

FAQ on Faculty Recruitment@IISc

(Last Updated: July 29, 2019)

This FAQ includes responses to (a) the questions asked by young researchers while registering for the young researchers meetings and (b) the questions asked by the young researchers during the young researchers meetings.

Meetings held thus far: Chicago (August 27, 2018); Baltimore (August 30, 2018); Austin (March 15, 2019); Tokyo (March 27, 2019); Saarbrücken (June 15, 2019); Palo Alto (June 21, 2019)

What is the procedure to apply for a faculty position at IISc?

*The application can be submitted through an online portal: <https://recruitment.iisc.ac.in/frp/>
The following webpage provides details of the advertisement: :
<https://iisc.ac.in/about/faculty-corner/how-to-apply/>*

Can you elaborate on (a) frequencies of openings (b) general trend of faculty openings in the coming years?

Positions are continuously available since we have a rolling advertisement. Please look at the web-site: <https://iisc.ac.in/about/faculty-corner/how-to-apply/>

How many years in advance should I start applying? How do I network with faculty there?

The faculty recruitment process could vary between 3-6 months. 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).

The faculty recruitment process could vary between 3-6 months. A good time to start your application process would be about 6 to 9 months prior to your anticipated joining date.

How long is the faculty recruitment process? Or when should I apply for a position if I want to join right after my PhD?

Faculty recruitment process could vary between 3-6 months. It is expected that you can start communicating with the department 6 to 9 months to a year after finishing PhD. A formal application can be sent in about 6 to 9 months prior to your anticipated joining date.

When are applications due? Is there a common time at which one must apply? What is your screening process?

There is a rolling advertisement. You can apply at any time. Departments scrutinise 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. They 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.

One thing you will notice about academic institutions in India is that you will not get an immediate reject. The email response from the chairman may give some indication as to their level of interest.

Please describe the interview process.

There are two stages to the process.

Different departments do the first stage differently. The candidate may be invited for about two days and these visitation days will be filled with interactive meetings and presentations. Some departments want formal presentations, chalk talk, etc. Other departments want a seminar style presentation. The candidate will have one-on-one interactions with faculty. Interactions may also be with faculty that work in related areas in other departments.

The second stage is common across all departments. If the candidate is found promising, a few weeks (possibly up to three months) later you may be called for an interview with the interview committee. This will involve a short 25 minute presentation followed by 30 minutes of discussion. If you are already in India, you will be requested to come in person. If you reside abroad, this interaction could be via Skype. The chairperson will give an informal indication to candidate immediately after this stage on how the interview went, and within a few days an offer will follow.

When is the right time in your career to apply for faculty positions in IISc? 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.

I am interested to know more about the faculty recruitment program, and also the new possibilities enabled by the IoE status to pursue research requirements and time frame.

Please see the webpage:

<https://iisc.ac.in/about/faculty-corner/how-to-apply/>

It is expected that IoE will grant us certain operational flexibility in academic programmes, while additionally providing resources for infrastructure and to seed research initiatives across a range of areas in all branches of science and engineering.

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

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

What is the total lead time from the time of applying to the time of final decision?

The lead time would be anywhere from two months to six months. It is mandatory that a faculty candidate visits the Institute. From the time of the visit to the final decision, it could be anywhere from 1 month to 3 months.

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 position open for such a candidate.

I am looking for young faculty position at IISc and would like to move to India by early 2019.

Please consider applying right-away. Details available here: <https://iisc.ac.in/about/faculty-corner/how-to-apply/>

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.

Will IISc take its own students?

Yes, provided they have accumulated sufficient non-IISc post-doctoral experience with an established research group and demonstrated a high level of achievement and productivity beyond their IISc track-record.

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 by working closely with the potential faculty.

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. Rajesh Sundaresan who will be at the Chicago and Baltimore meetings spent several years at Qualcomm before joining IISc as an Assistant Professor.

I would like to understand the standards for judging Industry members since we are not allowed to publish our work.

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. Prof. Anurag Kumar who will be at the Chicago and Baltimore meetings 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.

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 particular 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.

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.

Is there an age limit for faculty positions in IISc?

For an Assistant Professor position, there is a notional limit of 35 years. However, in exceptional cases, there is no age limit.

How strict is the 35 years limit for assistant professors?

There is no strict limit. But note that in some disciplines, if you have spent too many years as post-doc, this may be viewed negatively, depending on the norm in your area of research.

We do prefer candidates come as quickly as possible. But if you have used your time in your long post-doc in a positive manner, the application may be viewed positively.

Preferable age limit is listed as 35 years. Is it very hard beyond 35 to get a position?

