

## Vivek Baruah Thapa, Ph.D.

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✉ vivek.thapa@bacollege.ac.in, vbthapa1@gmail.com  
🌐 <http://www.vivekbaruahthapa.com>  
ID <https://orcid.org/0000-0003-2411-9885>  
Scopus <https://www.scopus.com/authid/detail.uri?authorId=57221152206>  
R<sup>G</sup> <https://www.researchgate.net/profile/Vivek-Thapa-3>  
in <https://www.linkedin.com/in/vivek-baruah-thapa-097b24ab>  
💡 <https://vidwan.inflibnet.ac.in/profile/395436/Mzk1NDM2>  
☎ (+91)-6000651646, (+91)-8876270054



### Address of Correspondence:

Department of Physics, Bhawanipur Anchalik College,  
Bhawanipur, Barpeta-781352,  
Assam, India

### Personal Profile

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Date of Birth: 25/10/1994    Marital status: Unmarried  
Nationality: Indian  
Gender: Male  
Hobbies: Swimming, Lawn Tennis, Travel

### Research Interests

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Dense matter, Equation of State, Gravitational Waves, Asteroseismology, Compact objects, Pulsars

### Employment History

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June 2023 – till date	<b>Assistant Professor-I</b> , Department of Physics, Bhawanipur Anchalik College, Assam, India
April 2022 – February 2023	<b>Doctoral Research Associate</b> , Department of Fizică Nuclear, Horia Hulubei National Institute of Physics and Nuclear Engineering (IFIN-HH), Bucharest, România
September 2020 – August 2022	<b>Senior Research Fellow</b> , Department of Physics, Indian Institute of Technology Jodhpur, Rajasthan, India
August 2018 – August 2020	<b>Junior Research Fellow</b> , Department of Physics, Indian Institute of Technology Jodhpur, Rajasthan, India
May 2017 – July 2017	<b>Summer Research Fellow</b> , Indian Institute of Astrophysics, Bengaluru, Karnataka, India

### Education

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2018 – 2022	<b>Ph.D.</b> , Indian Institute of Technology Jodhpur, Rajasthan, India (CGPA - Course work: 9.5; % of marks: 95) Thesis title: <i>Probing dense matter equation of state in light of neutron star observable constraints.</i> Supervisor: Dr. Monika Sinha
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## Education (continued)

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2016 – 2018	<b>M.Sc. Physics, specialization: Astrophysics</b> , Tezpur University, Assam, India (CGPA: 8.57; % of marks: 85.7) Thesis title: <i>Probing the diffuse infrared emission in the Small Magellanic Cloud</i> . Supervisor: Dr. Rupjyoti Gogoi
2013 – 2016	<b>B.Sc. Physics (Honours)</b> , Cotton University, Assam, India (CGPA: 9.0; % of marks: 90)
2011 – 2013	<b>Intermediate +2 (Science)</b> , Assam Higher Secondary Education Council, India (% of marks: 90)
2011	<b>Matriculation</b> , Secondary Education Board of Assam, India (% of marks: 85)

## Awards and Achievements

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2024	Recipient of <b>SERB-International Travel Support</b> , Science and Engineering Research Board, Government of India
2024 – till date	Recipient of <b>IUCAA Associateship</b> , Inter-University Centre for Astronomy and Astrophysics, Government of India
2022	Recipient of <b>National Postdoctoral Fellowship</b> , Science and Engineering Research Board, Government of India
2018 – 2022	Recipient of <b>MoE Doctoral Research Fellowship</b> , Government of India
2018	<b>Silver Medalist (First Class with Distinction)</b> in Master's degree, Tezpur University
2017	Recipient of <b>Focus Area Science &amp; Technology – Summer Fellowship (FAST-SF)</b> , Indian Academy of Sciences, Bengaluru, India
2016	<b>Silver Medalist (First Class with Distinction)</b> in Bachelor's degree, Cotton University
2013 – 2018	Recipient of <b>DST-INSPIRE Scholarship for Higher Education</b> , Department of Science & Technology, Government of India
2013	Recipient of <b>Alfarid Sazad Merit Award</b> , Government of Assam
2011	Recipient of <b>Anundoram Borooah Merit Award</b> , Government of Assam

