FAQ on Faculty Recruitment@IISc

1. What are the top three requirements to get a faculty position at IISc?

Demonstrated excellence in research as evidenced by top class publications and supported by strong letters of reference, a clear vision for your future research as articulated in your research statement, a commitment towards mentoring the next generation scientists and technologists as articulated in your teaching statement.

2. I am curious to know about the research environment for an entry-level faculty at IISc.

To sum it up in one phrase, the mantra in IISc is research. We have very high expectations from our faculty from day one. The focus is on consistent and high impact publications.

To enable this, IISc provides some of the best support available in the country for entry-level faculty members – start-up grant, travel grant, competitive young engineer awards, a cumulative professional development allowance, well-aided mechanisms for interaction with the industry and other professional bodies, and institutional support for undertaking research and consultancy projects. The start-up grant provided by IISc is very generous and amounts of Rs. 1.5 to 2.5 crores (USD ~175,000 to 300,000) are also heard of, which can be used for purchasing equipment, initial laboratory setup, travel to national and international conferences, etc. Further, at a regular interval, the institute provides grants for purchase of research consumables, and sometimes minor equipment.

3. What is the procedure to apply for a faculty position at IISc? Can you elaborate on frequencies of openings and general trend of faculty openings in the coming years?

The application can be submitted through an online portal:
https://iisc.ac.in/careers/faculty-recruitment/

More information on how to apply is available here: https://iisc.ac.in/about/faculty-corner/how-to-apply/

The following webpage provides details of the advertisement: https://iisc.ac.in/wp-content/uploads/2022/10/IISc_Rolling-Faculty-Advertisement-Final.pdf

IISc has a rolling advertisement, so you can apply at any time. Departments scrutinize the applications as they arrive and based on need. The department then calls the candidate in for a visit. Typically, these visits last two days. Many may visit, but the department may shortlist a few and then make a case for hiring them. The shortlisted candidates will then be

called in for an interview, either in person or via Skype. But you would have most likely visited the Institute for a couple of days after your application was sent in.

4. How many years in advance should I start applying?

A good time to start your application process would be about 6 to 9 months prior to your anticipated joining date. It will be helpful if the candidate visits as soon as he/she finishes PhD and starts meeting with the faculty members. If you are visiting India for any reason while you are still a (senior) PhD student or just started your post-PhD assignment, please contact the chairs of the department(s) you are interested in. If there is a match of interests you will be invited to visit and give a talk at the department(s).

5. How do I network with faculty there?

The best way to network is to reach out to faculty working in areas you are interested in. The contact information will be in the department websites, or in the faculty's personal websites. Another approach will be to send an email to Chairperson of the department, with an expression of your interest to network and your intention to apply for the department, and request for a talk or seminar, even if online.

6. How long is the faculty recruitment process?

Faculty recruitment process could vary between 3-6 months. That said, the institute is trying to adopt a fast-track hiring model where decisions are made within 3 months of application submission.

It is expected that you can start communicating with the department 6 to 9 months to a year after finishing PhD. Note that some departments at IISc require three years of postdoc before applying (although this is not a mandatory requirement of the institute), so please reach out to the Chairperson of the department. A formal application can be sent in about 6 to 9 months prior to your anticipated joining date.

7. What is the interview process like?

There are usually three stages in this process, which varies according to the division and department. First, the department will evaluate the application and call the candidate for an interaction. The preliminary evaluation may also involve online presentations to a smaller core group of faculty in the department, and then an in-person presentation to the entire department. If the department likes your candidature, the application is forwarded to the Divisional Dean's office and you will be called for the second stage, i.e., interaction with the Deans of the institute and faculty outside your department. If you clear this stage as well, you will be called for the third stage, sometimes called the "selection committee"

round, where the director, deans, chair of the department, and external examiners will interview you. If you pass all the rounds, you will be made an offer.

The typical timeline for hiring can last between 3 to 9 months, depending on the number of applications received, the availability of the Deans, Director, and external members, and any ongoing policies of the Govt. of India. The institute is working to fast-track the application process this year.

8. Are candidates encouraged to apply for funding and fellowships prior to applying for a position?

The Government of India has come up with attractive fellowships such as INSPIRE and Ramanujan fellowships. Candidates are welcome to explore these prior to applying. You should preferably apply for these before or at the time of applying for a faculty position. Having said that, it is not mandatory for you to apply for these fellowships before you apply for an IISc faculty position.

9. I want to update my profile and publications in my application. How do I do this?

The best thing would be to send an email to the chairpersons of all the departments you have applied to with an updated profile.

10. What types of positions would be open for junior faculty member (e.g. post doc with 4 years of experience)?

An Assistant Professor position would be the right position for such a candidate.

11. What are the circumstances where post doc experience is waived for faculty applications?

For exceptional candidates this requirement can be waived. Also, depending on the circumstances, certain kinds of industrial research experience can also be considered as postdoctoral experience.

12. Will IISc take its own students?

Yes, provided they have accumulated sufficient non-IISc post-doctoral experience with an established research group and have demonstrated a high level of achievement and productivity beyond their IISc track-record. They should also demonstrate independent novel research, beyond your IISc work.