As indicated in earlier questions, there is flexibility. Age of the typical applicant is very field dependent. We have hired faculty at 28 in CS and at 38 in biosciences. We evaluate your performance thus far, and your future career potential.

Is there an age limit? I started as an engineer, turned into a biologist, but now am a neuroscientist. This gives me a unique perspective, but it also took time to get here, and further there is long post-doctoral stint.

We recognise that people in some research areas have longer training periods. There is no age limit. But the older you are, 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.

Related to eligibility criteria, could you be precise on the age limit constraint? Is it a hard and fast rule?

As indicated earlier, an Assistant Professor candidate should preferably be below 35 years of age. However, in exceptional cases, there is no age limit.

We prefer that candidates come as quickly as possible. But if you have used your time in your long post-doctoral stint or in your industry stint in a positive manner, the application may still be viewed positively. Age of the typical applicant is very field dependent.

Do you prefer those that work on unsolved question 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 abilities!

What is IISc's internationalisation strategy?

IISc encourages faculty members to collaborate with top foreign institutions, develop joint programmes for research through various bilateral funding programmes, exchange students and project their work at international meetings. Seed money is available to catalyse 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.

I am curious to know more about the intake process, seed funding support and department specific eligibility requirements at IISc.

For faculty recruitment please see
<https://iisc.ac.in/about/faculty-corner/how-to-apply/>

Seed funding would depend on the areas and requirement of faculty. It may be best to initiate a conversation with relevant department faculty search committees. This can be done by sending email to the Dept. Chairs. It can vary anywhere from Rs 50 Lakhs to Rs 2 Crores or even higher depending on the need and merits of the case.

Examples of research funding/startup packages in biology research fields. Examples of US scientists setting up labs at IISc. Collaborations with other institutions (IIT?)

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 Rs. 2 Crores or even higher depending on the merits of the case. IISc has many collaborations with US and other overseas universities, and, with IITs as well.

What is the duration for which a startup grant may be used?

A startup grant will be available to the faculty member within one or two months of joining the Institute. Normally, the startup grant is for a one year duration. Extension to 1.5 years is possible on request.

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 is 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.

IISc's undergraduate programme is a programme of the institute, not a programme of any one department. So teaching requirements are quite different from a typical undergraduate institution's teaching programmes. Faculty can design courses as per their requirement. A curriculum committee then vets the design, provides suggestions, feedback, and approval.

I have an interdisciplinary degree from two different departments, one of which is a biomedical department. 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 offer will come from one department, but you may also have an associate faculty position in the other department.

Some of the centres 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 centre.

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

You can indicate up to 3 departments. Application will go to all departments for consideration.

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.

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

You should have finished your PhD. A few years of post-doctoral experience, or industry experience that is of relevance to the 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.

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?

SERC has a petaflop machine. There is a national supercomputing mission programme under which we may soon have a 10 petaflop machine. This is a national facility for any user across India. But since there will be many other such centres, and since this one will be housed in IISc, we can anticipate that IISc faculty will get sufficient access to these facilities.

Yes, you can set up your own compute cluster. If a machine resides in our SERC, then SERC 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.

What kind of students can I get? The nature of my research is such that it relies on expertise of students from biochemistry and chemistry even though I work in Physics. Is it possible for people from chemistry (or other departments) to come and help me with my research?

You could get UG interns from biology or chemistry even though you are in Physics, just as an example. The UGs have to do a project in their final year. They can be very valuable in carrying out such research projects.

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 programme.

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

There is good news. We recently got the Institution of Eminence status. Under this, we will have a lot of flexibility in hiring foreign nationals. Once in, we treat all passport holders equally for their evaluation.

The government has relaxed norms already 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 do Indian citizens and OCI.

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.

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.

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

IISc has brought in one mechanism to help women faculty. The tenure clock stops for a year per child, for up to two children.

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.

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.

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 review report. The review report is comprehensive. It will ask for all information related to every dimension that was indicated in the question and more. Many may leave several parts of it empty, and will provide information on all the dimensions in which they have made contributions.

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.

Are there restrictions on what can be bought on a new start up grant for a fresh faculty?

There are no restrictions. You should be able to justify what you ask.

Timing. When you visit the Institute, do think about what you want in your start-up grant. This also suggests that you shouldn't apply too early. Apply about 9 months prior to coming to IISc. Offer is made in 2-6 months. The chair will ask you what you want in your start-up grant when you visit, and it will help to think about this ahead of time.

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

Success rate of proposals that come out of IISc is very 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 to put together a good proposal. Typically faculty have one or two such concurrently running projects.

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 doubled 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.

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 spend quite a bit of time on your research statement. It is looked at very carefully to see if you have articulated a coherent vision for your future research.