## Skills

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Languages	Reading, writing and speaking competencies for English, Assamese, Hindi, Nepali
Coding	Python, Fortran, C++, $\text{\LaTeX}$
Misc.	Academic research, teaching, $\text{\LaTeX}$ typesetting

## Journal peer-reviewer

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Monthly Notices of the Royal Astronomical Society, Oxford University Press  
Physical Review & Physical Review Letters, American Physical Society  
Symmetry, Multidisciplinary Digital Publishing Institute

### Accepted/Published Journal Articles






- 1 Thakur, P., Kumar, A., **Thapa, V. B.**, Parmar, V., & Sinha, M. (2024). Exploring non-radial oscillation modes in dark matter admixed neutron stars. *Journal of Cosmology and Astroparticle Physics*, **2024**(12), 042.  doi:10.1088/1475-7516/2024/12/042. eprint: <https://arxiv.org/abs/2406.07470>
- 2 Parmar, V., **Thapa, V. B.**, Kumar, A., Bandyopadhyay, D., & Sinha, M. (2024). Bayesian inference of the dense-matter equation of state of neutron stars with antikaon condensation. *Physical Review C*, **110**, 045804.  doi:10.1103/PhysRevC.110.045804. eprint: <https://arxiv.org/abs/2409.19451>
- 3 Kumar, A., Ghosh, M. K., Thakur, P., **Thapa, V. B.**, Nath, K. K., & Sinha, M. (2024). Universal relations for compact stars with exotic degrees of freedom. *European Physical Journal C*, **84**(7), 692.  doi:10.1140/epjc/s10052-024-13066-0. eprint: <https://arxiv.org/abs/2311.15277>
- 4 Sarkar, T., **Thapa, V. B.**, & Sinha, M. (2023). Fast neutron star cooling in light of the PREX-2 experiment. *Physical Review C*, **108**, 035801.  doi:10.1103/PhysRevC.108.035801. eprint: <https://arxiv.org/abs/2308.16449>
- 5 **Thapa, V. B.**, Beznogov, M., Raduta, A. R., & Thakur, P. (2023b). Frequencies of  $f$ - and  $p$ -oscillation modes in cold and hot compact stars. *Physical Review D*, **107**, 103054.  doi:10.1103/PhysRevD.107.103054. eprint: <https://arxiv.org/abs/2302.11469>
- 6 Kumar, A., **Thapa, V. B.**, & Sinha, M. (2023). Hybrid stars are compatible with recent astrophysical observations. *Physical Review D*, **107**, 063024.  doi:10.1103/PhysRevD.107.063024. eprint: <https://arxiv.org/abs/2303.06387>
- 7 Kundu, D., **Thapa, V. B.**, & Sinha, M. (2023). (Anti)kaon condensation in strongly magnetized dense matter. *Physical Review C*, **107**, 035807.  doi:10.1103/PhysRevC.107.035807. eprint: <https://arxiv.org/abs/2210.14565>
- 8 Kumar, A., **Thapa, V. B.**, & Sinha, M. (2022). Compact star merger events with stars composed of interacting strange quark matter. *Monthly Notices of the Royal Astronomical Society*, **513**, 3788.  doi:10.1093/mnras/stac1150. eprint: <https://arxiv.org/abs/2204.11034>
- 9 **Thapa, V. B.**, & Sinha, M. (2022b). Influence of the nuclear symmetry energy slope on observables of compact stars with  $\Delta$ -admixed hypernuclear matter. *Physical Review C*, **105**, 015802.  doi:10.1103/PhysRevC.105.015802. eprint: <https://arxiv.org/abs/2112.12629>
- 10 **Thapa, V. B.**, Kumar, A., & Sinha, M. (2021). Baryonic dense matter in view of gravitational-wave observations. *Monthly Notices of the Royal Astronomical Society*, **507**, 2991–3004.  doi:10.1093/mnras/stab2327. eprint: <https://arxiv.org/abs/2108.04318>
- 11 **Thapa, V. B.**, Sinha, M., Li, J. J., & Sedrakian, A. (2021). Massive  $\Delta$ -resonance admixed hypernuclear stars with antikaon condensations. *Physical Review D*, **103**, 063004.  doi:10.1103/PhysRevD.103.063004. eprint: <https://arxiv.org/abs/2102.08787>
- 12 **Thapa, V. B.**, & Sinha, M. (2020). Dense matter equation of state of a massive neutron star with antikaon condensation. *Physical Review D*, **102**, 123007.  doi:10.1103/PhysRevD.102.123007. eprint: <https://arxiv.org/abs/2011.06440>
- 13 **Thapa, V. B.**, Sinha, M., Li, J. J., & Sedrakian, A. (2020). Equation of state of strongly magnetized matter with hyperons and  $\Delta$ -resonances. *Particles*, **3**, 660–675.  doi:10.3390/particles3040043. eprint: <https://arxiv.org/abs/2010.00981>

