

Faculty Profile

1. Name: **Dr. Aditya Sow Mondal**
2. Designation: **Assistant Professor (Stage III)**
3. Email(s): **adityas.mondal@visva-bharati.ac.in / asowmondal7@gmail.com**
4. Date of Birth: **08.03.1986**
5. Contact number(s): **+91 9732249932**
6. Address: **Department of Physics, Siksha-Bhavana, Visva-bharati, Santiniketan-731235**
7. Research ID (Google Scholar, ORCID ID, Scopus ID, WOS ID, Vidyan ID, Research Gate):
ORCID ID: **0000-0002-2565-1219**
Scopus ID: **56865497500**
Vidyan ID: **163803**
Google Scholar ID: **SxdbbYLAAAAJ**
8. Membership of Learned Societies:
9. Homepage (If any):
10. Publication Summary:
 - (a) No. of Research papers - **17**
 - (b) No. of Book Chapters -
 - (c) No. of Conference papers - **2**
 - (d) h-index - **7**
 - (e) i-10 index - **5**
11. Date of Joining Visva-Bharati Service: **24.05.2009**
12. Education:

Degree	Year	University/Institution
Ph. D.	2019	Visva-Bharati
M. Sc. / M. Tech.	2008	Visva-Bharati
B. Sc.	2006	Visva-Bharati

13. Academic Positions held (in reverse chronological order)

Sl. No.	Positions held	Institution	Period
1	Assistant Professor (stage- III)	Visva-Bharati	31.07.2020 – Till date
2	Assistant Professor (stage- II)	Visva-Bharati	31.07.2015 – 31.07.2020
3	Assistant Professor (stage- I)	Visva-Bharati	24.05.2009 – 30.07.2015

14. Areas of Research:

Observational high energy Astrophysics, X-ray Astronomy, Neutron star and Black hole physics, Accretion geometry of low-mass Neutron star binary systems, Accretion powered Pulsars, Thermonuclear X-ray burst.

15. Subject Specialization: **Astrophysics & Cosmology, Quantum field theory (in M. Sc.)**

16. Courses Teach / Taught:

Undergraduate Courses	Mathematical Physics, Electricity & Magnetism, Mechanics, Optics, Astronomy & Astrophysics, Computer programming.
Postgraduate Courses	Astrophysics, Astrophysical data analysis techniques
Ph.D. Course-work	Observational High Energy Astrophysics, X-ray Astronomy, Tools & Techniques for handling Astronomical data.

17. Research Guidance:

- (a) No. of Postdoctoral students (Completed / Ongoing)
- (b) No. of Doctoral students (Completed / Ongoing): **01**
- (c) No. of M.Sc. Dissertations: **24**

18. Research Collaboration (National / International):

Prof. G. C. Dewangan, IUCAA, Pune

Dr. Mayukh Pahari, IIT Hyderabad

Dr. Biplab Raychaudhuri, Visva-Bharati

19. Research Grants/Projects

Sl. No.	Project Title	PI/Co-PI	Funding Agency	Amount	Completed/ Ongoing

20. Professional Recognition/ Award/ Prize/Fellowship

Sl. No.	Name of Award	Awarding Agency	Year
1	Selected as a Visiting Associate of Inter-University Centre For Astronomy And Astrophysics (IUCAA), Pune from August 1, 2019.	IUCAA, Pune (An Autonomous Institution of the University Grants Commission)	2019
2	JUNIOR RESEARCH FELLOWSHIP in the subject PHYSICAL SCIENCES under UGC Fellowship scheme	Joint CSIR-UGC	2008

21. List of Scientific Publications:

Sl. No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Aditya S. Mondal, Mayukh Pahari, Gulab C. Dewangan	NuSTAR discovers a long type-I X-ray burst from the clocked burster GS 1826-24	Journal of High Energy Astrophysics (JHEAP)	49	100450	2025
2	Aditya S. Mondal, Mahasweta Bhattacharya, Mayukh Pahari, B. Raychaudhuri, R. Ghosh, and G. C. Dewangan	NuSTAR view of the X-ray transients Swift J174805.3-244637 and IGR J17511-3057	Journal of High Energy Astrophysics (JHEAP)	45	359-370	2025