What is IISc's reservation policy for hiring?

IISc follows a reservation policy as per standard norms approved by its Governing Council. If we have 30 positions, a certain percent is reserved for certain categories. 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.

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. An eventual number for the course is assigned by the senate curriculum committee. Even though there seems some procedure, there is quite a bit of flexibility that is provided to the faculty.

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) and then asks the students that meet the requirements to come for an interview. Final selection is based on an interview.

Post-doctoral programme – 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.

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

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 Society for Innovation and Development, or from consultancy projects, there can be a component for personal remuneration. A certain percentage of this is taken as overheads by the Institute. The remaining amount is given to the faculty member, and this is taxable income.

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. This year, thanks to the office of career counselling and placement, we have had many joining industry. Currently about 10% go to industry. But that might change soon.

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. This has helped place many people.

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. Local expenses can be taken care of by IISc. Speak with your department chair or host. Travel is typically arranged for by the visitor's parent institution.

Can you tell us about housing for new faculty?

Every new faculty gets housing inside IISc. (This wasn't the case earlier.) You will be in a temporary apartment complex for visitors for some time, 1-2 months. The apartment will be readied during this period and will be made available to you once ready. Assistant Professors get a 2-BHK. Accommodation may be in IISc main campus or in Vijnanapura (a satellite residential campus of IISc.)

Is there flexibility in the joining date?

When you get your first offer, you get three months to decide. You may be given up to one more month more to decide. You could ask for some extension if offered a position with reason, and if the request is reasonable, you will likely get a limited extension.

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 one of the couple gets the job, the other will as well. However, Bangalore has many industry / IT / electronics / biotech domain jobs. There are also possible jobs in the newly established Centres in IISc which could be explored.

I heard IISc has schools for kids. 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 recognised and their children are readmitted once back from the sabbatical leave.

That said, the school is quite modest in terms of the resources it has available since it is largely run by the KV Sangathan. Class sizes may be large and students' abilities vary significantly across the population.

What kind of teaching experience do you expect?

Teaching is a very important component at IISc because we are a university. But most learn to teach on the job. 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 programme, the integrated PhD programme, and the PhD programme, there is quite a bit of teaching that needs to be done. But there is a lot of flexibility and lot of choice on what you want to teach.

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 say RBCCPS, we will coordinate with a core department, hire you there, and house you in RBCCPS.

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 however quite green in India compared to elsewhere. Chances are much higher of getting funded (DST and other government departments) compared to opportunities in the US.

Additionally, students are funded, so your fund raising can focus on your research needs alone – project assistants, post-doctoral fellows, etc. Further, summer salary is paid for all faculty, unlike in the US.

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

We plan to increase the number of post-doctoral fellows in India as part of IoE status. We have announced the highly selective C.V. Raman Post-Doctoral Fellowships recently: <https://iisc.ac.in/post-docs/>

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

We hire between 20-30 Assistant Professors per year. If outstanding candidates apply with sufficient experience, we will be happy to hire at 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. In exceptional cases, full Professors are invited directly by the highest body of IISc, its council. This is quite rare.

Is the teaching load high?

Around one course a semester.

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/>

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 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 other funding sources.

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. But we would 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.

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.

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.?

A few years back, if you were a foreign citizen (even of Indian origin) you could only be on a contract position. Now, things are changing. We are trying to attract more foreign faculty.

Because of the new IoE status, we will have more flexibility on hiring foreign citizens. These are being worked out, and in two to three months we will have more clarity.

If you are an OCI, there is now 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. Stay in touch with us, and we will be able to give a clearer picture soon.

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 use the Institute only as a host, do contact the Chairperson of the department where you will like to be hosted, and the Chairperson will suggest the best course of action.

Apart from faculty positions, what are other staff positions can we get, especially in biological sciences?

Under the IoE we anticipate we will have many openings for facility managers, CBR research staff, RBCCPS MTSs, DMTSs, teaching instructor positions, 5G technical staff in ECE/RBCCPS.

Though I am very much interested in research, I'd like to know if there are more teaching-oriented positions.

The only teaching-based position is the undergraduate teaching instructor.

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.).

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 one year duration.

We have many other kinds of leave. 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.

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.

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 is embarking on a 10,000 person observation programme to study the ageing brain.

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 visit the department and start a conversation with the department chairperson. We don't have a single window.

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

There is a lot of flexibility in course design. You may wish 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.

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

There are a lot of bilateral programmes - 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 programmes as we go.

As for foreign travel, we used to have difficulty traveling abroad. Now things have changed. Faculty get 3 lakhs per 3 years which enable you to travel abroad for conferences and workshops, and this may soon become 6 lakhs per 3 years. 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 through generous funding from the Tata Trusts.