- 1 Athira, S., Sinha, M., Bandyopadhyay, D., **Thapa, V. B.**, & Parmar, V. (2025). *Antikaon condensed dense matter in neutron star with  $SU(3)$  flavour symmetry*. eprint: <https://arxiv.org/abs/2504.06859>
- 2 **Thapa, V. B.**, Kumar, A., Parmar, V., & Sinha, M. (2025a). *Investigating universal relations in compact stars featuring  $\Delta$ -admixed exotic dense matter*.
- 3 Parmar, V., **Thapa, V. B.**, Sinha, M., & Bombaci, I. (2025). *Exploring  $\Delta$ -resonance in neutron stars: Implications from astrophysical and nuclear observations*. eprint: <https://arxiv.org/abs/2503.07256>
- 4 **Thapa, V. B.**, Sinha, M., Nandi, R., & Bandyopadhyay, D. (2024). *Contribution of neutron star core superfluidity in pulsar glitches*.



## Pre-prints

- 1 **Thapa, V. B.**, & Sinha, M. (2022a). *Direct URCA process in light of PREX-2*. arXiv: 2203.02272 [astro-ph.HE]

## Conference Proceedings

- 1 **Thapa, V. B.**, Kundu, D., & Sinha, M. (2025b). Nuclear symmetry energy slope and its impact on exotic magnetized matter. In *Journal of Physics: Conference series* (Vol. **2957**, p. 012021).  doi:10.1088/1742-6596/2957/1/012021
- 2 Parmar, V., **Thapa, V. B.**, Kumar, A., Bandyopadhyay, D., & Sinha, M. (2024). Inference of dense matter equation of state with antikaon condensation. In *Proceedings of the 68th DAE Symposium on Nuclear Physics* (ISBN: 978-81-967453-5-6) (Vol. **68**, pp. 797–798).  doi:<http://www.sympnp.org/proceedings>
- 3 **Thapa, V. B.**, Sarkar, T., & Sinha, M. (2023a). Implications of symmetry energy on neutron star cooling. In *Proceedings of the 67th DAE Symposium on Nuclear Physics* (ISBN: 978-12-345678-9-7) (Vol. **67**, pp. 783–784). eprint: <http://sympnp.org/proceedings/67/C6>
- 4 **Thapa, V. B.**, & Sinha, M. (2023). Tension between implications from PREX-2 data and gravitational tidal response on dense matter equation of state. In *EPJ Web of Conferences* (Vol. **279**, p. 10003).  doi:10.1051/epjconf/202327910003. eprint: <https://arxiv.org/abs/2302.07726>
- 5 **Thapa, V. B.**, Sinha, M., Sedrakian, A., & Li, J. J. (2022). Potentiality of antikaon condensation in dense matter. In *Proceedings of the 66th DAE Symposium on Nuclear Physics* (ISBN: 978-81-959225-1-2) (Vol. **66**, pp. 734–735).  doi:<http://www.sympnp.org/proceedings>
- 6 **Thapa, V. B.**, Sinha, M., Li, J. J., & Sedrakian, A. (2022). Dense matter in strong magnetic field: Covariant density functional approach. In *Springer Proceedings in Physics* (Vol. **277**, pp. 755–759).  doi:10.1007/978-981-19-2354-8\_136

