

Advertisement for Admission to Ph.D. Programme (November, 2021)
Department of Astronomy, Astrophysics and Space Engineering
Indian Institute of Technology Indore
Simrol Campus, Khandwa Road, Indore – 453552

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 department 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 with Statistical Inference, Galaxy Clusters and Large Scale Structures, Computational Astrophysics, Neutron Stars, Pulsars and Black Holes, Transients, Active Galactic Nuclei, Machine Learning and Big Data, Radio and X-ray Observations, Instrumentation related to Radio Astronomy and Space Payloads, Antenna Design and Fabrication, Galaxy and Interstellar Medium, Star and Planet Formation, Exoplanets, 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, Climate change, Atmosphere and Cloud Physics, 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**, **Large Synoptic Survey Telescope and Tianlai**. The department offers the M.Sc. (Astronomy) and Ph.D. degrees as well as a UG minor program in Astronomy. In addition, the department is also offering two new PG programs M.Tech. (Space Engineering) and M.S. (Research) 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://astronomy.iiti.ac.in/>), faculty (http://astronomy.iiti.ac.in/?page_id=24) and PhD student profiles (http://astronomy.iiti.ac.in/?page_id=26) and homepages of 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** : <https://sites.google.com/iiti.ac.in/welcome/home>
- **Rajkumar Hajra** : <http://people.iiti.ac.in/~rhajra/>
- **Anjali Rao** : http://astronomy.iiti.ac.in/?page_id=24

Categories of Admission:

Please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvvt.php> for explanation on various admission categories for PhD students.

Eligibility Criteria:

Please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvvt.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 an **Online Entrance Examination. Shortlisted candidates after the Entrance Examination will be notified via email to attend the **Online** Interview.**

Tentative dates for Entrance Exam: **12 November 2021 and Interviews: **13 November 2021**.**

Shortlisted candidates for interviews will be notified by email tentatively on or before **13 November 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 (Compulsory**):**

Candidates **MUST** apply **ONLINE** through our portal: <https://academic.iiti.ac.in:8443/nregistration.jsp>

All applications received by **10 November 2021 will be considered for this round of Entrance Examination and Interview. Please note an application with an incomplete or not properly filled application form or lack of self attested copies of supporting documents (found in any stage) will not be considered for further processing.**

Uploading of Supporting Documents (Compulsory**):**

Once you have completed your online application via the above mentioned portal, you will next **have to submit self-attested scanned copies** of all of your **supporting documents** via this Google form –

<https://forms.gle/RyMrdbLnDAT4ToF67> by **10 November 2021**. This includes the **signed application form, application fee payment receipt, all relevant mark sheets and certificates (starting from class 10 to the highest degree that you have), results/score cards/rank cards of the relevant qualifying exams, category certificate (if applicable), identity proof and any other documents necessary to establish the claims made by you in the application form** as per the main PhD advertisement of the Institute. Please combine all supporting documents **into a single PDF file** (having size **less than 25 MB**) and upload them in the Google form. In the same Google form, you will also need to upload **a high resolution recent passport photograph of yours (file in jpeg, jpg or png format having size less than 5 MB)**. Please keep the same set of scanned copies of supporting documents ready if you are invited for an online interview.

For a detailed explanation on the necessary supporting documents please refer to the main PhD Advertisement of the Institute available at <http://academic.iiti.ac.in/phdadvvt.php>

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 the same Google form – <https://forms.gle/RyMrdbLnDAT4ToF67> by **10 November 2021**.

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 in your phone or computer to make video presentation. There are some free softwares that you may find useful e.g. various screen recorders for Android, OBS – <https://obsproject.com/>, vokoscreen – <https://linuxecke.volkoh.de/vokoscreen/vokoscreen.html> etc.

Recommendation Letters (Compulsory):

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: dpgc-aase@iiti.ac.in and aase-office@iiti.ac.in **before the application deadline that is 10 November 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 any automatic email notification for the recommendation letter. You have to request them to send it to the above email ids before the deadline. Please ask them to use only the format provided with our advertisement and they should add in the letter their scanned signatures with date.**

Application Fee:

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

For any queries please contact:

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