

Indian Institute of Technology Indore
Simrol Campus, Khandwa Road, Indore – 453552
Department of Astronomy, Astrophysics and Space Engineering
Rolling Advertisement for Admission to Ph.D. Programme

IIT Indore is an institution of national importance and is ranked highly in both research and teaching. According to the World University Rankings 2020 by the Times Higher Education IIT Indore is ranked 3rd overall amongst all Institutes of India.

Research Areas:

Department of Astronomy, Astrophysics and Space Engineering (DAASE) at IIT Indore is a unique discipline among all IITs. It offers a dedicated platform to pursue research in astronomy, astrophysics and space science and engineering, and related areas. The DAASE is seeking applications for PhD positions under the following three broad areas of research:

- **Astronomy and Astrophysics**
- **Atmospheric and Space Sciences**
- **Instrumentation in Astronomy, Atmospheric and Space Sciences**

Under these broad domains, the faculties of DAASE are involved in cutting edge research in various interesting topics such as, Observational and Computational Cosmology, Galaxy Clusters and Large Scale Structures, Computational Astrophysics, Neutron Stars, Pulsars and Black Holes, Transients, Active Galactic Nuclei, Statistical Inference, Machine Learning and Big Data, Radio and X-ray Observations, Radio Astronomy Instrumentation, Galaxy and Interstellar Medium, Star and Planet Formation, High Energy Astrophysics, Gamma-ray Astronomy, Multi-wavelength & Multi-messenger Astronomy, Ionosphere & Satellite Communication/Navigation, Spacecraft & Payload Control, Interplanetary Space Weather, Remote Sensing and RADAR, Signal and Image Processing etc.

Our faculty members are actively involved in international mega-science project the **Square Kilometre Array (SKA)**, **PLUTO code**, **Navigation with Indian Constellation (NavIC)**, **ESA/JAXA BepiColombo (mission to Mercury)**, **ESA Comet Interceptor mission**, and related research. Our faculty members and students are extensively using national/international facilities like the **ASTROSAT**, **LOFAR**, **uGMRT**, **VLA**, **ATCA**, **SWIFT**, **NuStar**, **FACT**, **MAGIC**, **NICER**, **XMM-Newton**, **Chandra X-ray Observatory**, **Fermi-LAT**, **IceCube Neutrino Observatory**, **Himalayan Chandra Telescope**, **ESA Rosetta**, **NASA spacecraft observations (e.g. ACE, WIND, Van Allen Probes, GOES, THEMIS etc.)** and will be actively involved in upcoming projects e.g. the **Thirty Meter Telescope**, the **James Webb Space Telescope (JWST)**, **EUCLID**, **SEAMS**, **Daksha**, **MACE**, **Aditya-L1 mission**, **Cherenkov Telescope Array** and **Large Synoptic Survey Telescope**. The department offers the M.Sc. and Ph.D. degrees as well as a minor in Astronomy supporting a dynamic and rapidly growing community interested in Space Research and Applications. The research activities and experimental facilities have been well supported by various extramural research and infrastructure grants both by National and International funding agencies.

Applicants are strongly advised to visit the departmental website (http://people.iiti.ac.in/~astro/beta_astro/?page_id=24) and the profiles of the individual faculty members before applying for the PhD programme:

- **Siddharth Malu** : <http://www.iiti.ac.in/people/~siddharth/>
- **Abhirup Datta** : <http://iiti.ac.in/people/~abhirup.datta/>
- **Bhargav Vaidya** : <http://www.iiti.ac.in/people/~bvaidya/>
- **Suman Majumdar** : <http://www.iiti.ac.in/people/~sumanm/>
- **Saurabh Das** : <http://www.iiti.ac.in/people/~saurabh.das/>
- **Manoneeta Chakraborty** : <http://www.iiti.ac.in/people/~manoneeta/>
- **Amit Shukla** : http://people.iiti.ac.in/~astro/beta_astro/?page_id=24
- **Rajkumar Hajra** : <http://people.iiti.ac.in/~rhajra/>
- **Anjali Rao** : http://people.iiti.ac.in/~astro/beta_astro/?page_id=24