## Books and Chapters

- 1 **Thapa, V. B.**, & Bhattacharjee, D. (Eds.). (2025). *Physics Frontiers: Bridging Theories and Experiments* (Vol. - I) (ISBN: 978-81-983738-4-7). (Proceedings of "Physics Frontiers-2024" National Conference).  doi:10.5281/zenodo.14626413
- 2 **Thapa, V. B.**, Sarkar, T., & Singha, J. (2021). Probing dense matter equation of state in view of neutron star astrophysical observables. In R. Jayakumar & R. R. Duvvuru (Eds.), *Research Trends in Multidisciplinary Research* (Vol. 29, pp. 41–66).  doi:10.22271/ed.book.1306

## Schools, Workshops & Conferences

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### Attended

2014	<b>Introductory Workshop on Relativistic Astrophysics</b> , Gauhati University, India
2014 & 2015	<b>Summer School on Radio Astronomy</b> , Cotton University, India
2016	<b>North-East Meet of Astronomers-2 (NEMA-2)</b> , Tezpur University, India
2017	<b>Winter School on Astronomy (Star Clusters)</b> , Western University, Canada & Birla Science Centre, Hyderabad, India <b>ASTROSAT Data Analysis Workshop</b> , IUCAA & Tezpur University, India <b>DST-SERB School on Observational Astronomy</b> , Tezpur University, India <b>North-East Meet of Astronomers-3 (NEMA-3)</b> , Assam Don Bosco University, India
2019	<b>Introductory workshop in Astronomy and Astrophysics</b> , University of Kashmir (Leh campus), India
2020	<b>Virtual Meeting on Compact Stars and QCD</b> , ICTS-TIFR, Bengaluru, India. (online) <b>Michigan Cosmology Summer School</b> , University of Michigan, U.S.A. (online) <b>XXIV DAE-BRNS HEP Symposium</b> , NISER, Odisha, India. (online)
2021	<b>International Workshop on Emerging Trends in Gravitation and Cosmology</b> , Presidency University, Kolkata, India. (online)
2022	<b>School on Physics of the Early Universe</b> , ICTS-TIFR, Bengaluru, India. <b>21<sup>st</sup> National Space Science Symposium</b> , IISER-Kolkata, West Bengal, India. (online) <b>National Seminar on Recent Trends in Physics Research</b> , Manipur University, Manipur, India. (online) 1-day conference on <b>Emerging Trends in High Energy Astrophysics (ETHEAP)</b> , Tezpur University, Assam, India. (online) <b>40<sup>th</sup> Meeting of the Astronomical Society of India</b> , IIT-Roorkee, Uttarakhand, India. <b>ICTS Summer School on Gravitational-Wave Astronomy</b> , ICTS-TIFR, Bengaluru, India. (online) <b>Nuclear Physics in Astrophysics-X conference</b> , CERN, Geneva, Switzerland. (online)
2023	<b>Bridging the Gaps: Interdisciplinary Collaborations in Constraining the Physics of Finite Nuclei, Neutron Stars and Dark Matter</b> , NIT-Rourkela, Odisha, India. (online) National conference <b>SPARK-2023 (Symposium on Physics: Advances in Research and Knowledge)</b> , North Lakhimpur University, Assam, India <b>North-East Meet of Astronomers-9 (NEMA-9)</b> , Mizoram University, Mizoram, India <b>67th DAE Symposium on Nuclear Physics</b> , Indian Institute of Technology Indore, Madhya Pradesh, India
2024	<b>42<sup>nd</sup> Meeting of the Astronomical Society of India</b> , Indian Institute of Science, Bengaluru, Karnataka, India. <b>International Conference on Frontiers in Physics and Applied Physics</b> , University of Science & Technology Meghalaya, India. <b>Compact Stars in QCD Phase Diagram (CSQCD2024) International Conference</b> , Yukawa Institute for Theoretical Physics, Kyoto University, Japan.

## Schools, Workshops & Conferences (continued)

- 2025     **43<sup>rd</sup> Meeting of the Astronomical Society of India**, National Institute of Technology, Rourkela, Orissa, India.

