

Center of Excellence in Space Sciences India (CESSI)

The Center of Excellence in Space Sciences India (CESSI) is a multi-institutional Center of Excellence hosted by the Indian Institute of Science Education and Research (IISER) Kolkata and has been established through funding from the Ministry of Human Resource Development. CESSI aims to explore the Sun's activity, generate the understanding necessary for space weather forecasting, hunt for gravitational waves, support national space science initiatives, participate in international capacity building activities and pursue public-private partnerships in space science research.

Minimum Eligibility criteria:

We seek highly motivated candidates with MS/MSc/MTech degrees with at least 55% aggregate marks or equivalent grade-point average (A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC non-creamy layer/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates) in Physical Sciences, or allied disciplines that are deemed suitable by the selection committee for PhD research in the space sciences. Additionally students with 4 Years bachelor's degree with 75% marks and having their own fellowship (CSIR, UGC etc.) now are eligible for the PhD Programme of IISER Kolkata.

Final year post-graduate students who are yet to obtain their degree may also apply; however, they must have completed their degree at the time of admissions with the requisite aggregate marks. Preference will be given to candidates with their own PhD fellowships, such as, UGC/CSIR-NET JRF, INSPIRE or any other equivalent fellowship. Outstanding candidates, who do not have any independent fellowships, may also be selected if deemed suitable by the selection committee; however they should have qualified in at least one of the following exams: GATE, JEST, CSIR/UGC NET-LS.

Channel 1: Self Funded category

For candidates in the self-funded category, apart from satisfying minimal eligibility criteria all candidates must have their own PhD fellowships, such as, UGC/CSIR-NET JRF, INSPIRE or any other equivalent fellowships. Please note that people who have INSPIRE FELLOWSHIP, should only apply if they have the "Provisional Offer of Research Studentship under INSPIRE Fellowship".

Following is the list of broad research areas where CESSI is willing to take PhD students:

- (a) Computational Solar Physics, Space Weather, Star-Planet Interactions
- (b) Astrophysics:
 - (1) Numerical modelling of radiation from astrophysical plasma by Monte Carlo methods
 - (2) General relativistic fluid dynamics simulations.

Channel 2: Institute Funded category

Institute funded positions are available in the following areas/topics:

Astrophysics [Dr. Sudip K Garain]

- (1) Numerical modelling of radiation from astrophysical plasma by Monte Carlo methods
- (2) General relativistic fluid dynamics simulations.

[Prof. Rajesh Kumble Nayak]

(1) Gravitational wave astronomy

Selection Procedure :

Note that these are the minimum eligibility criterion. The selection committee will short-list a certain number of candidates based on their applications, inform them through email of this short-listing, and may seek additional details, including recommendation letters. The short-listed candidates will subsequently have to appear for an interview by a panel of experts and the final selection will be based upon the recommendation of this expert panel. The interview will be held online which will be communicated to the candidates.

Reservations for candidates will be as per Govt.of India norms.

Required Documentation and Instruction for the Online Application :

1. You will need a functional (personal) email-id for completing the online application. If you do not have one, create one before you apply.
2. Please have your picture (soft copy, preferably in JPG or PNG format) ready.
3. Please read the eligibility criteria above carefully.
4. The applicants should open the link (<http://apply.iiserkol.ac.in/application>) and under the option Apply For, choose "PhD in Space Sciences (Autumn 2025)".
5. Complete the application form as instructed. The form can be opened and edited/corrected until the last date.
6. In the field Remarks within the online application, write a statement of purpose, outlining your motivation for pursuing a PhD in sciences, and why you are interested in CESSI; this should be limited to 500 words. We suggest that you first write this using your favourite text editor and subsequently start the application process during which you can cut-and-paste the same into the online form.
7. You must complete your application. Incomplete applications will be rejected.
8. Applicants should save the completed application form and take a printout of the same. Those who are short-listed for the interview should bring a signed hard-copy of the application with them at the time of the interview.

Contact Us: cessi@iiserkol.ac.in

CESSI Autumn 2025 PhD Timeline :

- PhD application portal opens: 9th March 2025
- Application portal closes: 19th May 2025
- Publication of shortlist for the Interview: 26th May 2025
- Selection Interview window : 9.06.25- 20.06.25
- Publication of PhD interview results by: 26.06.2025
- Pre-registration portal opens: 26.06.2025
- Pre-registration deadline: 28.07.2025
- PhD Registration (as per Academic Calendar): 30.07.2025