



SUVANKAR PAUL

Department of Physics

Raiganj Surendranath Mahavidyalaya

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PERSONAL DETAILS

Nationality: Indian
Gender: Male
Marital Status: Single
Language: Bengali, English and Hindi
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(Web of Science)
Vidwan ID: [196631](https://www.vidwan.in/196631)
Researchgate: <https://www.researchgate.net/profile/Suvankar-Paul>
INSPIRE-HEP: <https://inspirehep.net/authors/1727165>
Google Scholar: <https://scholar.google.com/citations?user=eIyGNSQAAAAJ&hl=en>

EDUCATION

Ph.D., Physics 2015 - 2020 **CPI (Course Work) - 10/10**

- Thesis Title: *Black Holes vs Horizonless Compact Objects: Strong Gravitational Lensing and Accretion Disk Images*
- Thesis Supervisor: **Prof. Tapobrata Sarkar**

Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh, India

M.Sc., Physics 2013 - 2015 **CPI - 8.2/10 [82 %]**

Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh, India

B.Sc., Physics (Honours) 2010 - 2013 **Percentage - 65.12**

Acharya Brojendra Nath Seal College, Cooch Behar, West Bengal, India
(under **University of North Bengal**, Siliguri, West Bengal, India)

Higher Secondary Examination 2008 - 2010 **Percentage - 90.00**

Barabisha High School, Alipurduar, West Bengal, India
(under **West Bengal Council of Higher Secondary Education**, Kolkata, West Bengal, India)

Madhyamik Pariksha (Secondary Examination) 2008 **Percentage - 96.87**

Barabisha High School, Alipurduar, West Bengal, India
(under **West Bengal Board of Secondary Education**, Kolkata, West Bengal, India)

TEACHING
EXPERIENCE

Assistant Professor in Physics at **Raiganj Surendranath Mahavidyalaya**
Dec 2023 - Present

Lecturer in Physics at **Alipurduar (Damanpur) Government Polytechnic**
Jan 2023 - Dec 2023

Courses taught:

1. *Applied Physics-I* for 1st Semester Diploma in EE, CST & ECE,
 2. *Applied Physics-II* for 2nd Semester Diploma in EE, CST & ECE,
 3. *Applied Physics-I Lab* for 1st Semester Diploma EE, CST & ECE.
 4. *Applied Physics-II Lab* for 2nd Semester Diploma in EE, CST & ECE.
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Lecturer in Physics at **Maynaguri Government Polytechnic**
Dec 2021 - Jan 2023

Courses taught:

1. *Applied Physics-I* for 1st Semester Diploma in CE, ICE & SE,
 2. *Applied Physics-II* for 2nd Semester Diploma in CE, ICE & SE,
 3. *Applied Physics-I Lab* for 1st Semester Diploma in CE, ICE & SE,
 4. *Applied Physics-II Lab* for 2nd Semester Diploma in CE, ICE & SE.
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Assistant Professor at **ICFAI University Tripura**

Sep 2020 - Nov 2021

Courses taught:

1. *Physics* for B.Tech. 1st year,
 2. *General Physics 1,2* for B.Sc. (Chemistry & Math) Pass,
 3. *Classical Mechanics and Special Relativity* for B.Sc. Physics (Honours),
 4. *Nuclear and Particle Physics* for M.Sc. Physics,
 5. *General Theory of Relativity* for M.Sc. Physics, and
 6. *Advanced Condensed Matter Physics Lab* for M.Sc. Physics.
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Teaching Assistant at **IIT Kanpur**

Aug 2015 - Dec 2019

- Undergraduate Physics Laboratory

Experiments taught:

1. Observing resonance by a **Pohl's Pendulum**,
2. Study of **Electromagnetic Induction**,
3. Measurement of the free space permeability by using a **Current Balance**,
4. Determination of the **Speed of Light** in vacuum, and
5. Measurement of **Moment of Inertia** of a Bicycle Wheel.

- Preparatory Undergraduate Physics Laboratory

Experiments taught:

1. Observing resonance by a **Pohl's Pendulum**,
2. Study of the law of momentum conservation in a **Linear Air Track**, and
3. Determination of the acceleration due to gravity using a **Simple Pendulum**.

RESEARCH INTERESTS

- Probing strong gravity through gravitational lensing, shadows, accretion disk images, etc.
- Study of tidal effects on stars by ultra-compact objects in various astrophysical scenarios.

JOURNAL PUBLICATION

Summary: Total number of Journal Publications: 11

Journal of Cosmology and Astroparticle Physics (ISSN: 1475-7516): 3
Impact Factor: 7.28.

Physics Letters B (ISSN: 0370-2693): 3
Impact Factor: 4.95.

The Astrophysical Journal (ISSN: 1538-4357): 2
Impact Factor: 5.521.

Physical Review D (ISSN: 2470-0010): 2
Impact Factor: 5.407.

The European Physical Journal C (ISSN: 1434-6044): 1
Impact Factor: 4.994.

h-index: 8* (* as per INSPIRE-HEP data).