13. What opportunities exist for foreign citizens/OCI card holders for a long term career?

Applications from citizens of countries other than India are also most welcome. The only difference would be that additional procedures and clearances will be required, which are of a minor nature and which the Institute will handle together with the potential faculty by working closely with the candidate.

14. As a candidate from industry, I wish to know the yardsticks by which someone like me would be compared against, say, a university post doc, for positions at IISc. A lot of my current work cannot be published due to IP reasons, hence a discussion with possible examples of successful candidates with similar background can provide valuable guidance.

While evaluating an application from an industry researcher, we sure consider the specific nature of the work the candidate is involved in and evaluate the application in a holistic way. We have a many such researchers who have joined us as faculty members. E.g., Gaurab Banerjee spent several years at Qualcomm before joining IISc as an Assistant Professor. We have a many such researchers who have joined us as faculty members. Prof. Anurag Kumar spent several years at Bell Labs before joining IISc as an Assistant Professor. Other examples are Bharadwaj Amrutur, Rajesh Sundaresan, Neelesh Mehta, Gaurab Banerjee, and many others.

15. Is it possible for a person with an engineering PhD to apply for a faculty position at a basic-sciences department in IISc, provided that the research area is relevant to that department?

Yes, this is possible. We have Electrical Engineers working in the Centre for Neuroscience and the Molecular Biophysics Unit. The candidate's area of expertise and research must be of interest to the department.

16. What is the institute's policy towards independent researchers with fellowship such as DST-INSPIRE, Ramanujan Fellowship?

These are very useful fellowships to have. Candidates are welcome to explore these prior to applying. You should preferably apply for these before or at the time of applying for a faculty position. Having said that, it is not mandatory for you to apply for these fellowships before you apply for an IISc faculty position.

17. Is there an age limit for faculty positions in IISc?

For an Assistant Professor position, there is a notional limit of 35 years. However, for exceptional candidates, this age limit may be waived. We have hired faculty at 28 in CS and at 38 in biosciences. We evaluate your performance thus far, and your future career potential.

We do prefer candidates come as quickly as possible. While generally a long postdoc may be viewed negatively by some departments, if you have used your time in your long post-doc in a positive manner, the application may be viewed positively. We recognize that people in some research areas have longer training periods; but the greater the experience, the greater the expectation. You may be interested in knowing that IISc has other positions as well which are not regular faculty positions – Centre for Brain Research, RBCCPS, etc.

18. Do you prefer those that work on unsolved questions or just a high impact article as criteria for faculty positions?

For faculty positions it is important that the candidate exhibits a track record of research excellence. IISc encourages applications emanating from a wide variety of styles ranging from tackling fundamental problems to translational activity. Faculty members at IISc have the freedom to decide their approach based on an intelligent assessment of the local environment and their own interests and abilities.

19. What is IISc's internationalization strategy?

IISc encourages faculty members to collaborate with top foreign institutions, develop joint programs for research through various bilateral funding programs, exchange students and project their work at international meetings. Seed money is available to catalyze such collaborative efforts. PhD students get funds to travel to at least one international meeting during their career at IISc. Faculty applicants with foreign nationality are encouraged to apply. The institute has a special drive to recruit international students and provides them a full scholarship.

20. Please give examples of research funding/startup packages. What is the duration for which a startup grant may be used?

IISc is very generous in providing start-up funding. Depending on the field of research and requirements, the funding can vary from Rs 50 lakhs (for purely theoretical work) to more than Rs. 2 Crores, based on the merits of the case. The typical expectation is that your start-up grant is $1/4^{th}$ of your total budget for the next 4-5 years of your initial career at IISc. The startup grant will be available to the faculty member within a few days of joining. Normally, the startup grant is for a one-year duration; but extension by a few months is possible on request with proper justification.

21. To what extent is there flexibility in applying to a department different from your PhD-expertise department? Will such a faculty have flexibility in the courses he/she wants to teach?

Three neuroscience faculty have been trained as electrical engineers. Manoj Varma has been trained as aerospace engineer, joined the ECE department, and in now in CeNSE. So there is flexibility to apply to another department. As already indicated, the department must be interested in your area of research. Your research expertise and statement must be attractive to the department. Teaching requirements vary by department, so please contact your department for more information. The usual list of courses is usually available in the department's website.

22. I have an interdisciplinary degree from two different departments; can I apply to two departments in IISc?

Yes, you can apply to up to three. One, two, or all three departments may consider your application. If more than one wants to offer you a position, you may be given the option of one or another. It is also possible that an offer will come from one department, but you may also have an associate faculty position in the other department. Note that some of the centers in the interdisciplinary sciences don't have core faculty. In such cases, you will be hired in one of the existing departments, but you will be given an associate faculty status in the interdisciplinary center.

23. If I apply to multiple departments, do we give a preference list?

You can indicate up to 3 departments based on your preference. Your application will go to all the indicated departments for consideration. You can even potentially change your preference list based on your interactions at each department. In some cases, joint hiring is also possible across two departments.

