ink captivates me right from childhood.
- On a similar note, I love editing and proofreading. I have edited multiple doctoral theses and actively penned down a number of manuscripts published in top-rated International journals.
- Love dancing. Trained in Rabindra Nritya, Kathak and Bharatanatyam dance forms.
- Zumba, a fitness-inspired Latin dance form, which ignites my love for fitness has become a norm for me.
- Reading story books is my favourite meditation.

Experiences so far

1. Anchored webinars organised by Department of Physics, Ramsaday College.

2. Hosted the National Science Day, 2022 programme in Ramsaday College.
3. Performed solo dance in the holy festival of Dol-yatra, organised by Ramsaday College.
2. Conducted the Inter-College Science Quiz organised by Bose Institute.
3. Hosted Dipta Memorial Symposium (a couple of times) in Bose Institute.
4. Moderated Bose Institute Employers' Association programme.
5. Anchored Bose Institute Annual Cultural Programme (a couple of times).
6. Hosted M.Sc freshers' programme in St. Xavier's College and Bose Institute.

Publications

1. **Van der Waals type PV diagrams of PNJL matter**, [65th DAE BRNS Symposium on nuclear physics](#), 648-649 e-Print: [2208.05311](#) [nucl-th]
2. **Dynamics of QCD matter – current status**, [Int.J.Mod.Phys.E 30 \(2021\) 02, 2130001](#).
3. **Finite temperature properties of a modified Polyakov–Nambu–Jona-Lasinio model**. [Phys.Rev.D 102 \(2020\) 7, 074006](#).
4. **Shear Viscosity from finite volume PNJL model**, [DAE Symp.Nucl.Phys. 63 \(2018\) 988-989](#).
5. **Transport coefficients in a finite volume Polyakov–Nambu–Jona-Lasinio model**, [Phys.Rev.D 97 \(2018\) 11, 116020](#).
6. **Thermodynamics of strongly interacting matter in a hybrid model**, [Phys.Rev.C 99 \(2019\) 4, 045207](#).
7. **Reparametrizing the Polyakov Nambu Jona Lasinio model**, [Phys. Rev. D95, 054005 \(2017\)](#).
8. **PolyakovNambuJonaLasinio model in finite volumes**, [Europhys. Lett. 116, 52001 \(2016\)](#).
9. **A comparative study on two different approaches of bulk viscosity in the PolyakovNambu JonaLasinio model**, [Mod. Phys. Lett. A32, 1750018 \(2016\)](#).
10. **Shear viscosity and phase diagram from Polyakov–Nambu–JonaLasinio model**,

Phys. Rev. D91, 054005 (2015).

11. **Net Charge Fluctuations as a signal of QGP from Polyakov–NambuJonaLasinio model**, arXiv:1212.6010 [hepph].
12. **Net Charge Fluctuations in PNJL model**, DAE Symp. Nucl. Phys. 59, (2014) pp. 692693.
13. **Behavior of Shear Viscosity from PNJL model**, DAE Symp. Nucl. Phys. 59, (2014) pp. 694695.
14. **Combining EVHRG and PNJL model in contrast to continuum LQCD data**, DAE Symp. Nucl. Phys. 59, (2014) pp. 774775.
15. **Bulk viscosity from the PolyakovNambuJonaLasinio model**, DAE Symp. Nucl. Phys. 60, (2015) pp. 800801.
16. **Looking for possible volume scaling violations in finite volume PolyakovNambuJonaLasinio model**, DAE Symp. Nucl. Phys. 60, (2015) pp. 802803.
17. **Study of fluctuations from Polyakov Nambu Jona Lasinio Model**, Proc. Indian Natl. Sci. Acad. 81, (2015) pp. 5661.
18. **Study of D measure from Polyakov Nambu Jona Lasinio model**, Proc. Indian Natl. Sci. Acad. 81, (2015) pp. 152157.

National and International conferences and courses

December, 2017	DAE-BRNS Symposium on Nuclear Physics	Thapar University, Patiala. Oral, Thesis and Poster Presentations.
November, 2015	QGP Meet	VECC, Kolkata. Oral Presentation.
October, 2015	Quark Matter	Kobe, Japan. Poster presented.
February, 2015	ICPAQGP	VECC, Kolkata. Poster presented.
November, 2014	International Conference on High Energy Physics	IMSc, Chennai. Poster presented.
January, 2014	Workshop on FAIR Physics:	Bose Institute,

