

Indian Institute of Technology Hyderabad Advertisement No. IITH/HR/Faculty Rectt (R)/2/2024-25

Starting date of applications: 10.10.2024 Closing date of applications: 01.11.2024 05:30 pm

1. General Information:

IIT Hyderabad (IITH), established in 2008, is consistently ranked among the top 10 Indian Engineering Institutes in the NIRF and QS World Rankings. IITH has 5300+ students (~1500 PhD students), 320+ faculty and 350+ staff. With about 11,000+ publications, 1,70,000+ citations, 4210+ projects worth of Rs. 1260+ Crores, 310+ patents and 190+ startups, IITH is one of the fastest growing institutions in the Country. IITH has been striving for excellence passionately with a motto of "Inventing and Innovating in Technology for Humanity (IITH)".

IIT Hyderabad invites applications from exceptionally bright and motivated Indian Nationals or OCIs with an established record of independent, high-quality research and commitment to teaching for regular positions of Assistant Professor, Associate Professor and Professor at IIT Hyderabad (www.iith.ac.in) in the following Departments.

- ✤ Artificial Intelligence
- Biomedical Engineering
- Climate Change
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science & Engineering

- Electrical Engineering
- Entrepreneurship and Management
- Liberal Arts
- Materials Science and Metallurgical Engineering
- ✤ Mathematics
- Mechanical and Aerospace Engineering
- Physics

Design

For specializations required in these departments please see below. **Interested candidates may** apply through an online portal <u>https://faculty.recruitment.iith.ac.in</u> and attach the relevant certificates/documents.

Institute encourages faculty members who join a particular department to be affiliated to up to two other departments, apart from their parent department, depending on their research interests with the approval of the concerned departments.

Women candidates are especially encouraged to apply. Reservation as per Government of India rules for SC/ST/OBC-NCL/EWS are applicable for all positions. Necessary certificates must be enclosed with the application form. GOI policy on reservation of faculty positions also includes persons with Physical disability.

Recruitment will be based on the need in given areas within the department. However, exceptionally meritorious candidates in any area of specialization pertaining to the said department will also be considered.

The institute reserves the right to fill or not to fill any or all of the advertised posts. Mere fulfillment of the qualifications and experience requirement does not entitle a candidate to be called for an interview.

The Institute provides support to cover relocation expenses for a new faculty member. The Institute provides Cumulative Professional Development Allowance (CPDA) of Rs. 3 lakhs for every block of 3 years to meet the expenses for participating in international conferences, national conferences and paying the membership fee of various professional bodies and contingent expenses. The faculty and their families are covered by an attractive Contributory Health Services Scheme. The institute also provides Rs. 50,000 annually as a travel grant for strengthening collaborations. Institute also provides annual research grant to its faculty based on their performance.

<u>Seed Grant:</u> IITH provides a seed grant to new faculty to get them started on their research, while they await the results of their project proposals submitted to external funding agencies. New faculty can apply immediately after joining for the Seed Grant of up to Rs. 35 lakhs, which includes fellowship for one PhD student for 3 years.

2. <u>Description of posts and required qualifications</u>:

2.1 Assistant Professor Grade-I (Pay Level 12):

As per 7th CPC, the minimum pay to be fixed at Rs.1,01,500/- (Pay Level-12) along with admissible allowances. After completion of 3 years of satisfactory service, they may be placed at pay level 13A1.

Qualification: The candidate must have a strong academic record with a PhD and at least first class at both UG and PG levels.

Experience: At least 3 years of industrial/research/teaching experience after completion of PhD

2.2 Assistant Professor Grade-II (Pay Level 10 or Pay Level 11):

Candidates with less than 3 years of post-Ph.D. industrial/research/teaching experience can apply for Assistant Professor Grade-II. The minimum pay to be fixed in the case of a fresh candidate with no post-PhD experience would be at Rs.98,200/- (Pay Level-10) along with admissible allowances. Once selected in this position, the candidate will be considered for the post of Assistant Professor Grade-I upon fulfilling the required work experience, subject to internal review.

Qualification: The candidate must have a strong academic record with a PhD and at least first class at both UG and PG levels.

The candidates are expected to have a strong record of research publications in the journals of repute (Q1), and referred conferences (A^* and A), patents, etc.