### Presented

- 2017     Oral presentation entitled “Investigation on the Radio Properties of Narrow-Line Seyfert Type-I Galaxies” at **North-East Meet of Astronomers-3 (NEMA-3)**, Assam Don Bosco University, India.
- 2020     Oral presentation entitled “Dense matter equation of state in strong magnetic field model with density-dependent parameterization” at **XXIV DAE-BRNS HEP Symposium**, NISER, Odisha, India. (online)
- 2022     Poster presentation entitled “Exotic dense matter in view of astrophysical observations” at **21<sup>st</sup> National Space Science Symposium**, IISER-Kolkata, West Bengal, India. (online)
- Oral presentation entitled “Constraining exotic dense matter equation of states in view of gravitational-wave observations” at **National Seminar on Recent Trends in Physics Research**, Manipur University, Manipur, India. (online)
- Poster presentation entitled “Dense baryonic matter in light of recent astrophysical observations” at **40th Meeting of the Astronomical Society of India**, IIT-Roorkee, Uttarakhand, India.
- Poster presentation entitled “Tension between implications from PREX-2 data and gravitational tidal response on dense matter equation of state” at **Nuclear Physics in Astrophysics-X conference**, CERN, Geneva, Switzerland. (online)
- Oral presentation entitled “Potentiality of (anti)kaon condensation in dense matter” at **66th DAE Symposium on Nuclear Physics**, Cotton University, Assam, India.
- 2023     Oral presentation entitled “Nuclear symmetry energy slope and its impact on exotic magnetized matter” at **SPARK-2023 (Symposium on Physics: Advances in Research and Knowledge)**, North Lakhimpur University, Assam, India.
- Oral presentation entitled “Influence of hot and cold dense matter on quasinormal oscillation modes of compact stars” at **North-East Meet of Astronomers-9 (NEMA-9)**, Mizoram University, Mizoram, India.
- Oral presentation entitled “Implications of symmetry energy on neutron star cooling” at **67th DAE Symposium on Nuclear Physics**, Indian Institute of Technology Indore, Madhya Pradesh, India.
- 2024     Poster presentation entitled “Contribution of neutron star core superfluidity in pulsar glitches” at **42nd Meeting of the Astronomical Society of India**, Indian Institute of Science, Bengaluru, Karnataka, India.
- Oral presentation entitled “Investigating Universal Relations in Neutron stars featuring exotic dense matter” at **International Conference on Frontiers in Physics and Applied Physics**, University of Science & Technology Meghalaya, India.
- Oral presentation entitled “Impact of hot and cold dense matter on quasinormal oscillation modes in compact stars” at **Compact Stars in QCD Phase Diagram (CSQCD2024) International Conference**, Yukawa Institute for Theoretical Physics, Kyoto University, Japan.

## Schools, Workshops & Conferences (continued)

- 2025 Oral presentation entitled “Inferring the Equation of State for Dense Matter in Neutron Stars: A Bayesian Perspective on Antikaon Condensation” at **43rd Meeting of the Astrophysical Society of India**, National Institute of Technology, Rourkela, Orissa, India.

