

Indian Institute of Science

# PLACEMENT BROCHURE

2019-20

Office of Career Counselling and Placement, IISc



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## The Message

Over the 109 years since its establishment, the Indian Institute of Science (IISc) has become India's top-ranked institute for advanced scientific and technological research and education in India. Today IISc has over 44 departments, units, or centres, around 4652 students, and about 465 academic and scientific staff. Out of this population of students, about 2600 are in various Ph.D. programs, almost 930 are enrolled for various Masters degrees, whereas about 450 are registered in the newly established, research-oriented, four-year Bachelor of Science (Research) programme, of which the third batch will graduate in 2017. Recently, on an annual basis, the Institute produces 300-350 Ph.D.s, and a similar number of students graduate with various masters degrees.

The students at IISc are trained in a world-class academic environment comprising top-notch, globally connected, research faculty, and state-of-the-art research facilities. The education of the students takes place in an environment of high quality fundamental and applied research, thus producing individuals trained to think beyond textbook material.

The courses are taught by faculty who bring to bear on teaching their unique insights gained from using the subject matter in their own research. All students, whether Doctoral, or Masters, or Undergraduate, undergo hands-on involvement in one more scientific or engineering research projects, and thereby are trained in problem formulation and solution, laboratory and/or computing skills, technical writing, technical presentation, and the peer evaluation process. As the industry in India seeks to expand their research, design, and development activities, we are confident that the individuals we produce will provide the innovation and leadership skills that the industry will be looking for. Our new Office for Career Counselling and Placement (OCCaP) serves as the interface between the graduating students and the prospective employers during the placement process. This Placement Booklet provides an overview of our departments/centres/units and the various academic programs. I invite you to visit our campus to visit the research and teaching facilities, and to interview our students. OCCaP will provide you with all the required logistical support.



**Prof. Anurag Kumar**

Director, IISc



# Indian Institute of Science

The Indian Institute of Science was founded by Jamsheji Nusserwanji Tata in 1909, to promote scientific temper and research aptitude in the nation.

A focus on excellence in research, the academic freedom it offers, coupled with a beautiful campus and a salubrious climate has meant that the Institute is the most sought after destination for top researchers and young minds.

With 34 departments and centres organized in to the 6 divisions of Biological, Chemical, Electrical, Mechanical, Physical & Mathematical and Interdisciplinary Sciences, IISc offers an unmatched range of technical expertise and a large talent pool for industry to choose from.

The Institute has consistently Topped National Rankings and has made the nation proud by scoring high on many reputed international rankings.

It is our endeavour to make the Institute a natural destination for companies that put a premium on intellectual capital.



# Alumni Achievements

Over the course of the century, many eminent personalities have been associated with the institute, among whom are stalwarts like C. V Raman, G. N. Ramachandran, Harish Chandra, S. Ramaseshan, A. Ramachandran, C. N. R. Rao and R. Narasimha. Alumni of the institute have been instrumental in kindling quality research and education across the country. Notable among them are Homi J. Bhabha who conceived the idea of Tata Institute of Fundamental Research (TIFR); Vikram Sarabhai and Satish Dhawan, the pioneers of the Indian space programme and the Indian Space Research Organization (ISRO); and J. C. Ghosh who established the first Indian Institute of Technology (IIT) at Kharagpur.



**Suparna Bhattacharya**

*Distinguished Scientist, HP*

My Ph.D. at IISc was an extremely enriching experience - it opened my mind to the joys of research, exposed me to many fascinating subjects and most of all created a strong foundation to build depth of knowledge needed to tackle difficult problems and perseverance needed to aim for high standards of research excellence.

**Manjuprakash Rama Rao**

*Director, Advanced Research and Development, Tyco International*

The rigorous student selection process at IISc coupled with eminent faculty creates talent pool which can hit the ground running may it be in research, product development or entrepreneurial endeavours.