For Assistant Professor Grade-II and Assistant Professor Grade-I positions, the upper age limit shall be preferably below 35 years as on the closing date.

2.3 Associate Professor:

As per 7th CPC, the minimum pay is to be fixed at Rs.1,39,600/- (Matrix pay level of 13A2) along with admissible allowances.

Qualification: The candidate must have a strong academic record with a PhD and at least first class at both UG and PG levels.

Experience: A minimum of 6 years of teaching/research/professional experience after completion of PhD, of which 3 years should be at the level of Assistant Professor in CFTIs or equivalent in a research organization or industry.

The candidates are expected to have a strong record of research guidance, research publications in the journals of repute (Q1), and referred conferences (A* and A), patents, etc.

For Associate Professor Position, the upper age limit shall be preferably 45 years as on the closing date.

2.4 Professor:

As per 7th CPC, the minimum pay is to be fixed at Rs.1,59,100/- (Matrix pay level of 14A) along with admissible allowances.

Qualification: The candidate must have a strong academic record with a PhD and at least first class at both UG and PG levels.

Experience: A minimum of 10 years teaching/research/professional experience after completion of PhD, of which at least 4 years should be at the level of Associate Professor in IITs, IISc Bangalore, IIMs, and IISERs or R&D Labs or industry.

The candidate should have demonstrated leadership in research in a specific area of specialization in terms of guidance of MTech and PhD students, and has a strong record of sponsored research, publications in reputed journals (Q1) and refereed conferences (A* and A), patents, laboratory/course development and other recognized relevant professional activities.

For Professor Position, the upper age limit shall be preferably 55 years as on the closing date.

3. <u>Relaxation in age limit:</u>

Category	Age relaxation	
Reservation policy as per GoI norms is followed.		
SC/ST	5 years	
OBC-NCL	3 years	
PWD	Relaxation for PWD candidates: 15 years for SC/ST, 13 years for OBC-NCL	

3.1 Age relaxation for various categories:

and 10 years for General Category.	and 10 years for General Category.	
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- 3.2 Reservation for 'Persons with Disabilities' with minimum of 40% disability: Reservations will be given as per the GOI guidelines.
- 3.3 The candidates submitting applications under the EWS category should upload a valid EWS Certificate issued for the current financial year. Income statement of the whole family needs to be submitted.
- 3.4 OBC-NCL certificate should not be more than one financial year old from the last date of application.

4. <u>Particulars of specializations required in each department</u>:

Note: IITH reserves the right to focus on specific areas for its recruitment. The fields mentioned below are meant to be indicative of the departments' current requirements, which may change without notice. However, outstanding candidates in any field relevant to the department will also be considered.

4.1 Artificial Intelligence:

Candidates with outstanding research publication records in any area of Artificial Intelligence and Machine Learning may apply. Candidates should have a strong academic background with their bachelor's degree in any area of science and engineering but should have their PhD in the area of AI/ML and require an outstanding publication record with contributions in any area of AI and its applications, including interdisciplinary AI research. Successful candidates are expected to engage in cutting edge AI research and be capable of offering Institute-wide courses in AI and ML to the growing community of AI users and practitioners at IITH. For more details about the department, please visit <u>https://ai.iith.ac.in/</u>.

4.2 Biomedical Engineering:

Applicants from Biomedical Eng., Electrical Eng., Instrumentation, Computer Science and Engineering, Mechanical Eng., and Applied Physics background, who have done substantial and outstanding research work in biomedical engineering with the topic of their PhD thesis falling in one of the biomedical engineering streams will be considered.

Areas of Specialization for consideration: Biomedical Instrumentation, Medical Robotics, Brain Machine Interfaces, Neurotechnology, Medical Devices, Biomedical Imaging Instrumentation, Algorithms and platforms for imaging, medical image processing, Radiation Physics and Therapy

Applicants are mandated to have a UG/PG degree in engineering streams such as Biomedical Engineering, Electrical, Computer, Mechanical, Instrumentation, Engineering Physics or in Applied Physics, Mathematics; or Medical streams such as MBBS and BDS. For more details about the department, please visit <u>https://bme.iith.ac.in/</u>.