1. **Shadows and thin accretion disk images of the γ -metric**
Rajibul Shaikh, Suvankar Paul, Pritam Banerjee, and Tapobrata Sarkar
[The European Physical Journal C 82, 696 \(2022\)](#);
[arXiv:2105.12057](#);
Citations: 28*.
2. **A stellar constraint on Eddington-inspired Born-Infeld gravity from cataclysmic variable binaries**
Pritam Banerjee, Debojyoti Garain, Suvankar Paul, Rajibul Shaikh and Tapobrata Sarkar
[The Astrophysical Journal 924, 20 \(2022\)](#);
[arXiv:2105.09172](#);
Citations: 11*.
3. **Tidal disruption near black holes and their mimickers**
Pritam Banerjee, Suvankar Paul, Rajibul Shaikh and Tapobrata Sarkar
[Journal of Cosmology and Astroparticle Physics 03 \(2021\) 042](#);
[arXiv:1912.01184](#);
Citations: 8*.
4. **Constraining Modified Gravity from Tidal Phenomena in Binary Stars**
Pritam Banerjee, Debojyoti Garain, Suvankar Paul, Rajibul Shaikh and Tapobrata Sarkar
[The Astrophysical Journal 910, 23 \(2021\)](#);
[arXiv:2006.01646](#)
Citations: 15*.
5. **Strong gravitational lensing by a strongly naked null singularity**
Suvankar Paul
[Physical Review D 102, 064045 \(2020\)](#);
[arXiv:2006.01646](#);
Citations: 32*.

6. **Observational signatures of wormholes with thin accretion disks**
Suvankar Paul, Rajibul Shaikh, Pritam Banerjee and Tapobrata Sarkar
[Journal of Cosmology and Astroparticle Physics](#) 03 (2020) 055;
[arXiv:1911.05525](#);
Citations: 54*.
7. **Strong gravitational lensing by wormholes**
Rajibul Shaikh, Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar
[Journal of Cosmology and Astroparticle Physics](#) 07 (2019) 028;
[arXiv:1905.06932](#);
Citations: 90*.
8. **Analytical approach to strong gravitational lensing from ultra-compact objects**
Rajibul Shaikh, Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar
[Physical Review D](#) 99, 104040 (2019);
[arXiv:1903.08211](#);
Citations: 68*.
9. **Tidal effects away from the equatorial plane in Kerr backgrounds**
Pritam Banerjee, Suvankar Paul, Rajibul Shaikh, and Tapobrata Sarkar
[Physics Letters B](#) 795, (2019) 29;
[arXiv:1812.08642](#);
Citations: 7*.
10. **A novel gravitational lensing feature by wormholes**
Rajibul Shaikh, Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar
[Physics Letters B](#) 789, (2019) 270;
[arXiv:1811.08245](#);
Citations: 95*.
11. **Curvature couplings of massless fermions in analog gravity**
Pritam Banerjee, Suvankar Paul, and Tapobrata Sarkar
[Physics Letters B](#) 789, (2019) 160;
Citations: 0*.

* Citations are based on INSPIRE-HEP data.

**OTHER ARTICLES
/ PREPRINTS**

1. **Strong Gravitational Lensing by Compact Object without Cauchy Horizons in Effective Quantum Gravity**
Suvankar Paul
[arXiv:2501.03745](#);
Citations: 0*.
2. **Gravitoelectromagnetism: Formulation**
Suvankar Paul
[Gravito-electromagnetism](#).
3. **On Strong Gravitational Lensing in Rotating Galactic Space-times**
Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar
[arXiv:1804.07030](#);
Citations: 5*.

4. **Information Geometry in Time Dependent Quantum Systems and the Geometric Phase**

Anshuman Dey, Suvankar Paul, Pratim Roy and Tapobrata Sarkar

[arXiv:1605.01358](https://arxiv.org/abs/1605.01358);

Citations: 0*.

* Citations are based on INSPIRE-HEP data.

CONFERENCE PRESENTATION

1. An oral presentation, "*A Novel Gravitational Lensing Feature from Wormholes*", was presented at the "*22nd International Conference on General Relativity and Gravitation - 13th Edoardo Amaldi Conference on Gravitational Waves*"- an international conference organized by **Universitat de València** and **Consejo Superior de Investigaciones Científicas (CSIC)** in Valencia, Spain (July 2019).
2. An oral presentation, "*Gravitational Lensing in the strong deflection limit by a null naked singularity*", was presented at the "*27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on Advances in Relativity and Cosmology (PARC-2021)*"- an international conference organized online by **Department of Mathematics, BITS-Pilani, Hyderabad Campus** (October 26-28, 2021).

SCHOOL PARTICIPATION

1. Participated in "*ICTS Summer School on Gravitational-Wave Astronomy*"- a summer school organized by **International Centre for Theoretical Sciences, Bangalore, India** (August 2018).

AWARDS & ACHIEVEMENTS

- Recipient of INSPIRE Scholarship funded by Department of Science and Technology (DST), Govt. of India (2010-2015).
- Qualified GATE 2019 in Physics with Rank 65.
- Qualified GATE 2017 in Physics with Rank 196.
- Qualified CSIR-UGC NET 2015 in Physics with CSIR-JRF Rank 57.
- Qualified CSIR-UGC NET 2014 in Physics with LS Rank 173.
- Qualified JEST 2015 in Physics with Rank 34.
- Qualified JAM 2013 in Physics with Rank 233.

SKILLS

- Software Skills: Mathematica, MS Office, Libre Office, Latex, Inkscape etc.
- Programming: C, FORTRAN 90 etc.
- Operating Systems: Windows and Ubuntu.

OTHER ACTIVITIES

- Playing Cricket, Football, Cycling, Running, Swimming etc.
- Passionate in adventure sports activities like Trekking, Hill-climbing etc.

DECLARATION

I hereby confirm that the particulars mentioned above are true & correct to the best of my knowledge and belief.

January 8, 2025

Suvankar Paul

Suvankar Paul
