भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान
**INDIAN INSTITUTE OF SPACE SCIENCE AND TECHNOLOGY**
तिरुवनंतपुरम/Thiruvananthapuram

# Center for Career Guidance and Placements
## 2024

# CONTENT

# Director's Message

### *Dr. S Unnikrishnan Nair*
Director

Indian Institute of Space Science and Technology (IIST) a Deemed to be University started in the year 2007, is the only National Institute under the umbrella of Dept. of Space dedicated in contributing to the research and education in various key and allied areas of Space Science and Technology. Our B.Tech. students are inducted through a rank list prepared from the students who qualify JEE (Main and Advanced) exams. Students admitted for M.Tech./M.S. and Ph.D programmes are also those who have qualified GATE for Engineering streams and NET/JRF for non-engineering streams.

IIST upholds an urge to develop and continuously strengthen research with various industries, defense sectors, and research organizations. With a rigor of Academic programmes at par with IITs, and Research labs being continuously upgraded with state-of-the-art facilities. IIST provides the right ambience for faculty and students to work extensively in specialized areas of research in collaboration with different ISRO Centres. IIST is always live with colloquia, seminars, conference, lectures by eminent experts in different fields so as to fuel the flames of blowing knowledge. IIST always encourages innovative ideas to grow and strive to gain international recognition for its academic programmes and research activities. The Institute churns out graduates and post-graduates capable of working in cutting edge technologies.

# From Placement Desk

With a bright set of students who have undergone a rigorous curriculum at IIST and capable of working at cutting edge technologies, CCGP has a key role in ensuring that our students are appropriately placed and continuously contribute to the growth of our nation. IIST values feedback from various industries and research organizations and hence the CCGP liaisons with industry and research organizations to arrange interactive sessions to receive feedback on academic programmes, programmes on specific skillsets etc.

We hope that this brochure brings out key features of our institute. Typical procedure for internship and placement that industry/organization is also briefly indicated. We are confident that our students would be an asset to the organization that they would be working on.

We Sincerely hope that you would get in touch with us for internship and placements. The CCGP would be happy to provide you with all the necessary information and guide you through the process of internship and placement.

**Dr. Jinesh K B**
**Head, CCGP**
**Dept. of Physics**

**Dr. Immanuel Raja**
**Dy. Head, CCGP**
**Dept. of Avionics**

# About IIST

IIST is a national institute under the umbrella of Department of Space. The institute offers education at the undergraduate, graduate, doctoral and post-doctoral levels with special focus on space sciences, space technology and space applications. The academic programmes have been formulated to strengthen the fundamentals, experience the realities through practical work, and enhance the knowledge and understanding in various branches of science and engineering. The curriculum has been developed and continuously upgraded to meet these goals. All our academic programmes are approved by AICTE/UGC.

www.iist.ac.in/placementcell

# Academic Programmes
## Undergraduate and Dual Degree Programmes

Admission:  IIT JEE (Advanced) conducted by IIT's

Undergraduate Programmes:
1.  Aerospace Engineering (4-year B. Tech Programme) – 64 students.
2. Electronics & Communication Engineering (with specialization in Avionics) (4-year B. Tech Programme) – 60 students.

Dual Degree Programmes: (22 students)

5 year B.Tech + M.Tech/M.S. Programme.

The 5-year Dual Degree programme leads to B. Tech degree in Engineering Physics along with one of the following Post-graduate degree specialization chosen.

1.  Master of Science (Astronomy and Astrophysics).
2.  Master of Technology (Earth System Science).
3.  Master of Science (Solid State Physics).
4.  Master of Technology (Optical Engineering).

*NOTE: There is no exit option at the end of four years.*

# Academic Programmes
## Postgraduate Programmes

Admission:

M.Tech Programmes: GATE qualification with high score and Master of Science programme in Astronomy and Astrophysics is based on JEST/JRF/NET/GATE.

There are 124 students are available to participate in the campus placement recruitment 2023-2024.

| DEPARTMENT | POST GRADUATE PROGRAMMES |
|---|---|
| Aerospace Engineering | M.Tech in Thermal and Propulsion (2012 onwards) |
| | M.Tech in Aerodynamics and Flight Mechanics (2013 onwards) |
| | M.Tech in Structure and Design (2013 onwards) |
| Avionics | M.Tech in RF and Microwave Engineering (2012 onwards) |
| | M.Tech in Digital Signal Processing (2012 onwards) |
| | M.Tech in Control Systems (2013 onwards) |
| | M.Tech in VLSI and Microsystems (2013 onwards) |
| | M.Tech in Power Electronics (2015 onwards) |
| Chemistry | M.Tech in Materials Science and Technology (2013 onwards) |
| Earth & Space Sciences | M.Tech in Earth System Sciences (2014 onwards) |
| | M.Tech in Geoinformatics (2013 onwards) |
| | Master of Science in Astronomy & Astrophysics (2013 onwards) |
| Mathematics | M.Tech in Machine Learning and Computing (2012 onwards) |
| Physics | M.Tech in Optical Engineering (2012 onwards) |
| | **M.Tech in Quantum Technology (2022 onwards)** |



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# Academic Programmes

## Doctoral Programmes

The Doctoral programmes leading to a Ph. D degree is currently available in the following departments.