24. Are the applicants expected to have teaching experience?

Most of us have learnt teaching on the job. A well-thought out teaching and research statement is however expected as a part of your application. You could highlight your teaching experience as TAs, if you have some. Our view is that you will have had good exposure to high quality teaching as a graduate student, and you will likely become a good teacher yourself by imbibing the best practices that you may have experienced. Several resources and textbooks are also available to help improve your teaching.

25. I have no teaching or industrial experience. I am currently a PhD student. Can I apply?

You should have finished your PhD and have your degree certificate on hand before applying. A few years of post-doctoral experience, or industry experience that is of relevance to your department, will also be helpful. There have been cases where we have hired without publications during the industry period, but only if we understand the

circumstances and the reason for no publications and if there is significant research potential that is demonstrated via other means.

26. What are the computational resources available at IISc? What kind of supercomputers do we have? If a faculty wants his own machine, will SERC help procure and maintain it?

The supercomputing education resource center (SERC) has several high performance computational facilities, including a petaflop machine. More information is available at: https://www.serc.iisc.ac.in/

There are several national missions and programs, under which IISc has purchased and will purchase several more HPCs. IISc faculty will get sufficient access to these facilities. Apart from this, you have the option to set up your own compute cluster with your start-up grant or with your research projects. If a machine resides in SERC, they will maintain it and will also make it available to other Institute users. If you need it exclusively for your lab activity, then you may have to set up and maintain your own within your lab. Additionally, in recent times, cloud computing has become more accessible and affordable, which you can account for in your start-up grant request and your other project proposals.

27. What kind of students can I get? My interdisciplinary research relies on students with expertise outside the department, and across departments. Is it possible for such students (from other departments) to join and help me with my research?

As an example, you could get interns from biology or chemistry even though you are in Physics. Since UGs must do a project in their final year, they can be very valuable in carrying out such research projects. Simultaneously it will be great research training for them.

We have a large number of summer interns from KVPY, Science Academies, etc.

You can take PhD students from other departments as well, if you are associated with the other department. Alternatively, you can have joint students with another adviser from the other department. Your department could also take students with the background that you need. Neuroscientists often work with engineering students. Mathematicians may hire engineering students into their program.

28. What are the opportunities for foreign faculty? Is there any difference in terms of evaluation?

There is good news. As an Institution of Eminence, IISc has flexibility in hiring foreign nationals. Once in, we treat all passport holders equally for their evaluation. The government has already relaxed norms for hiring Overseas Citizens of India. Earlier foreign

passport holders could only be hired on contract positions. But very soon, with the IoE status, we should be able to hire foreign nationals just as we hire Indian citizens and OCI.

29. Is there a target on the number of faculty?

We want to grow at about 20 faculty per year for the next five years. That means we plan to hire about 30 faculty per year given that we have about 10 retirements per year.

30. Will IISc not hire in an already well-represented area?

We think you should apply even if your area of expertise is already well represented in IISc. You should let the university decide whether they want to hire you or not. It may be that we need more faculty to join to build critical mass in your area. It may be that we need younger faculty in your area.

31. Is there a plan to increase the number of women in engineering?

We have very few women and are keen to add women. But the standards are not lowered. There are many well-qualified women candidates and we want to encourage them to apply. The government has offered special grants and postdocs for women who have had breaks in career. We encourage women candidates to avail of such opportunities. IISc has brought in more than one mechanism to help women facult, such as pausing the tenure clock for maternity leave, young women scientist scholarships, etc.

The number of women students is about 25% - with a high percentage in biosciences. This has created a need for more hostel rooms for women, and we are building one. In summary, yes, we need more women in engineering, and the above are some efforts towards this.

32. What are the evaluation criteria for tenure? Is the focus on publications only, or will patents, teaching, etc., count?

Each candidate, at an appropriate juncture, will be asked to send a comprehensive review report. The report should contain all information related to every dimension of their research, teaching, student guidance, projects and funding, consultancy, administrative works, etc. The report is then given to the department chair who discusses it with a committee of professors. They may give advice to the candidate on how to rework the report or they may take it forward, or they may suggest that the faculty wait to strengthen the case. It is then forwarded with a recommendation from the department. The divisional chair then forms a panel of 10-12 area experts, the best researchers in the candidate's domain, and seeks letters from these experts. Some are suggested by the candidate, and some by the department. Once the letters are received, the divisional chair makes a case to an external and national committee. It is this committee that makes the final

recommendation. It is not that there are a fixed number of associate professor positions or professor positions. Each candidate's promotion is treated separately.

33. What fraction of time does a new faculty member spend in writing proposals?

Success rates of proposals that come out of IISc is high. We typically see that they are well thought out and hit the right objectives. Typically one may spend a week or so per year on writing a good proposal. Typically, faculty have one/two such concurrently running projects.

34. I feel that 3 lakhs for three years may be too little for attending international conferences.

The above money is from MHRD. This is likely to be increased soon. But there are many other means by which you can travel to international conferences and prestigious meetings.

IISc itself has set up a fund for almost 300 additional travels per year, thanks to generous support from IoE and the Tata Trusts. There are also travel and hospitality funds available for visiting collaborating labs/institutions for one to three months. There are additional travel funds for students as well.