**Amit Phadnis**

*President, Engineering and India Site Leader CISCO Systems*

My stint at IISc was a true game changer for me. Outstanding batchmates, great faculty and a scientific and engineering environment helped me expand my horizons and increase my confidence in myself.



**Tilak Mitra**

*CTO, IBM Global Business Services Industrial Sector, Distinguished Engineer*

Some say that confidence is self-grown; and while I would not deny the same, but for me, it was my tenure at IISc that helped me discover my inner self belief that has fueled my passion to achieve whatever little I have been able.



# IISc Rankings

## Rankings

The institute has pioneered nation-leading research and education across a wide range of science and engineering fields, and university rankings by several global organizations testify this. IISc as a whole, and several departments in particular, have been consistently ranked among the **best in the world**, and as the absolute best in India.

IISc is also the first and only institute from India to make it to the top 10 in these rankings.

## World University Rankings 2020

**29th** in Asia

**99th** in Engg. and Tech., Worldwide

**301-305th** Overall, Worldwide

## National Institutional Ranking Framework

**1st** in MHRD, Govt. of India

## Academic Ranking of World Universities (Shanghai Rankings)

**1st** in India

**401-500** Worldwide

## QS Global World Ranking

**3rd** in India

**184th** worldwide

**50th** in Asia

## Times Higher Education, UK 2018 (World's Best Small Universities)

**8th** worldwide



# Why Recruit from IISc

## Century-old Tradition

Upholding the revolutionary vision of Swami Vivekananda and J. N. Tata, IISc takes pride in producing graduates who can transform societies through their contributions to Science, Technology and Industry.

## Research Projects

Student projects are invariably designed to be published or patented when complete, giving students exposure to the highest standards of critical thinking as well as exposure to project management and completion skills.

## Industry Interactions

Strong, long-lasting ties with industry through joint research as well as teaching programs provides our students prior exposure to the corporate environment.

## International Exposure

Participation in international conferences, exchange visits and collaborations, the presence of international students on our campus as well as regular international seminar speakers give our students continuous exposure to an international setting.

## Internationally Competitive Faculty

IISc is the most sought-after destination for academics in India. Faculty members on roll are well-networked and competitive internationally.

## Outstanding Student Body

With stringent admission criteria, a rigorous training program that pays attention to individual needs, and a residential campus that naturally nurtures team spirit, our students grow into a community of confident, resourceful, and versatile thinkers and problem solvers.

## Consistently at the Top

In all recent rankings, national and international, IISc stands out as the top institute in India, attracting the best talent nationally and often globally.

## Inter-Disciplinary Training

Students are exposed to cutting-edge research and are encouraged to take courses in the 42 departments on campus. A large number of collaborative projects are ongoing to solve problems that require multi-disciplinary approaches.

## World-Class Infrastructure

IISc houses state-of-the-art facilities, some even unique internationally, allowing students unparalleled exposure to the best investigational tools.

## Impactful Research

While maintaining the highest levels of academic excellence, students are trained to align their research with national missions or to address problems that would improve the human condition, preparing them to be the leaders of tomorrow.

## Research at IISc

The main emphasis of the Institute is on research, and it expects the faculty and students to initiate and carry out research programs of a quality that is on par with international standards.

A representative list of companies with which IISc faculty have research interactions include **Boeing, Cadila Pharmaceuticals, Daimler Chrysler, General Electric, General Motors, Hindustan Unilever Limited, Indian Immunologies, Intel, IBM, Microsoft, Nokia, Nortel, Pratt & Whitney, Bosch, Texas Instruments** etc. Some of them have set up specialized laboratories or research centers within IISc to foster long term collaborations.



