

IISc-CDS Admissions 2023 Lab Familiarization Program

12 May 2023



Interview procedure

- You would have received an email with date and time (session) of your interview.
- **JEST applicants: interview letter from the department to be sent by tomorrow.**
- Please report to the venue 45 minutes early.
- Written exam – 45 minutes, Multiple Choice Questions and programming questions.
- Oral interview - after the written exam, basic and advanced topics based on your lab preference.

Written exam

- **Before you attempt the test, we recommend that you take the practice test right away to make yourself familiar with the HackerEarth testing platform and check your hardware/software compatibilities.**
- Please fill your application details in the test form before you start with answering the questions. You should fill in the same email address as used in your application form and also fill in your IISc application ID for the Research program.
- Do not close the browser or tab of the test interface before you submit your final answers.
- You should not move away from full screen browser window during the test. If you do so, the test may be terminated.
- Ensure that you are attempting the test using the same email ID as in your IISc application.
- You should not use any external help from anyone else or books, notes. You should not access any online sources like websites, ChatGPT, etc. If you do so, the test may be terminated.
- Attempt the questions in your order of comfort. There is no negative marking.
- Your answers are automatically saved after you click on each the MCQ choice. For programming questions, you must submit the solution for it to be saved.

Oral interview

Only shortlisted candidates from written exam will be appear for oral interview

Syllabus

- Basic Topics: Linear Algebra; Probability & Statistics; Programming, Data Structures, Algorithms; Numerical Methods; Ordinary Differential Equations; Discrete Mathematics. Final year undergraduate level preparation is required.
- Advanced Topics: You will be questioned on the topics related to labs selected in the student information Google form. The topics for each lab and the prior training expected are listed in the brochure.

Google form

Assessment depends on google form choices – interview panels, basic and advanced topics etc.

Please note that you cannot change the labs later!!!

Lab videos

- Algorithmic Techniques for Computational Genomics (ATCG): https://www.youtube.com/watch?v=VBzNqGk_Y7U
- Biomedical Image Analysis (BioMedIA)
Lab: [BioMedIA_lab_video.mp4](#)
- Biomolecular Computation Laboratory (BCL): [BCL_intro - 2023.mp4](#)
- Computational & Statistical Physics Lab (CSPL): [CSPL_Intro-2023.mp4](#)
- FLOW Analysis and Multi-physics simulations at Extreme-scale (FLAME) Lab: [FLAME_Intro](#)

Lab videos

- MATRIX Lab: [Lab Intro](#)
(Materials-physics & Algorithmic Techniques Research In eXtreme-computing Lab)
- Numerical Algorithms and Tensor Learning Laboratory (NAT Lab): https://www.youtube.com/watch?v=fH8R5qIS9_w
- Scientific Machine Learning and Operations (STARS) Lab: <http://cds.iisc.ac.in/faculty/sashi/>
- CSL (Cloud Systems Lab): <https://www.youtube.com/watch?v=ypjTn959Vfo>
- DREAM Lab (Distributed Research on Emerging Applications & Machines): https://youtube.com/playlist?list=PLBprss_o1Cz6s5yeTZPR4GSIUySNhyMch

Lab videos

- MARS Lab (Middleware and Runtime Systems): <https://www.youtube.com/watch?v=6yhkcWWu-b4>
- Natural Language Processing (NLP) Lab: [NLP-Lab.mp4](#)
- Vision and AI Lab (VAL – formerly Video Analytics Lab): [Overview of VAL Brief.mp4](#)
- VCL (Visual Computing Lab): <https://www.youtube.com/watch?v=jic4xdRsZAg>

Contact

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- Refer to our familiarization video from last year: <https://www.youtube.com/watch?v=PBvVjJkG2bQ> for more details.