But all these aside, if your area of research matches with certain focused activities, e.g., brain research or cyber-physical systems, you may be able to seek funding from sources like the Pratiksha Trust Initiative in Brain, Computation, and Data or the RBCCPS funded by the Robert Bosch Foundation.

35. What are expectations from a good application? How important is the research statement?

First and foremost, we look at your PhD and postdoc performance. If we see that the candidate has demonstrated strength, we seek letters from letter writers. These must be really strong letters. Please note that most letters are positive. So we are looking to see if letters say that you have done something special. Please give some thought to your research statement. We look at it very carefully to see if you have articulated a coherent vision for your future research.

36. What is IISc's reservation policy for hiring?

IISc follows a reservation policy as per standard norms approved by its Governing Council. The application form will have a location where the category information will be specified. The applications will be processed in accordance with the applicable reservation policies. The advertisement provides more details on this. We also have special drives for candidates belonging to reserved categories.

37. What is the process for offering a new course?

Departments have two kinds of courses – core and elective. Typically, a faculty member teaches one core course and one elective a year. Some teach fewer, some teach more. We have a variety of courses, theory, practice, and even courses that teach people to do research. The faculty member sends a proposal to the department curriculum committee which discusses and vets the course. A number and code for the course are assigned by the department curriculum committee and confirmed by the senate curriculum committee. Even though there is a procedure to follow, there is quite a bit of flexibility that is provided to the faculty.

38. Is there autonomy in selecting students and post-doctoral fellows?

There is a lot of autonomy, but also variation across departments. Allotment of PhD students is done early in biology. Theoretical areas do their allocation after a year. On the selection itself, typically the department identifies an eligibility criterion (e.g., valid GATE score or Masters' GPA) and then asks the students that meet the requirements to come for an interview. Final selection is based on an interview.

Post-doctoral program – since funding from projects will be managed directly by the faculty, the choice is entirely left to the faculty and will be based on alignment of interests of the post-doc's with the faculty member's line of research.

39. Can you say something about industry-funded research and consultancy, and how it could add to salary?

Unfortunately, unlike the US system, there is no personal salary or top-up from government research grants. That is because we have a 12-month salary. From industry-funded research projects, those funded via the Foundation for Society for Innovation and Development (FSID), or from consultancy projects through the Center for Scientific and Industrial Consultancy (CSIC), there can be a component for personal remuneration. A certain percentage of this (usually 30%) is taken as overheads by IISc / FSID. The remaining amount is taxable income to the faculty.

40. Where do students go after graduation?

We have had a steep increase in the number of graduates in the last few years. It jumped from 300 per year, two years back, to 400 per year. Where do they go? Most students go on to do a post-doc, industry research jobs, academia, etc. The office of career counselling and placement helps guide students.

41. What is it that has changed which makes more PhDs take up industry positions?

Earlier, we didn't have a formal placement process for PhDs. We now have an office for counselling and placement, and it handles PhD placements as well. This has helped place many graduates.

42. Is there a provision for a PhD student or a post-doc to visit the Institute for a year?

We encourage visits by young researchers. It is possible that local expenses can be taken care of by IISc. Speak with your department chair or host. Travel is typically arranged by the visitor's parent institution.

43. Can you tell us about housing for new faculty?

Every new faculty is eligible for housing inside IISc; however, the specific size and type of house depends on the Central Govt. pay scale they are hired at. Housing allotment meetings usually occur once in 4-5 months, and until you are allotted a house you can stay in a temporary accommodation (subject to a 9 month limit). Typically, assistant professors get a 2 bedroom apartment; however, under very pressing circumstances, the director's discretion may be used for different type of housing. Accommodation may be in the IISc main campus or in the Vijnanapura campus, a satellite residential campus of IISc.

44. Is there flexibility in the joining date?

When you get your first offer, you get two months to decide. You may be given more time to decide at the discretion of the department and administration, if you provide justification.

Usually, you get up to four months to join the institute after the offer letter is sent. This can be extended by a few more months provided you give suitable justification.

45. Are there incentives for dual career couples, with different research directions and complementary expertise?

We do have several couples in the institute and encourage couples to apply. We encourage them to be in different departments. There is no guarantee that if a couple applies jointly and approximately one half of the couple gets the job, the other will as well. However, Bangalore is a large metropolitan city and has many technical jobs, including in industry, government R&D labs, ISRO, DRDO, private research firms, start-ups, IT, electronics, and biotech among others. There are also possible jobs in the newly established Centers at IISc.

46. I heard IISc has schools for children of faculty. What can you say about KV IISc?

Yes, there is a KV on campus, and IISc staff and faculty get top priority for their children. It is also convenient in another sense in that parents' sabbatical leaves are recognized and their children are readmitted once back from the sabbatical leave. That said, the school is

modest in terms of the resources it has available. It is largely run by the KV Sangathan. Class sizes may be large, and students' abilities vary significantly across the population. Again, Bangalore being a large city has several schools in and around campus, if you wish to explore other opportunities.