### Invited Talks

- 2021 Departmental Student Seminar series talk on “Astrophysical observables as a tool to probe dense matter physics” at IIT Jodhpur, India.
- 2022 Invited talk entitled “Neutron stars: Astrophysical laboratories to probe dense matter” at Department of Physics, Debraj Roy College, Golaghat, Assam, India.
- Invited talk entitled “Exotic cold dense matter in light of gravitational-wave observations” at RIKEN-iTHEMS, Tokyo, Japan. (online)
- Invited talk entitled “Cold dense matter in light of neutron star astrophysical constraints” at Department of Nuclear Physics, Horia Hulubei National Institute of Physics and Nuclear Engineering (IFIN-HH), Bucharest, Romania.
- Invited talk entitled “Investigation of exotic particle spectrum in cold compact stars” at Institute of Theoretical Physics, University of Wrocław, Poland.
- 2023 Invited lecture entitled “Understanding ground state of matter in light of neutron stars” on “*Lecture series on compact objects*” at Indian Institute of Technology Roorkee, Uttarakhand, India. (online)
- Invited talk entitled “Cold exotic dense matter in light of neutron star astrophysical constraints” at Institute of Nuclear and Particle Physics, School of Physics and Astronomy, Shanghai Jiao Tong University, Shanghai, China. (online)
- 2024 Invited talk entitled “Neutron Stars: The Mysterious Cosmic Powerhouses” at Department of Physics, North Gauhati College, Kamrup(R), Assam, India. (online)
- Invited talk entitled “Developing Neutron Star Equation of States in RMFT” at *HEPCAT Group*, Department of Mathematics & Applied Mathematics, University of Cape Town, South Africa. (online)
- Invited talk entitled “Unlocking Cosmos: An Introduction to Astronomy & Astrophysics” at Department of Physics, Jijamata Mahavidyalaya Buldhana, Maharashtra, India. (online)
- Invited talk entitled “Paths to Becoming a Researcher in Physics: A Journey Through Academia and Beyond” at Mentoring Session of “Mukhya Mantri Bigyan Pratibha Sandhan” organised by Assam Science Technology and Environment Council, Government of Assam, India. (online)
- Invited talk entitled “Dense Matter Physics and Exotic States in Neutron Stars” at RIKEN-iTHEMS, Tokyo, Japan.
- 2025 Invited talk entitled “Quantum Secrets: How the Universe (and You) Truly Work” (National Science Day - 2025 Lecture) at Bhawanipur Anchalik College, Assam, India.
- Invited talk entitled “Ripples in Spacetime: Unveiling Neutron Star Secrets through Gravitational Waves” at Department of Physics, Bhattadev University, Assam, India.

## Professional Courses/ Programmes

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### Attended

- 2023      **Two Day Induction Training Programme**, Higher Education Department, Government of Assam, Assam Administrative Staff College, Assam, India
- Online Month-long Faculty Induction Programme**, Teaching Learning Centre, Tezpur University, Assam, India
- 2024      **NEP: Orientation and Sensitization Programme (Online)**, Malaviya Mission Centre of the Astronomy Centre for Educators, IUCAA, India
- One Week National level Online Faculty Development Program (Online) on Outcome Based Education and Application of Generative AI in Teaching and Research**, Internal Quality Assurance Cell (IQAC) of Gauhati University, Assam in association with *ipsr solutions limited*, India
- Refresher Course on Astronomy & Astrophysics**, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, Maharashtra, India
- Online Workshop on Data Analytics & AI**, Centre for Computer Science and Information Technology (CCSIT), Manjeri, University of Calicut, Kerala, India in association with *ipsr solutions limited*, India

### Academic Extensions

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| July 2025            | <b>Visitor</b> , Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, Maharashtra, India. (Expected)  |
| December 2024        | <b>Visitor</b> , Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, Maharashtra, India.   |
| October 2024         | <b>Visitor</b> , RIKEN-Interdisciplinary Theoretical and Mathematical Sciences Program (iTHEMs), Tokyo, Japan.   |
| May – June 2024      | <b>Visitor</b> , Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, Maharashtra, India.   |
| November 2022        | <b>Visitor</b> , Institute of Theoretical Physics, University of Wrocław, pl. M. Borna 9, 50-204 Wrocław, Poland.  |
| June – July 2022     | <b>Visiting Scholar</b> , Variable Energy Cyclotron Centre (VECC), Kolkata, West Bengal, India.  |
| May – July 2017      | <b>Summer Research Fellow</b> , Indian Institute of Astrophysics (IIA), Bengaluru, Karnataka, India.<br>Project title: <i>Radio Properties of Narrow-Line Seyfert I Galaxies</i> .<br>Mentor: Prof. C. S. Stalin, Professor, IIA; Co-mentor: Dr. Suvendu Rakshit, Scientist-C, Aryabhata Research Institute of Observational Sciences (ARIES), India |
| July – December 2015 | <b>Basic Radio Astronomy Course</b> , Cotton University, Assam, India. Mentor: Dr. Wasim Raja, Post-doctoral fellow, CSIRO Astronomy & Space Science, Australia  |