Is hiring into specific areas or is the focus on hiring good people?

We keep track of needs and use it as a guiding line. But we largely hire good people.

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 visitation programmes, chaired professorships. We refer you to:

<https://www.iisc.ac.in/about/endowed-chairs/endowed-visiting-chairs/>

With the IoE status, we anticipate that we may be able to get a lot more such visitors and foreign post-doctoral fellows.

Can you shed more light on available funding agencies and the funding process? How is the number of students per faculty member determined?

Scholarships from MHRD tells us how many students we can take. There is of course more pressure on faculty these days to bring their funds and support their students. There are several funding agencies, CSIR, MEITY, DST, DRDO, DBT, etc., that generously fund research fellows and PhD students. There are based on an annual round of application and selection. There are also specific proposal calls for specific areas. Examples include Water, Manufacturing, Epidemiology, etc. IISc has the reputation of sending excellent proposals and the chances of successful funding is quite high.

In addition, there are early career awards for young assistant professors. The proposals for these go through a faster review process. There are also specific grants for women, women who have had a career break, etc.

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

If you have children, the tenure clock can be paused for one year per child for up to two children during the initial years.

If we are looking to do research in a new area, we need to apply for a post-doc first. Will consideration be given if we don't have experience in that area during our PhD?

We are looking for demonstrated expertise in the area or in a related area.

Does IISc have a spousal hiring policy?

There are many examples of both spouses working as faculty in the Institute and the Institute encourages couples to apply. However there are no specific spousal hiring considerations other than perhaps encouraging spouses to apply to different departments. Each candidate is evaluated on his or her own merit.

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 recognise 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 or in a related area. Your CV should demonstrate excellence and achievement in that related area, and should not just be a research proposal in a new area.

In IISc, you will be in a different salary bracket if you are within the first 3 years and, upon completion of three years, will move to the normal salary range.

All of us were hired on a five year contract position, and this is still the situation for a new faculty hire. The conversion to permanent position is based on a peer review. The typical cycle 6 years. If you do well, there is an early promotion possibility after 4 years.

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.

We usually get trained for problems here. 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.

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

In principle you can apply without post-doctoral experience. But our advice is that you don't. The extra time 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.

Does industry experience count?

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

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

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 stoppage for maternity reasons.

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.

Can I apply for an assistant professor position if I have less than 3 years of postdoctoral experience?

Yes, in exceptional cases, candidates with less than the three years post-doctoral experience will also be considered. Please also note that the time between your submission of the application and your joining date may be between 6 and 9 months. So it is a good idea to submit your application 6 – 9 months prior to your anticipated start date, by which time you may have completed your three years.

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

Yes, candidates can apply for associate professor positions. 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.

In 2013-2014, I visited India and gave interviews at a couple of institutes (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. Very soon, we will have an online faculty recruitment portal on which you could track your application status.

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.

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.

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.

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.

So please familiarise yourself with the departments' researches before you list the departments in your application. You could do this by visiting the department's websites and by browsing through the faculty profiles, by reading about the researches 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 ensure that your email application to the Registrar is copied to ALL the chairpersons of ALL the departments to which you have applied. Please follow up with the chairpersons until you get an acknowledgement that the application has been received.

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

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.

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.

For faculty candidate applications to the Physical and Mathematical Sciences division at IISc, what is the general expectation for the post-PhD research experience (duration or productivity/publication-wise) that is necessary? If someone has a competitive profile within

a year or two after the completion of PhD, is that a good time to apply for faculty position at IISc and will there be enough chances of getting shortlisted?

Yes, 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.

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

Unfortunately, no travel or lodging support will be provided.

Coming from a highly collaborative environment at Sandia, I am curious to know how collaborative framework in IISc works in terms of industry and government (ISRO, DRDO, etc.) partnership. 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 programmes 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.

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 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.

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.

I see 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 is the typical application cycle? I am doing a 2 year post doc until end of 2019. 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 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.

Does the CSA Department engage with Industrial Research labs such as 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.

I will 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 definitely of interest to ECE, EE, CSA, CDS departments, among others.

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 they are shortlisted, then their performance in the seminar, chalk talk, and interactions with the faculty members, and performance in the selection committee interview determine the suitability for our further consideration.

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 centre funded by a philanthropic grant from the Robert Bosch Foundation. The Centre for Infrastructure, Sustainable Transportation, and Urban Planning is a centre supported by the local infrastructure and transportation entities and has many stakeholders. The many other centres 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 centre 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/>

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.

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 manufacturing that has been planned. IISc will likely launch 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.

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 we can get to know each other. It is very important for you to get a feel of IISc and for us to know about your contributions.