47. What kind of teaching experience do you expect in the applicants?

Teaching is a very important component at IISc because we are a university. It is our view that our recruited faculty have been exposed to good teaching practices as students, and will adopt or improve upon them. Faculty typically teach one core course and one elective in the engineering departments. In the science departments, we encourage all faculty to teach. Many share teaching loads.

Some years back, the impression was that IISc had low teaching requirements. But that is no longer the case. With the UG program in several departments, plans for UG programs in several more, the M.Tech program, the M.Sc. program, the integrated PhD program, and the PhD program, the teaching load is at par with other premier institutes. But there is sufficient flexibility and choice on what you want to teach.

48. Are faculty hired in the division of interdisciplinary research?

Some departments/centres (CeNSE) have core faculty while some others don't (RBCCPS). If you want to apply to centers without core faculty, e.g., RBCCPS, we will coordinate with a core department, hire you there, and house you in RBCCPS.

49. How does funding for research work at IISc?

When you join, there is a start-up grant which is competitive with universities abroad. Once you get started up, the expectation is that you raise your own funds for your research. Things are quite green in India compared to elsewhere. Chances of getting funded through government grants (e.g., Anusadhan National Research Foundation (ANRF), Department of Science and Technology (DST), Ministries related to your work, Department of Atomic Energy (DAE), etc.) are much higher compared to opportunities in the US. Additionally, up to 5 of your students are funded by the institute at any given time, so your fund raising can focus on your research needs alone – manpower for lab assistants, post-doctoral fellows, etc. Further, summer salary is paid for all faculty, unlike in the US.

50. What is the strategy to increase the number of post-doctoral fellowships in India?

At a national level, the government has increased the number of postdoctoral fellows, e.g., the ANRF National Postdoc Fellowship, the DST postdoc fellowship, fellowships and calls from different industries and philanthropic organizations, etc. IISc has also increased the number of postdocs that it can fund as part of IoE status. IISc also has other very

prestigious postdoc fellowships available, which can be found at: https://iisc.ac.in/post-docs/

51. Does IISc hire mostly at the junior level or are there higher positions also?

IISc typically hires at the Assistant Professor level. If outstanding candidates with experience apply, we do hire at the Associate Professor level. All Associate Professors are hired as the tenured faculty, which explains the low number of inductions (average of 4 to 5 per year) at the Associate Professor level. We normally do not directly hire full Professors; they are hired by invitation only. In exceptional cases, full Professors are invited directly by the highest body of IISc, its council. Though rare, this too has been done.

52. Is there a tenure process?

The tenure process for assistant professors is based on peer reviews and is described in: https://www.iisc.ac.in/tenure-track-assessment/

53. Is there a time limit to get new funds after the start-up grant has been granted?

There is no such limit. When you visit us, we seek information from you on what you need. We also seek information on your plans for the next five years. When you join, or just a little earlier, you write a proposal that will enable you to get the initial grant quickly. You then apply for other grants in parallel. We have several experienced people who can suggest funding sources.

54. How important are publications? How are collaborations viewed? How do these impact promotions? What are student publication requirements?

The mantra in IISc is research and innovation. We have very high expectations from our faculty. Publications are important but other dimensions such as independent guidance of students, teaching, sponsored projects, industry collaboration, and high impact innovation are given due importance. The focus is on consistency and impact, not just numbers.

You can certainly collaborate. This is very important and encouraged. But we would also like to see your lab mature and make good on its own. This will be assessed at the time of your promotion evaluation. The very best experts in your domain must say the very best things about your contributions and the impact you've made.

As for students, there's no definite rule that each must have a certain minimum number of publications for graduation, but they should publish in the best venues.

55. How much time do we have after we join before we start teaching a new course?

It very much depends on when you join and how ready you are. IISc is very flexible on these matters. Discuss with your department Chairperson. If you join in May, you will be prepared to teach from the August semester. Otherwise you may have to wait for your next semester.

56. Do you have to be an Indian citizen to be a faculty? Would you also be limited in the grants you can apply for? What about security clearances, etc.?

We can hire foreign faculty. Because of the new IoE status, we have more flexibility on hiring foreign citizens. If you are an OCI, there is no issue. We may need to do some additional paperwork, on which we will work with you.

On restrictions on grants, we don't have the full picture, due to the recent change from SERB to ANRF. Stay in touch with us, and we will be able to give a clearer picture soon.

57. Wellcome Trust - DBT fellowships – they have specific sponsors, hosts, etc. Do these go hand in hand with specific positions?

If you have been offered a position at IISc, and still have some time to join, we will help you with the application on such fellowships. If you want to apply for the fellowship and would like the Institute to be a host, do contact the Chairperson of the department where you will like to be hosted; the Chairperson will suggest the best course of action.

58. Apart from faculty positions, what are the other staff positions one can apply for?

We have many openings for facility managers, CBR research staff, RBCCPS MTSs, DMTSs, teaching instructor positions, 5G technical staff in ECE/RBCCPS.

59. What is the teaching-research composition at IISc?

The focus is more on research. We all teach because we want to train our students. But we are primarily a research university. The only permanent positions are faculty positions. All others are contractual (teaching only positions, research only positions, etc.).