### Prestigious National Awards

- 2** Bharat Ratna Awards
- 35** Padma Awards
- 76** JC Bose Fellowship Awards
- 96** Shanti Swarup Bhatnagar Awards
- 34** Swarnajayanti Fellowship Awards
- 5** Infosys Prizes

### Fellowships to IISc Faculty

- 121** Indian National Science Academy
- 129** Indian Academy of Sciences
- 88** National Academy of Sciences
- 81** Indian National Academy of Engineering
- 10** Royal Society of London
- 37** The World Academy of Sciences
- 1** IEEE (Institution of Electrical and Electronics Engineers)

### Our Patent Portfolio

- 348** Indian
- 195** Foreign
- 543** Total



# Academic Departments

## Division of Biological Sciences

Biochemistry  
Centre for Ecological Sciences  
Centre for Neuroscience  
Microbiology and Cell Biology  
Molecular Biophysics Unit  
Molecular Reproduction, Development and Genetics

## Division of Chemical Sciences

Inorganic and Physical Chemistry  
Materials Research Centre  
Organic Chemistry  
Solid State and Structural Chemistry Unit

## Undergraduate Program

Biology  
Chemistry  
Earth & Environmental Sciences  
Materials Sciences  
Mathematics  
Physics

## Division of Interdisciplinary Research

Centre for Biosystems Science and Engineering (BSSE)  
Centre for Nano Science and Engineering (CeNSE)  
Department of Computational and Data Sciences (CDS)  
Department of Management Studies (MS)  
Interdisciplinary Centre for Energy Research (ICER)  
Interdisciplinary Centre for Water Research (ICWaR)  
Interdisciplinary Mathematical Sciences

## Division of Mechanical Sciences

Aerospace Engineering (AE)  
Centre for Atmospheric and Oceanic Sciences (CAOS)  
Centre for Earth Sciences (CEaS)  
Centre for Product Design and Manufacturing (CPDM)  
Centre for Sustainable Technologies (CST)  
Chemical Engineering (CE)  
Civil Engineering (CiE)  
Materials Engineering (Mat. Eng.)  
Mechanical Engineering (ME)  
Smart Manufacturing

## Division of Electrical, Electronics, and Computer Science (EECS)

Computer Science and Automation  
Electrical Communication Engineering  
Electrical Engineering  
Electronic Systems Engineering (ESE)  
Artificial Intelligence

## Division of Physical and Mathematical Sciences

Astronomy and Astrophysics Programme (AAP)  
Centre for High Energy Physics (CHEP)  
Instrumentation and Applied Physics (IAP)  
Mathematics (MA)  
Physics (PHY)

# Industry Interface

## Internship at Industries

The Institute allows students to take up internship positions in Industries for up to three months, without affecting academic activities. Undergraduate and Masters students may take up these internships during summer months (May to July). Research students can avail internship if their coursework is completed, subject to approvals from the advisor/ department. Longer internships are allowed with special arrangements. OCCaP plans to organize special events to facilitate such interactions between students and Industries.



## Industry Interaction Events

OCCaP introduced a new initiative to engage our patron industries with our students on a one-on-one basis. This new platform strives to connect top level R&D managers, and our alumni with our graduating students. The platform was launched at an event held on October 3rd, 2016 and was attended by around 100 delegates from industries. About 100 posters were presented by students at this event. We plan to organize visits of experts from industries to some of our key facilities/ Laboratories to explore collaborations with research groups in IISc. In addition, we plan to periodically circulate documents containing a short summary of research works of our graduating students seeking employment.

This is a flagship initiative of the Office of Career Counselling and Placement at IISc, and is supported by Society for Innovation and Development (SID, IISc) Centre for Scientific and Industrial Consultancy (CSIC, IISc) Office of Development and Alumni Affairs (ODAA, IISc), and IISc Students Council. We seek active participation by Industries by visiting our website to explore new hiring avenues. Please see the booklet available in the downloads page of our website or contact us at [placement.occap@admin.iisc.ac.in](mailto:placement.occap@admin.iisc.ac.in). Sponsors will be given special priority based on mutual agreement.



# Academic Programme



## Master's at IISc

### Master of Technology (M. Tech.)

M. Tech. is two-year, course based program designed to prepare students to address complex industrial and technological problems through an advanced knowledge of engineering subjects. A bachelor's degree in the relevant engineering or a related field is necessary to enter this program. The program consists of rigorous course work involving core courses and electives and up to a year of project work.