4.3 Chemical Engineering:

Areas of Specialization for consideration: Process Control, AI/ML with applications in Chemical Engineering, Electrochemical Engineering, Sensor Systems and Devices, Chemical Process Safety, Systems Biology/Bioinformatics, Particulate Technology/Granular Flow

Mineral Processing Technology.

In addition to PhD, the applicants must have BTech/BE in Chemical Engineering. For more details about the department, please visit <u>https://che.iith.ac.in/.</u>

4.4 Chemistry:

Candidates with any area of specialization in chemistry can apply. In addition to a PhD, the applicants should have UG and PG degrees in Chemistry. For more details about the department, please visit <u>https://chemistry.iith.ac.in/.</u>

4.5 Civil Engineering:

The department is actively seeking applications from suitable candidates in four key specializations. The thrust areas for each specialization are detailed in the table below:

Specialization	Thrust Areas
Transportation Engineering	1. Transport infrastructure planning and design
	2. Pavement analysis, design, and evaluation
	3. Pavement materials
	4. Pavement management systems
	5. Transport economics and finance
	6. Rail and air transportation
	7. Traffic Operations and Management
Geotechnical Engineering	1. Geotechnical Earthquake Engineering
	2. Rock Mechanics
Environmental Engineering	1. Air pollution modeling
	2. Solid Waste management
Hydraulics and Water Resources	1. Experimental Hydraulics
Engineering	2. Computational Hydraulics
Construction Technology and	Open to all areas
Management	

In addition to PhD Civil Engineering or other allied areas, the applicants must have BTech/BE in Civil Engineering. For more details about the department, please visit <u>https://civil.iith.ac.in/</u>.

4.6 Climate change:

Applicants should have PhD in sciences, engineering or social sciences, with core PhD and/or postdoc work (minimum of 3 years, with demonstrated output in terms of publications) in one or more of climate science, climate mitigation and/or adaptation, climate and health, climate and society, climate policy.

4.7 Computer Science and Engineering:

Areas of Specialization for consideration: All areas of computer science and engineering.

Candidates in areas not mentioned above, with an outstanding track record, are also welcome to apply. For more details about the department, please visit <u>https://cse.iith.ac.in/</u>.

Candidates found exceptional by the selection committee will be awarded a salary top-up for their first year funded by an endowment.

4.8 Design:

A PhD in Design/Creative Arts or in any relevant field of Design with demonstrable written output in the form of monographs, essays, journal papers, curatorial texts, editorials are essential.

Areas of Specialization for consideration: Product Design/Industrial Design, Interaction Design XR technologies and UX/UI, Visual design/Visual Communication/Graphic Design, Animation & Film making, Systems Design, Strategy and Design Management. For more details about the department, please visit <u>https://design.iith.ac.in/</u>

4.9 Electrical Engineering:

In addition to PhD, the applicant must have at least one degree from EE/ECE/Electronics or a related area. Applications are invited in the following gap areas:

- 1. Communications, Signal Processing, and Learning (CSPL) Quantum Communications, Quantum Computing, Computer/Wireless Networks, Network Security, Computer Vision, Reinforcement Learning, Statistical Learning.
- 2. Microelectronics and VLSI (Micro) Analog/digital integrated circuits and system design, Photonic Integrated Circuits, Circuits and devices for /quantum information processing, Advanced CMOS VLSI fabrication.
- 3. Power Electronics and Power Systems (PEPS) Very high-speed electric drives, High power density converters (focusing on watt/weight ratio)/very high-frequency resonant power converters, EMI/EMC investigation of power converters, Wide band gap devices-based power converters, Power converters and machines for robotics and drones.
- 4. Systems and Control (SysCon) all areas within Systems and Controls.