60. Does IISc encourage faculty to go on sabbatical leave?

Yes, sabbatical leave can be availed every seventh year. It can be of six months or of one year duration. We have many other kinds of leave. Details on the leave types available to IISc faculty are at: https://iisc.ac.in/iisc-leave-rules/

Every summer can be used as vacation or to do research. If you stay in the Institute and work during summer, you get one month of earned leave which can be flexibly used later. You could also get Entrepreneurship leave to start a company.

There are of course some minimal constraints – your time outside the Institute should be less than 2 years within the last 7 years to avail certain kinds of leave.

61. Can you speak about publication counts expected for faculty positions, and how first author versus co-author is viewed?

This is field dependent. The department to which you will apply will evaluate the applications and send a recommendation. Numbers to some extent, impact of your contributions to a greater extent, recommendation letters – all of these matter. We pay a lot of attention to what your recommenders say about your contributions and about your potential.

62. How easy is access to clinical data from hospitals, say like CMC Vellore? Can money be used to purchase equipment and house them in hospitals?

We now have excellent MRI machines on campus. We also anticipate that we may get time at a neuroscience facility in a nearby hospital. The Centre for Brain Research has embarked on a 10,000-person observation program to study the ageing brain.

63. Some departments have focus areas available online. Others don't. Is there a resource that will help us with a 30 minute Skype call to help us orient our applications?

We suggest that you reach out to the department and start a conversation with the department chairperson. Additionally, venues like the Young Researchers Meet are available to ask your questions.

64. How much independence will I have to develop my own new course?

There is a lot of flexibility in course design. Your goal may be to have your students to develop expertise in a specific topic. You may have a specific proposal to do this. The department curriculum committee, which vets all new course proposals, is usually very flexible to allow novel teaching and grading methods. Perhaps the core courses will have some conformity requirements.

65. Is there significant exchange with researchers abroad? Are there exchange students?

There are a lot of bilateral programs at IISc: Indo-US, Indo-French, Indo-Australia, etc. There are also many specific university collaborations with IISc. They are well run and well-funded, and some of them allow PhD co-supervision, travel, stay, etc. We create these programs as we go.

As for foreign travel, faculty get 3 lakhs every 3 years which enable them to travel abroad for conferences and workshops, which is likely to be increased soon. Additionally, we have 300+ competitive travel grants across the institute. Further, students get 2 lakhs once in their PhD. There are about 50+ additional grants available to students, thanks to generous funding from the Tata Trusts.

66. Can foreign researchers travel to India for collaborations?

There are many schemes by which we can get eminent scientists from abroad come to India for lectures, interaction and collaboration: GIAN, VAJRA, Indo-US, Indo-French, Indo-Danish, Indo-Sweden visitation programs, chaired professorships. We refer you to: https://www.iisc.ac.in/about/endowed-chairs/endowed-visiting-chairs/

With the IoE status, we have increased the number of such visitors and foreign post-doctoral fellows.

67. What kind of relaxations are available for women faculty on account of maternity?

The tenure clock pause for maternity reasons: the tenure clock can be paused for one year per child, for up to two children, during the initial years. More information on maternity leave is available at: https://iisc.ac.in/iisc-leave-rules/

68. Earlier I used to work on bacterial cells and now I work in cancer research. Would the switch be considered negatively?

Please note that we recognize that new needs arise, that people rise up to the challenge, and this may involve a switch. But we look for demonstrated expertise either in the research area of hiring or in a related area. Your CV should demonstrate excellence and achievement in that related area and should not just be an incremental research proposal in a new area.

69. Will a post-doc of more than 3 years count in some way?

This counts as assistant professor experience only if you were already an assistant professor during those years.

70. We usually get trained for solving the problems that arise here (abroad). Will they be relevant in India? Should we return?

Do train to be the best wherever you are. You may be responding to the societal needs in that location. But chances are we will need that expertise in India. You can always adapt and apply what your learnt and the skills you developed abroad to solve problems in India.

71. Is a post-doc experience required for applying for a faculty position?

In principle you can apply without post-doctoral experience. However, many departments require a postdoc after your PhD. Their logic is that the extra time after your PhD will give you a new perspective. See the world of research from a new standpoint, outside that of a student. This new perspective will be enriching to both you and to IISc.

72. Does industry experience count?

Yes, many of our engineering faculty candidates have come after a stint in the industry. The initial years are viewed as on par with post-doctoral experience. This is of course not so much the case in the sciences.

73. How common is the process of getting time on large scale common facilities, such as the synchrotron.

The Government of India buys time in various facilities. Faculty send applications for such use. A national committee then evaluates, approves, and pays for beam time. For example, a lot of biologists use beam time in a facility at Grenoble. Additionally, faculty are known to use the synchrotron in Argonne National Lab in the US

74. Are there separate pay grades for men and women?

Salary structure is gender neutral. Promotion standards, evaluation criteria are also gender neutral. Women can avail tenure clock pausing for maternity reasons.

75. Is a Ph.D. degree mandatory to apply for a faculty position? Won't good impact factor publications and research contributions suffice?

Yes, the minimum qualification to apply for a faculty position is a doctoral degree, with First Class or equivalent (in terms of grades, etc.) in the preceding degree.

