



## Suvankar Paul

---

### PERSONAL DETAILS

Father's Name: Nitai Paul  
Date of Birth: 21st July 1992  
Nationality: Indian  
Gender: Male  
Marital Status: Single  
Language: Bengali, English and Hindi  
Contact Address: Vill. - Purba Chakchaka, P.O. - Barobisha, Dist. - Alipurduar,  
West Bengal - 736207, India  
e-mail: [suvankar266@gmail.com](mailto:suvankar266@gmail.com)  
Phone: (+91) 9933018266  
Skype: paul.suvankar  
ORCID ID: 0000-0003-1282-080X  
Scopus ID: 57210970597  
Researcher ID: AAC-7633-2021  
(Web of Science)  
Vidwan ID: 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)

---

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.
- 

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.
- 

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.
- 

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 by gravitational lensing, shadows and accretion disk images
- Study of tidal effects on stars by black holes and horizonless compact objects
- Stability analysis of different geometries around compact objects using quasi-normal modes.

---

JOURNAL  
PUBLICATION

1. **Shadows and thin accretion disk images of the  $\gamma$ -metric**  
Rajibul Shaikh, Suvankar Paul, Pritam Banerjee, and Tapobrata Sarkar  
[The European Physical Journal C 82, 696 \(2022\)](#), (ISSN: 1434-6044);  
[arXiv:2105.12057](#);  
Citations: 24\*.
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 \(2022\)](#), (ISSN: 1538-4357);  
[arXiv:2105.09172](#);  
Citations: 7\*.
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](#), (ISSN: 1475-7516);  
[arXiv:1912.01184](#);  
Citations: 7\*.
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 \(2021\)](#), (ISSN: 1538-4357);  
[arXiv:2006.01646](#)  
Citations: 13\*.
5. **Strong gravitational lensing by a strongly naked null singularity**  
Suvankar Paul  
[Physical Review D 102, 064045 \(2020\)](#), (ISSN: 2470-0010);  
[arXiv:2006.01646](#);  
Citations: 25\*.
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](#), (ISSN: 1475-7516);  
[arXiv:1911.05525](#);  
Citations: 43\*.
7. **Strong gravitational lensing by wormholes**  
Rajibul Shaikh, Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar  
[Journal of Cosmology and Astroparticle Physics 07 \(2019\) 028](#), (ISSN: 1475-7516);  
[arXiv:1905.06932](#);  
Citations: 70\*.
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 \(2019\)](#), (ISSN: 2470-0010);  
[arXiv:1903.08211](#);  
Citations: 47\*.

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](#), (ISSN: 0370-2693);  
[arXiv:1812.08642](#);  
Citations: 5\*.
10. **A novel gravitational lensing feature by wormholes**  
Rajibul Shaikh, Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar  
[Physics Letters B 789, \(2019\) 270](#), (ISSN: 0370-2693);  
[arXiv:1811.08245](#);  
Citations: 77\*.
11. **Curvature couplings of massless fermions in analog gravity**  
Pritam Banerjee, Suvankar Paul, and Tapobrata Sarkar  
[Physics Letters B 789, \(2019\) 160](#), (ISSN: 0370-2693);  
Citations: 0\*.

\* Citations are based on INSPIRE-HEP data.

- |                                   |  |
|-----------------------------------|--|
| ARTICLE UNDER<br>REVIEW/PREPRINTS | <ol style="list-style-type: none"> <li>1. <b>On Strong Gravitational Lensing in Rotating Galactic Space-times</b><br/>Pritam Banerjee, Suvankar Paul and Tapobrata Sarkar<br/><a href="#">arXiv:1804.07030</a><br/>Citations: 5*.</li> </ol> |
|-----------------------------------|--|

\* Citations are based on INSPIRE-HEP data.

- |                            |   |
|----------------------------|---|
| CONFERENCE<br>PRESENTATION | <ol style="list-style-type: none"> <li>1. An oral presentation, <i>“A Novel Gravitational Lensing Feature from Wormholes”</i>, was presented at the <i>“22nd International Conference on General Relativity and Gravitation - 13th Edoardo Amaldi Conference on Gravitational Waves”</i>- an international conference organized by <b>Universitat de València</b> and <b>Consejo Superior de Investigaciones Científicas (CSIC)</b> in Valencia, Spain (July 2019).</li> <li>2. An oral presentation, <i>“Gravitational Lensing in the strong deflection limit by a null naked singularity”</i>, was presented at the <i>“27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on Advances in Relativity and Cosmology (PARC-2021)”</i>- an international conference organized online by <b>Department of Mathematics, BITS-Pilani, Hyderabad Campus</b> (October 26-28, 2021).</li> </ol> |
|----------------------------|---|

- |                         |  |
|-------------------------|--|
| SCHOOL<br>PARTICIPATION | <ol style="list-style-type: none"> <li>1. Participated in <i>“ICTS Summer School on Gravitational-Wave Astronomy”</i>- a summer school organized by <b>International Centre for Theoretical Sciences</b>, Bangalore, India (August 2018).</li> </ol> |
|-------------------------|--|

- |                          |  |
|--------------------------|--|
| AWARDS &<br>ACHIEVEMENTS | <ul style="list-style-type: none"> <li>• Recipient of INSPIRE Scholarship funded by Department of Science and Technology (DST), Govt. of India (2010-2015).</li> <li>• Qualified GATE 2019 in Physics with Rank 65.</li> <li>• Qualified GATE 2017 in Physics with Rank 196.</li> <li>• Qualified CSIR-UGC NET 2015 in Physics with CSIR-JRF Rank 57.</li> <li>• Qualified CSIR-UGC NET 2014 in Physics with LS Rank 173.</li> <li>• Qualified JEST 2015 in Physics with Rank 34.</li> <li>• Qualified JAM 2013 in Physics with Rank 233.</li> </ul> |
|--------------------------|--|

SKILLS

- Software Skills: Mathematica, MS Office, Libra 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 aforementioned particulars are true and correct to the best of my knowledge and belief.

*December 11, 2023*

**Suvankar Paul**

---