- ➢ Aerospace Engineering
- ➢ Avionics
- ➢ Chemistry
- ➢ Earth and Space Science
- ➢ Humanities
- ➢ Mathematics
- ➢ Physics

The selection of full time Ph. D scholars is being done TWICE in a year. (January & June)

# Why recruit from IIST ?

- **Excellent Student Quality:** IIST has a rigorous selection of students based on their performance in highly competitive examinations such as IIT-JEE Advanced for UG programs and GATE for PG programs

- **Rigorous Curriculum:** Our curriculum has been periodically revised to train our students in the latest technology, while covering the fundamentals thoroughly. Many of the courses include course projects in which students are trained to come up with working models/ designs, etc.

- **Brilliant faculty:** Our faculty have been trained in the top research institutions and industries in India and abroad. Faculty members have established world-class research labs and facilities at IIST and compete with top researchers around the world.

- **Hands-on training for students:**   Students participate in different technical and co-curricular activities and hobby projects. Notably many students actively contribute to nanosatellite design, payload design, development and testing. InspireSat1, which was recently successfully launched was done entirely by students under able mentorship of many experts.

- **Impactful research:** Students are involved in research projects that have a huge impact on technical needs of the country and ISRO in particular. The work done by our students are presented in international conferences and published in high-quality peer-reviewed journals.

- **Holistic development:** The students are also provided an opportunity to develop themselves in a multi-cultural residential environment. This helps in broadening their thinking and understanding, improves communication skills and enables them to work in a cross-cultural environment.

# Research @ IIST

Research Programmes in IIST focus on various area of Science, Engineering and Humanities. Faculty members could also take up projects both fundamental as well as relating to the cutting-edge technology from reputed industries/Research organizations. Many in house projects of ISRO are being undertaken.

There are about 30 nos of IIST-ISRO Centres research projects are engaged though ASRG (Advanced Space Research Group).

Till date, the no. of externally funded projects which are completed are 4 and the no. of externally funded projects which are on-going are nearly 30.
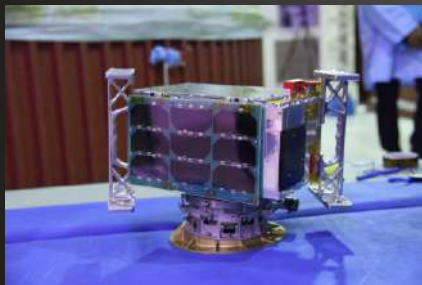


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# International Collaboration

The students of IIST have ample opportunity of exposure to foreign universities and establishments. IIST has entered into several international collaborations as outlined below:

- ➢ California Institute of Technology (CALTECH), USA (14 students)
- ➢ Universities Space Research Association (USRA), USA
  - ❖ Lunar Planetary Research Institute (LPRI), Houston, USA.
  - ❖ University of Texas, Arlington, USA.
- ➢ Jet Propulsion Laboratory (JPL), USA (18 students)
- ➢ Lockheed Martin's Under Graduate Student Visitation Program. (2 students)
- ➢ Mitacs Globalink Research Foundation, Canada (3 students)
- ➢ Australian National University (ANU), (6 students).

There also some of the MOU and NDA's being signed with various institutes and research organization outlined below:

- ➢ University of Caltech.
- ➢ TU-Delft, The Netherlands.
- ➢ IoA University of Cambridge.
- ➢ Max Planck Institute of Radio Astronomy.
- ➢ The TECHNION, ISRAEL Institute of Technology.
- ➢ Laboratory of Atmospheric and Space Physics (LASP), University of Colorado.
- ➢ Nanyang Technological University (NTU), Singapore.
- ➢ ISAE SUPAERO, France.
- ➢ Danish Aerospace Company.
- ➢ University of Cambridge.
- ➢ NIIGATA University, Japan.
- ➢ CNRS, FEMTO-St, BESANCON, France.
- ➢ Sree Chitra Tirunal Institute of Medical Science & Technology.