76. I would like to apply for an Associate Professor position and above. Can I? I would like to go for direct interview if selected.

Yes, candidates can apply for associate professor positions. Please indicate this to the department chair. We then invite promising candidates for a face-to-face interaction with the department/divisional faculty. Candidates also give a seminar. Some departments request candidates to give multiple seminars. The interview with an external committee (which is perhaps what you mean by a direct interview) is the final stage of the application and interview process. Candidates who have already visited the Institute to interact with the faculty, but who reside abroad, can attend this interview via a video conference facility.

77. I visited India previously and gave interviews at a couple of institutes in India (name removed), but I haven't gotten a reply from them.

If you will apply to IISc, we encourage you to ping the department chairpersons on the status of the application. We have an online faculty recruitment portal on which you could track your application status.

78. Is it necessary to do a PhD from IISc to get a faculty position at IISc?

This is certainly not necessary. In fact, should our PhDs wish to apply for a faculty position, we strongly encourage them to prove their capabilities outside the IISc environment before they apply to IISc.

79. Does IISc have any growth or expansion plans for Systems and Security research?

Systems and security research is a very important growth area for IISc. See, for example, our thematic clusters on security research, cyber-physical systems, quantum technologies, and the 5G testbed. We encourage strong candidates in these areas to apply.

80. My research is highly interdisciplinary. How do I decide which department I should apply to?

The academic structure at IISc is quite different from other universities and institutes. We have divisions, with many departments within each division. Certain research profiles may fit not just in multiple departments within a division but may fit across divisions. The academic structure of IISc is available at: https://iisc.ac.in/academics/

So please familiarize yourself with the departments' research areas before you list the departments in your application. You could do this by visiting the department's websites, by browsing through the faculty profiles, by reading about the research carried out in the department, by learning about thrust areas that the department is participating in, etc. Identify the three best matching departments and contact the department chairpersons to see if there is interest in your research profile. You should also seriously consider visiting the departments.

In your application, please indicate the three specific departments to which you would like to apply. Please then follow up with the chairpersons of the respective departments.

We now have an online recruitment portal which should help ease this process.

81. If I formally apply to IISc, and am not selected, when will IISc inform me of its decision? Will the decision be in writing? When should I move on and start looking for other opportunities?

An indication will be provided to the faculty candidate who is not selected. You are encouraged to be in touch with the Chairperson(s) of the Department(s) that you have applied to. You can always send email to recruitment.council@iisc.ac.in to know the current status of your application.

82. How do I know the areas in which faculty applications are being sought in a specific department?

Some departments advertise their target areas of hiring. Some may advertise in magazines such as the IEEE Spectrum. Please visit the department's website to learn about the hiring focuses, if any. Please note that the specific advertised areas are only guidelines. We largely hire good people in the areas of relevance to a department.

An excellent candidate with a competitive profile can apply before completing two-three years of post-doctoral experience. As for the general expectation on research quality and output, since the criteria vary across departments, it is best to speak directly with the chairpersons of the departments of interest to you.

83. Will travel and lodging to attend the Young Researchers Meeting be sponsored?

Unfortunately, no travel or lodging support will be provided. The 2025 YRM is online.

84. Coming from a highly collaborative environment at Sandia, I am curious to know how the collaborative framework in IISc works in terms of industry and government (ISRO, DRDO, etc.) partnerships. Can you discuss current collaborative research that IISc faculty members are involved in with other research institutions or industry?

For decades now, DRDO and IISc have closely collaborated via programs in mathematical engineering, frontiers in information, communication, and computation technologies, sensor networks, antennas, massive MIMO, and other such strategic initiatives in aerospace engineering, mechanical engineering, etc.

Similarly, there are close ties between IISc and ISRO. We also share a common history. For a few years both ISRO and IISc were led by the same person, and the close collaboration continues to this day. The ISRO-IISc Space Technology Cell has about 40 collaborative research projects running at this moment. These involve synthesis of Li-Fe-P-O quaternary cathodes for Li-ion batteries, MEMS-based space qualified pressure transducers, guidance and control of satellites for soft landing, physics of compact objects and underlying Supernovae, remote sensing, to name just a few.

The 5G test bed project involves several IITs and industries. The autonomously driving vehicle project involves faculty from several departments and Wipro. The India Urban Data Exchange effort is a consortium effort involving several companies and the Government of India aimed at co-creation of a smart city infrastructure. The Institute of Eminence status has further catalysed collaborative research activity within IISc.

85. I would like to explore the opportunities for postdocs in Data Science and the Internet of Things.

Data Science and the Internet of Things are certainly areas in which we are looking for postdocs. Please visit the webpages of CDS, RBCCPS, and the departments within the

EECS divisions, and contact faculty and the chairpersons of the concerned departments directly.

The following is an answer applicable to postdocs in other domains as well. We encourage postdoc candidates to learn about the C. V. Raman Postdoctoral fellowship. There are 50 such positions at IISc. Many faculty take on postdoctoral fellows using their grant funds. We encourage candidates to contact faculty in their areas of interest and explore such opportunities.