3	Mahasweta Bhattacharya, Aditya S. Mondal , Mayukh Pahari, B. Raychaudhuri, R. Ghosh, and G. C. Dewangan	Relativistic X-ray reflection from the accreting millisecond X-ray pulsar IGR J17498-2921	Monthly Notices of the Royal Astronomical Society (MNRAS)	534	634-644	2024
4	Aditya S. Mondal , B. Raychaudhuri, and G. C. Dewangan	Relativistic X-ray reflection and highly ionized absorption in the spectrum of NS LMXB 1A 1744-361	Monthly Notices of the Royal Astronomical Society (MNRAS)	527	2362-2370	2024
5	S. K. Roy, Tanmoy Ghosh, B. Raychaudhuri and Aditya S. Mondal .	Acoustic black hole: the Sagnac effect, the geodesics and the bounding values of the parameters	The European Physical Journal C	84	doi:10.1140/epjc/s10052-024-12931-2	2024
6	B. Samanta, B. Raychaudhuri, F. Rahaman, Aditya S. Mondal , and S. Sarkar	Tachyonic field coupled with global monopole.	International Journal of Theoretical Physics	63	doi:10.1007/s10773-024-05836-z	2024
7	Aditya S. Mondal , B. Raychaudhuri, and G. C. Dewangan	The complex spectral behavior of the newly discovered neutron star X-ray binary Swift J1858.6-0814	Monthly Notices of the Royal Astronomical Society (MNRAS)	524	5918-5928	2023
8	Aditya S. Mondal , B. Raychaudhuri, G. C. Dewangan, and Aru Beri	Evidence of hard power-law spectral cutoff and disc reflection features from the X-ray transient XTE J1739-285	Monthly Notices of the Royal Astronomical Society (MNRAS)	516	1256-1262	2022
9	Soumya Kanti Roy, B. Raychaudhuri and Aditya S. Mondal .	Spacelike trajectories in BTZ spacetime and comparison with timelike and lightlike trajectories.	Physica Scripta	97	https://doi.org/10.1088/1402-4896/ac91b1	2022

10	Pinaki Roy, Aru Beri and Aditya S. Mondal	NuSTAR and AstroSat observations of thermonuclear X-ray bursts with short-recurrence times in 4U 1636-536.	Journal of Astrophysics and Astronomy (JAA) Special Issue on "Astrophysical Jets and Observational Facilities: A National Perspective"	43	Article ID 0045	2022
11	Aditya S. Mondal , B. Raychaudhuri, and G. C. Dewangan	Evidence of disc reflection in the X-ray spectrum of the neutron star low-mass X-ray binary 4U 1636-536	Monthly Notices of the Royal Astronomical Society (MNRAS)	504	1331-1339	2021
12	Aditya S. Mondal , G. C. Dewangan, B. Raychaydhuri	On the disc reflection spectroscopy of NS LMXB Serpens X-1: analysis of a recent NuSTAR observation	Monthly Notices of the Royal Astronomical Society (MNRAS)	494	3177-3185	2020
13	Aditya S. Mondal , G. C. Dewangan, B. Raychaydhuri	Study of the reflection spectrum of the bright Atoll source GX 3+1 with NuSTAR	Monthly Notices of the Royal Astronomical Society (MNRAS)	487	5441-5449	2019
14	Aditya S. Mondal , G. C. Dewangan, M. Pahari, B. Raychaudhuri	NuSTAR view of the iconic neutron star X-ray binary Cyg X-2	Monthly Notices of the Royal Astronomical Society (MNRAS)	474	2064-2072	2018
15	Aditya S. Mondal , Mayukh Pahari, G. C. Dewangan, R. Misra and B. Raychaudhuri	NuSTAR and Swift joint view of neutron star X-ray binary 4U 1728-34: disc reflection in the island and lower banana states	Monthly Notices of the Royal Astronomical Society (MNRAS)	466	4991-5002	2017
16	Aditya S. Mondal , G. C. Dewangan, M. Pahari, R. Misra, A. K. Kembhavi and B. Raychaudhuri	Broad-band X-ray emission and the reality of the broad iron line from the neutron star-white dwarf X-ray binary 4U 1820-30	Monthly Notices of the Royal Astronomical Society (MNRAS)	461	1917-1926	2016

17	Md. Shah Alam, Dipanjan Mukherjee, Aditya S. Mondal , Gulab C. Dewangan, Sanjay Jhingan and Biplab Raychaudhuri	XMM–Newton view of a hard X-ray transient IGR J17497–2821	Monthly Notices of the Royal Astronomical Society (MNRAS)	451	3078-3088	2015
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22. Other information:

1. Published an Astronomer Telegram on “A recent NuSTAR observation of the source GX 17+2” (The Astronomer’s Telegram, No. 17234).

2. I was invited to participate in the Second Daksha Science Workshop at IUCAA on 30th and 31st March 2025. *Daksha* is a proposed indian space mission for detecting explosive astrophysical events and high-energy counterparts to gravitational wave sources.

Last updated on (22 / 08/ 2025)