## Teaching experience

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3. Teaching the following courses at Bhawanipur Anchalik College:
  - **Academic Session 2024-25:**  
(*Spring Session*)
    - iii. Mathematical Physics (PHY254) for UG 4th Semester
    - ii. Quantum Mechanics (PHY252) for UG 4th Semester
    - i. Waves & Optics (PHY2104) for UG 2nd Semester(*Autumn Session*)
    - iii. Waves (PHY201) for UG 3rd Semester
    - ii. Digital Photography & Editing Skills (PHY1103SE) for UG 1st Semester
    - i. Mechanics & Properties of Matter (PHY1104) for UG 1st Semester
  - **Academic Session 2023-24:**  
(*Spring Session*)
    - iii. Microsoft Excel - Advanced (SECo207703) for UG 2nd Semester
    - ii. Introduction to Natural and Physical Sciences (MDC-2) for UG 2nd Semester
    - i. Electricity and Magnetism (PHY151) for UG 2nd Semester(*Autumn Session*)
    - ii. Introduction to Natural and Physical Sciences (MDC-1) for UG 1st Semester
    - i. Mathematical Physics-I (PHY101) for UG 1st Semester
2. Assisted in guiding 4 M.Sc. students in their thesis work at IIT Jodhpur.
1. Teaching assistant in the following courses at IIT Jodhpur:
  - i. General Theory of Relativity for M.Sc. students
  - ii. Quantum Field Theory for M.Sc. students
  - iii. Introductory Physics Lab for B.Tech. students
  - iv. Introduction to electromagnetic theory for B.Tech. students

## Co-curricular activities

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| 2015        | Volunteer in organizing <b>Summer School on Radio Astronomy</b> , Cotton University   |
| 2017 – 2018 | Convener of <b>Astronomy Club</b> , Tezpur University   |
| 2017        | Volunteer in organizing <b>DST-SERB School on Observational Astronomy</b> , Tezpur University   |
| 2024        | Convenor in organizing " <b>Science Talk Series-2024</b> ", Bhawanipur Anchalik College<br>Co-convenor in organizing online national conference " <b>Physics Frontiers-2024: Bridging Theories and Experiments</b> ", Bhawanipur Anchalik College |
| 2025        | Convenor in organizing " <b>Science Talk Series-2025</b> ", Bhawanipur Anchalik College   |

## Academic Evaluation Duties

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| 2024 | <b>External Examiner</b> for B.Sc. 1st & 5th Semester Physics Practical Examination (AY 2023-24) of Suren Das College, Kamrup (R), Assam (Letter No.- SDC/EE/PHY/2024/07)                                    |
| 2025 | <b>External Examiner</b> for Higher Secondary Final Year Physics Practical Examination (AY 2024-25) of PM Shri Patacharkuchi Vidyapith HS School, Bajali, Assam (Letter No.- ASSEB/EXB/PRINT/2024/95/0321-A) |

## **Administrative Roles @ Institute**

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1. Coordinator of **Energy Audit Cell**, Bhawanipur Anchalik College (June 2023 - till date)
2. Coordinator of **Green Earth Club**, Bhawanipur Anchalik College (June 2023 - till date)
3. Web-master of **Departmental website (Physics)**, Bhawanipur Anchalik College (June 2023 - till date)
4. Coordinator of **Science Forum**, Bhawanipur Anchalik College (February 2024 - till date)
5. Coordinator of **Research & Development Cell**, Bhawanipur Anchalik College (April 2024 - till date)
6. Assistant Coordinator, **Institution's Innovation Council**, Bhawanipur Anchalik College (April 2024 - till date)
7. Assistant Coordinator, **IT Cell**, Bhawanipur Anchalik College (April 2024 - till date)
8. Nodal Officer, **Samarth-eGov Portal**, Bhawanipur Anchalik College (November 2024 - till date)
9. Coordinator, **Institute NIRF Committee**, Bhawanipur Anchalik College (December 2024 - till date)
10. Coordinator, **Theoretical Research Laboratory**, Bhawanipur Anchalik College (March 2025 - till date)