86. I see that the CSA department is short on computer networking systems faculty. I was wondering how my background in computer networking systems would be a fit for the overall goals of the department. What would be the focus of the department for say 5 years down the road? When does the typical application cycle start? I am doing a 2 year post doc. Is the 3 year post doc requirement mandatory? If not when would be a good time for me to apply?

We welcome applications from computer networking systems researchers. Next generation communication networking -- both theory and systems -- is one of the focus areas for expansion in the next five years. This is in anticipation of the network expansion that's likely in India over the next few years. For faculty recruitment process, see the next item. The 3-year post-doctoral experience is not mandatory and can be waived for exceptional candidates. Faculty members who join without the 3-year postdoctoral experience will enter into a different pay scale and will then move to a higher pay scale upon completion of 3-years.

87. Does the CSA Department engage with Industrial Research labs such as Microsoft Research India (MSRI)?

Yes. The Department of CSA and, in general, the departments in the EECS division are actively engaged in research collaboration with research labs such as MSRI. In fact, MSRI is currently funding multiple research projects in several departments. Similarly, the EECS faculty members have active engagements with IBM Research, Amazon, Google, Qualcomm, Cisco, TI, Intel, AMD, TCS, Wipro, Volvo, British Telecom, etc.

88. I would like to know more about the current openings in Power Electronics at IISc.

Yes. In general, power engineering (power electronics, high voltage engineering, and smart energy systems) is an area where IISc proposes to grow in the coming years. Please do look at the webpages of the current faculty members in these areas. We do look for an expertise that is complementary to that of the existing faculty and to fill up subareas and research topics not already represented.

Theory of deep learning is an amazing emerging interface subject which has practitioners across many departments like ECE, CS and Mathematics (and increasingly so even in theoretical physics). In my own research I have used techniques from mainstream courses in all these departments and I have had collaborators who are affiliated equally diversely. Hence I am open to taking up faculty positions in any of these departments. Research in this topic is of interest to CSA, ECE, EE, ESE, CDS, RBCCPS departments, among others.

89. What are some of the most important prerequisites to become a faculty member in the Molecular Biophysics Unit (in terms of # of publications and post doc experience)?

The criteria for a faculty position in MBU are no different than for any other department in Biological Sciences. We look for overall excellence as measured by the candidate's performance at the PhD and Post-PhD levels. Number of publications and years of post-doctoral experience are not the sole criteria for selection. The key criteria are research excellence and a clear demonstration of independent and original research. Once candidates are shortlisted, then their performance in the seminar, chalk talk, interactions with the faculty members, and performance in the selection committee interview determine the suitability for our further consideration.

90. What are the avenues for third party funding in interdisciplinary research? What are the main focuses in the areas of Energy and Sustainable Development? Would it be possible to set up a new research group on Water-Waste-Energy and Food nexus?

The Robert Bosch Centre for Cyber-Physical Systems is a center funded by a philanthropic grant from the Robert Bosch Foundation. The Centre for Infrastructure, Sustainable Transportation, and Urban Planning is a center supported by the local infrastructure and transportation entities and has many stakeholders. The many other centers in the Division of Interdisciplinary Research are well funded by external sources.

There is quite a bit of effort on sustainable development, clean energy, next generation solar and thermal power plants, and smart grids. The Interdisciplinary Centre for Water Research (ICWaR) works on water science and technology at the small (watershed, field, and lab) and large (country, regional, river basin) scales. The center also closely works with the Civil Engineering Department, the Robert Bosch Centre for CPS, and the local water supply board to address city scale inequity in water distribution issues. These are just a few examples (in the interest of brevity). You are strongly encouraged to write to the chairpersons of these departments or visit their websites to get more details.

On starting a new research group on the Water-Waste-Energy and Food nexus, the work being carried out at the Centre for Sustainable Technologies may be of great interest to you. Groups of researchers that are united by a common set of research goals are strongly

encouraged to get together and form new thematic clusters. This is particularly important in interdisciplinary topics which may have researchers spread over multiple departments. Visit the following website for some existing thematic clusters:

https://www.iisc.ac.in/thematic-research-clusters/

91. My interest is in distributed control and computation. Is there hiring in this topic?

Yes, certainly. Traditionally, distributed systems has been in computer science and automation. But in the context of cyber-physical systems, we see it being of use in a great many places in the CPS-IoT domain. This has gotten system designers interested in the topic. The RBCCPS and the ECE department, in addition to EE, may be very much interested in your application.

92. What is IISc's vision for manufacturing research? What are some collaborations with industry?

This domain is being spearheaded by CPDM. There is now a lot of interest in materials as well as in additive manufacturing. There is a big initiative in. IISc has launched an MTech in Manufacturing. The Department of Heavy Industries of Government of India has provided funding, along with some private partners, to help CPDM create a test-bed for manufacturing. The RBCCPS has been working with industries to demonstrate the usefulness of Industrial IoT for modern manufacturing and control.

93. Can you give us some examples of recruited faculty in the biological sciences and their profiles?

The most recent one is an MBBS doctor who got a Wellcome-Trust grant. But each applicant is different. We encourage you to come to visit us so that you can get to know about the department, and we can learn about your research and your interests.