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# Student Achievements

Sri Aditya Deevi (SC18B080) of B.Tech., Electronics and Communication Engineering (Avionics) received the prestigious Gold Medal for being the best academic performer across all B.Tech. branches and Kiran L. (SC17B150) of Master of Science in Astronomy and Astrophysics (Dual Degree) received the Gold Medal for topping all M. Tech. programmes. Subrahmanya V Bhide (SC18B030) received an excellence certificate and a cash prize for having the highest academic score in Aerospace Engineering, while Abhishek A (SC17B141) Dual Degree (M.Tech. in Optical Engineering) was selected as the best all-rounder and outgoing student.



| Gold medal for the topper of all B.Tech. Branches | Gold medal for the topper of all PG specializations | Best academic score in Aerospace Engineering | Best all-rounder and the best outgoing student |
|---|---|---|---|
| Sri Aditya Deevi (SC18B080) B.Tech. in Electronics and Communication Engineering (Avionics) | Kiran L (SC17B150) Dual Degree (M.S. in Astronomy and Astrophysics) | Subrahmanya V Bhide (SC18B030) B.Tech. in Aerospace Engineering | Abhishek A (SC17B141) Dual Degree (M.Tech. in Optical Engineering) |

Subrahmanya V Bhide (SC18B030) of Aerospace Engineering, Sri Aditya Deevi (SC18B080) and Kothadiya Princekumar Balkrushna (SC18B078) of Electronics and Communication Engineering are pursuing Masters degrees at California Institute of Technology (Caltech), USA, before joining ISRO. The 9-month programme is financially supported under the DoS-Caltech Professor Satish Dhawan Endowment Fellowship.



| Masters Programme at California Institute of Technology (CalTech), USA | | |
|---|---|---|
| Subrahmanya V Bhide (SC18B030) Aerospace Engineering | Sri Aditya Deevi (SC18B080) Electronics and Communication Engineering (Avionics) | Kothadiya Princekumar Balkrushna (SC18B078) Electronics and Communication Engineering (Avionics) |

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# Internships

The placement cell permits and co-ordinates the following modes of internships for students:

a.   **Industry-partnered research internships** for MTech students would have 5-6 months of work in IIST followed by 5-6 months of internship with the company.

b.   **1-year internship (8-12 months):** This internship is applicable only for PG & Dual degree students in their final year.   The work done by the student may be suitably incorporated into the thesis towards the award.

c.   **1 semester internship (4-6 months):** This internship is applicable to both UG and PG students.

    i. UG: Final semester BTech students may do their project work as an internship at an industry/research institute, which would become a part of the thesis submitted by the student towards the completion of the degree.

    ii. PG: PG students may do a part of their project work at an industry/research institute for a period of 4-6 months and the rest at IIST.

d.   B. Tech internship during summer/ winter vacation is for 6-8 weeks.

# Placement Process

1. Pre- Placement Talks (PPT);

 Ø PPT's may be scheduled in any one or more of the modes:

 Ø Documented PPT's shared via email.

 Ø Online streaming of PPT

2. Shortlisting for Interview process;

Shortlist for the interview process can be made by the recruiter, at their discretion, by any or all ofOnline Test (students will take test from their home)

 Ø CV screening

3. Interview Process;

Interviews will be scheduled via virtual mode by the recruiter, at their discretion, by any or all of

 Ø Telephone Call

 Ø Skype, MS Teams, WebEx or Google meet, Zoom

Or any other online platform as per the preference of Recruiter

4. Interview reschedule;

If a company is unable to complete the interview process for a student due to technical issues like network failure etc., at any end, recruiters are encouraged to inform the same to Placement cell and reconnect with student at the earliest possible timeframe of a particular slot to complete the interview process.

5. Final selection;

Recruiter should share final results via email to placement@iist.ac.in by the end of an interview slot

 Ø Placement Cell will declare results to students

 Ø Students with more than one offer will confirm their preference to placement cell.

 Ø Acceptance status of offer will be communicated to respective recruiters.

 Ø Companies are encouraged to provide waitlist along with the final selection list. In case of non-availability of the final select students the waitlisted candidates will be automatically upgraded or will be upgraded as per recruiter's preference.

# Companies Visited

# Contact Details

## CCGP Officer:
Dr. Jinesh K. B
Head CCGP
Associate Professor
Dept. of Physics
Contact No: 0471 2568630

## CCGP Officer:
Dr. Immanuel Raja
Dy. Head CCGP
Assistant Professor
Dept. of Avionics (ECE)
Contact No: 0471 2568696

## CCGP Officer:
Contact No: 0471 2568606
Email ID: placement@iist.ac.in

For more details of Placement cell activities visit
https://www.iist.ac.in/placementcell