Categories of Admission:

Please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvt.php> for different categories under which a candidate can apply. **Please note only candidates falling under FA category will be considered for this round of interviews. Candidates who wish to apply under other categories should check the IIT Indore webpage from time to time for the next rounds of advertisement.**

Eligibility Criteria:

Please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvt.php> for the Minimum Educational Qualification and Qualifying Examination. Candidates fulfilling the Minimum Educational Qualification and Qualifying Examination (mentioned in the above link) from the relevant science and engineering disciplines, e.g. Physics, Applied Physics, Astronomy, Astrophysics, Space Science and Engineering, Mathematics, Applied Mathematics, Statistics, Applied Statistics, Earth and Atmospheric Science and Engineering, Remote Sensing, Software Engineering, Information Technology, Data Science, Data Analytics, Engineering Physics, Aerospace Engineering, Aeronautics, Electronics and Communications Engineering, Electrical Engineering, Computer Science and Engineering, Civil Engineering, Mechanical Engineering, Metallurgy Engineering and Materials Science, Biophysics, Biotechnology, Bioinformatics, Chemistry, Chemical Engineering are welcome to apply.

Application Procedure:

PhD Admission in DAASE takes place in two stages:

Based on the application candidates will be invited for the Online Entrance Examination. Shortlisted candidates after the Entrance Examination will be notified via email to attend the Online Interview.

Tentative dates for Entrance Exam: 13 March 2021 and Interviews: 15 March 2021.

Shortlisted candidates for interviews this round will be notified by email tentatively on or before 14 March 2021.

The applicants will be intimated by email ONLY for the entrance test and the interviews. Hence, please state your email id carefully and check your email account regularly. Please check your SPAM folder regularly as well, just in case you are expecting to be shortlisted, and do not receive an email from us.

Online Application Form:

Candidates must apply ONLINE through our website: <https://academic.iiti.ac.in:8443/nregistration.jsp>

All applications received by 12 March 2021 will be considered for this round of Entrance Examination and Interview. Please note only candidates falling under FA category will be considered in this round.

Please note an incomplete or not properly filled application form (found in any stage) will not be considered for further processing.

A Video Presentation from You:

If you have done any project during your Bachelor's or Master's please **make a 5 min video presentation (showing your face and slides)** on that project and **upload it** along with a pdf version of your project report in this Google portal – <https://forms.gle/D1aRd2sYrvqd3j8T7>

In case you have not done any project, **choose your favourite topic in science or engineering** and **make a 5 min video presentation on it** and **upload** that video file in the above portal.

You can use any software to make video presentation. There are some free softwares that you may consider useful e.g. OBS – <https://obsproject.com/>,

vokoscreen – <https://linuxecke.volkoh.de/vokoscreen/vokoscreen.html> etc.

Recommendation Letters:

The candidates should also arrange to send **TWO** letters of recommendation (in the specified format available in the application portal) from the referees listed in the application form. These letters should be sent by the referees directly to both the email ids: dpgcastronomy@iiti.ac.in and astro-office@iiti.ac.in before the application deadline that is **12 March 2021**. Please make sure that **one of the referee** is a faculty/scientist from the last institution/university that you have attended. Please note your referees will not receive

automatic email notification for the recommendation letter. You have to request them to send it to the above email ids before the deadline.

Application Fee:

Please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvt.php> .

Supporting Documents:

Please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvt.php> .

Motivated students with outstanding academic performance in relevant Science and Engineering disciplines are desirable.

All shortlisted applicants are required to have ready scanned copies of all the required supporting documents (this includes the application form, application fee payment receipt, recent passport photographs, all relevant certificates, results/score cards/rank cards of the relevant qualifying exams and any other documents necessary to establish the claims made by them in the application as per the main PhD advertisement of the Institute) when they are invited for the interviews.

For any queries please contact:

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Email: dpgcastronomy@iiti.ac.in; astro-office@iiti.ac.in .