## **Government Duties/ Trainings**

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- 2023 Attended "**Training of External Evaluator for Gunotsav-2024 (5th Round)**" with reference to Order No.: SSA/Bpt/Corres/Gunotsav/P-III/690/2023/856 dated 11th December, 2023
- 2024 Government Duty "**Engagement as External Evaluator for Gunotsav-2024 (5th Round)**" with reference to Order No.: SSA/BPT/Gunotsav/letter/786/2023/949 dated 29th December, 2023
- Attended "**Training on EVM/ briefing on ECI guidelines**" with reference to Order No.: BJEL-01/2024/26 dated 12th March, 2024
- Government Duty "**Appointment as Observer for the Conduct of NEET (UG) – 2024**" with reference to Letter No.: F.No.1/5/1/2/2024-TA dated 9th April, 2024
- Government Duty "**Appointment as Presiding Officer for Lok Sabha Election - 2024**" in continuation to Order No.: BJEL-01/2024/26 dated 12th March, 2024 on dated 22nd April, 2024
- Attended "**Training of External Evaluator for Gunotsav-2025 (6th Round)**" with reference to Order No.: SSA/Bpt/Corres/Gunotsav/P-IV/690/2024/994 dated 10th December, 2024
- 2025 Government Duty "**Engagement as External Evaluator for Gunotsav-2025 (6th Round)**" with reference to Order No.: SSA/BPT/Corres/Gunotsav/P-IV/690/2024/1116 dated 01st January, 2025
- Government Duty "**Engagement as External Evaluator for Gunotsav-2025 (6th Round)**" with reference to Order No.: SSA/Baksa/DMC/Gunotsav-6/2024-25/12/5543-42 dated 16th January, 2025
- Government Duty "**Engagement as Supervising Officer for HSLC Examination - 2025**" with reference to Order No.: ASSEB/D-I/EX/SO/18/2016-17 dated 25th February, 2025

## Public Outreach

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- 2022 Core student coordinator in organizing “*IITJ Padharo*” (Open House)
- 2024 Convenor in organizing “**Science Fair and Competition**”, Bhawanipur Anchalik College
- Convenor in organizing “**National Science Day-2024 Celebrations (Bikiran 1.0)**”, Bhawanipur Anchalik College

## Membership(s)

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- 2022 Life member, Astronomical Society of India (No.: L-2384)
- 2024 Life member, Physics Academy of the North-East (No.: LM-515)
- Life member, Assam Science Society (No.: LM-6924)

## Professional Collaborations

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Indian Institute of Technology Jodhpur, India

National Institute for Physics and Nuclear Engineering (IFIN-HH), Romania

Institute of Theoretical Physics, University of Wrocław, Poland

Frankfurt Institute for Advanced Studies, Germany

School of Physical Science and Technology, Southwest University, China

## Professional References

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|-----------------------------|---|
| Dr. Monika Sinha            | Associate Professor, Indian Institute of Technology Jodhpur<br>Address- Room No.-333, Department of Physics, IIT Jodhpur, Rajasthan, India ✉ ms@iitj.ac.in  |
| Prof. Armen Sedrakian       | Professor, Institute of Theoretical Physics, University of Wrocław<br>Address- pl. M. Borna 9, 50-204 Wrocław, Poland<br>✉ sedrakian@ias.uni-frankfurt.de   |
| Dr. Rupjyoti Gogoi          | Assistant Professor, Tezpur University<br>Address- Department of Physics, Tezpur University, Assam, India<br>✉ rupjyotigogoi@gmail.com  |
| Prof. Dhruva Jyoti Saikia   | Professor (Retd.), National Centre for Radio-Astronomy, Tata Institute of Fundamental Research (TIFR), Maharashtra, India<br>Address- Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India ✉ dhrubasaikia@iucaa.in |
| Prof. Debades Bandyopadhyay | Professor (Retd.), Saha Institute of Nuclear Physics, Kolkata, India<br>Address- Department of Physics, Aliah University, New Town, Kolkata, India ✉ debades.bandyopadhyay.retd@saha.ac.in  |
| Prof. Adriana R. Raduta     | Senior Researcher 1st degree, Horia Hulubei National Institute for Physics and Nuclear Engineering (IFIN-HH)<br>Address- Department of Nuclear Physics, IFIN-HH, Bucharest, Romania ✉ araduta@nipne.ro                                    |

## **Declaration**

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I hereby declare that the information in this curriculum vitae and the additional information furnished is correct and true to the best of my knowledge.

April 10, 2025  
Barpeta, Assam, India

*Vivek Baruah Thapa*

**Vivek Baruah Thapa**