### Master of Management (M. Mgmt.)

This program aims to produce executives with expertise in Technology Management and Business Analytics and the ability to understand, assess and forecast how technologies impact the systems within and outside organizations (environment, economy and society at large). Graduates receive formal education in analytics to strengthen their capability to perform robust analyses to take decisions in information and data driven organizations.

### M.Sc (Engg.) / M. Tech. (Research)

The M.Sc (Engg.) / M. Tech. (Research) are research based programs designed to prepare students for advanced engineering practice through research, development, production, design and/or management. Each student works with a research advisor and plans a program of course work and thesis research. Independent research work is assessed through a general test midway into the program and a final defense of the thesis.

### Master of Design (M. Des.)

The M. Des. is a two-year full-time post-graduate program that aims to impart education in the design and development of products that are innovative and competitive. Students are trained to approach product design with a holistic viewpoint, integrating the various facets of design in a balanced and harmonious manner, and through creative problem solving, bring about innovation in the product manufacturing industry.

# Academic Programme

## Ph.D at IISc

Research students at IISc get a unique international flavour by interacting with a large number of international visitors at the campus, or by being given an opportunity to visit foreign countries for training, collaborative research, or attending conferences. More than 350 Ph.D.s graduated during 2016-17.

### STUDENT AWARDS (2018-19)

<b>12</b> Best Paper Awards	<b>8</b> Best Oral Presentation Awards
<b>16</b> Best Poster Awards	<b>5</b> Best Researchers/ Thesis Awards
<b>23</b> Other Awards and Medals	<b>18</b> Fellowships
<b>7</b> Travel Awards	

Division	Faculty	Publication
Biological Sciences	76	405
Chemical Sciences	57	381
Electrical Sciences	96	547
Interdisciplinary Research	43	285
Mechanical Sciences	150	730
Physical and Mathematical Sciences	91	356

## Bachelor / Master of Science (Research) Programme

Bachelor/ Master of Science(Research) is a unique program which aims to train smart students who can forge themselves as per the need and work smartly in this age of Smart Materials and Technologies. This program is designed as a blend of Core science and essential engineering skills (computer science and electronics) that can serve as launching pad to the industry. Students of this program are adaptable to the working environment and capable of learning new skills. Along with interdisciplinary courses, most of the students venture into different projects every year, learning a new set of skills. With a strong conceptual understanding and excellent hands-on experience, the versatile graduates of this program are second to none in the country.

### Key Skills

- 1) Learnability - skills for future
- 2) Adaptability - workplace flexibility
- 3) Smart work - efficiency
- 4) Strong conceptual understanding
- 5) Excellent hands-on skill



# Placement Procedure

The **Placement Season** begins in October and goes on till May.

**Invitations** with the placement timeline and the other relevant information are sent out to the recruiters by OCCaP. New recruiters can contact OCCaP directly by sending a brief email [placement.occap@admin.iisc.ac.in] explaining their interest.

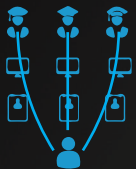
Recruiters are **registered** on the OCCaP website. All the registered recruiters have individual login credentials for their account. The website is the interactive portal of job opportunities.



Interested and eligible (as per the criteria specified by the recruiter) students show their willingness to appear for the recruitment process of a company by **signing in** details online. Details of all such students become available to the organisation for downloading or viewing through the OCCaP account.

OCCaP will schedule visits of recruiters for **pre placement talks**. The Job Description is made available to eligible students.

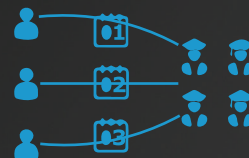
The recruiters fill a **Job Description** Form containing details of the job and the offer using their online account. They should provide compensation breakup details of the posted job opportunity.



Recruiters visit the campus on the allotted date(s) and conduct tests and/or interviews according to their recruitment process.

OCCaP will **schedule visits** of recruiters for pre placement talks, tests and personal interviews.

Recruiters can **shortlist** students. Recruiters are also urged to maintain a waitlist of students who can be interviewed in the event of non-availability of some of the shortlisted



# Interview Scheduling

1. All tests and interviews will be held within the IISc premises. Video conferencing option may be facilitated by OCCaP subject to availability
2. Based on Student Preferences, Existing Relationship with IISc, and the package offered, OCCaP will announce a sectorwise schedule for companies to visit IISc  
Recruiters will be provided a band of dates to choose from for placement tests and interviews, typically separately
3. More than one company may be invited to campus on any day
4. Students can register for one dream job option with OCCaP, between 9th October 2017 to 13th October 2017
5. The Online Test will be conducted only post 5.00 p.m.
6. Personal Interviews will be scheduled in campus, details of which will be shared by OCCaP
7. On the day of the interview in campus, No student should be held by a company more than 90 minutes (maximum 60 minutes at a stretch)
8. The final results and the waitlist should be shared in a sealed envelope with OCCaP staff
9. Direct communication about the final results with the students for campus recruitment will not be appreciated
10. All the communication for placement activities (Campus process/ Schedule/ Interviews/ Results etc.,) should be routed only through OCCaP

## Slot 1 : 14th October 2019 -16th October 2019

Top Recruiters in Slot 1 will be based on multiple factors. These factors will be the decision of OCCaP.

Shortlisting of candidates for interviews should be done latest by 12th October 2019. Online test will be usually conducted post 5.00

p.m on any of the given days.

Final results should be shared with OCCaP on same day, but the results will be declared to the students only on 16th October end of the day.

## Futher Slots : From 17th October 2019

Companies will be scheduled as per certain criteria.

Online test will be conducted usually post 5.00 p.m on any of the given day  
personal interviews for these company will be scheduled from 17th October 2019.

Shortlisting of the candidates should be done at least a day prior to the scheduled time of the interview process

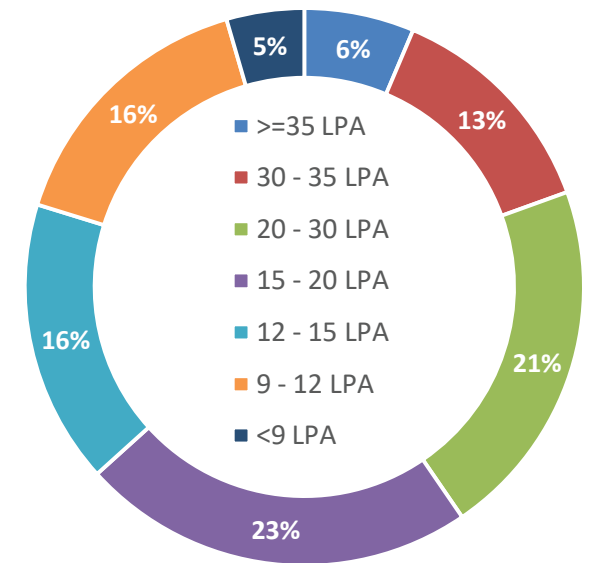
Final Results should be shared only with OCCaP by end of the interview day.



# Some Past Recruiters



Batch 2018-19



CTC Distribution

# Some Past Recruiters





## Placement Officer

### Bhagyalaxmi G M

**Address:** Ground Floor, CSIC Department,  
Below Sathish Dhawan Auditorium, IISc Campus

**Email:** placement.occap@iisc.ac.in  
occap.iisc@gmail.com

## OCCaP Committee

**Prof. K.J. Vinoy**, ECE (Convener)

**Prof. Narendra Dixit**, Chemical Engg.

**Prof. Srikanth k Iyer**, Mathematics

**Prof. Utpal Tatu**, Biochemistry



# Office of Career Counselling and Placement (OCCaP)

## Design

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