Exceptional candidates in all areas of EE are encouraged to apply. For more details about the department, please visit <u>https://ee.iith.ac.in/.</u>

4.10 Entrepreneurship and Management:

Area of Specialization for consideration: Entrepreneurship, Startup Management, Green Startup, Deep Tech Entrepreneurship, Rural Entrepreneurship, Operations Research, Logistics and Supply Chain Management, Strategic Management, Business Policy, Organizational Behaviour, Human Resource Management, HR Analytics, Information Systems, Business Analytics, Marketing Analytics, Digital Marketing, Product Management, Marketing Management, Entrepreneurial Finance, Corporate Finance, Financial Analytics and Business Sustainability. For more details about the department, please visit <u>https://em.iith.ac.in/</u>

4.11 Liberal Arts:

Applicants should have a PhD with a strong academic record in the following areas: Public Policy; English Language Teaching (ELT); Linguistics (with all sub specializations). For more details about the department, please visit <u>https://la.iith.ac.in.</u>

4.12 Mathematics:

Applicants should have a PhD in Computer Science, Probability, Statistics, Complex Variables and Algebraic Topology. Applicants with a PhD in Computer science areas should have their UG/PG degree in Mathematics or CSE. For more details about the department, please visit <u>https://math.iith.ac.in/</u>.

4.13 Mechanical and Aerospace Engineering:

Area of Specialization for consideration: Flight dynamics and Controls, Helicopter dynamics, Unmanned Aerial Systems, Guidance and Navigation, Automation and Smart manufacturing (process monitoring and control, IIOT and data driven), Systems Engineering, Robotics, Dynamics, Vibrations and Controls, Experimental mechanics, Data driven modelling, Mechanics of biological systems, Sport mechanics.

In addition to PhD, Applicants should have their UG/PG degree in Mechanical/Aerospace/ Production/Automobile/Mechatronics but should have their PhD in specialization areas related to Mechanical/Aerospace/Production/Automobile/Mechatronics and require an outstanding publication record. For more details about the department, please visit <u>https://mae.iith.ac.in/</u>.

4.14 Materials Science & Metallurgical Engineering:

Applicants should have a PhD in the fields relevant to Materials Science and Metallurgical Engineering and should significantly contribute to the research and teaching (mainly UG core courses) of the department.

Area of Specialization for consideration:

- 1. Design, development, and applications of advanced materials characterization techniques for process-microstructure-property relations in materials using techniques such as APT, 4DSTEM, EELS, and similar.
- 2. Design and development of advanced materials for renewable and sustainable energy (hydrogen storage and transport, Perovskite/Tandem solar cell devices, nuclear materials)
- 3. Design and development of ultra-high temperature materials (ultra-high temperature ceramics)
- 4. Metallurgical process modeling with expertise in CFD, non-ferrous extractive metallurgy (critical metals and RE extraction)
- 5. Computational modeling of deformation of materials at the microscale (computational crystal plasticity)

For more details about the department, please visit <u>https://msme.iith.ac.in/</u>.

4.15 Physics:

The applicants must have a PhD degree in addition to BTech in Engineering Physics (or closely related areas) and/or a Masters/ Integrated degree in Physics/Applied physics/Medical Physics/Astronomy/Electronics.

Area of Specialization for consideration:

1. Areas related to Quantum Technologies such NV centers, cold atoms, semiconductorsuperconductor circuits, quantum optics, quantum sensors, quantum error correction, random unitary circuits, noisy-intermediate scale quantum (NISQ) devices etc.

2. Areas related to Observational Astronomy such as Optical/IR Astrophotonics; X- ray/ Gamma-ray astronomical instrumentation; Gravitational wave, detector and instrumentations; Solar Astronomy

For more details about the department, please visit <u>https://physics.iith.ac.in/</u>

5. General Instructions:

- 1. Applications will only be accepted through the online portal (link: https://iith.ac.in/careers/). No hard copy submission or soft copy submission through email will be accepted.
- 2. The last date to apply is 01.11.2024, 5.30 PM.
- 3. Queries may be sent by email to faculty.recruitment@iith.ac.in
- 4. The applicants who applied during the last two years may highlight the substantial improvement in their CV since the last application.
- 5. The list of publications should clearly indicate the impact factor and the Quartile (Q1, Q2, etc.) of each journal.
- 6. Persons employed in Government/Semi Government Organization or Educational Institutions must apply through proper channels OR shall provide No Objection Certificate while applying or at the time of Interview. Foreign organization/Educational Institutions are exempted for application through proper channel/NoC.
- 7. Separate applications must be submitted if an applicant is applying for a faculty position in more than one Department.
- 8. Applicants should submit their valid SC/ST/OBC-NCL certificate issued by the competent authority in the prescribed format along with the application form in support of their claim.
- 9. The applicants submitting applications **under the EWS category** should upload a valid EWS Certificate issued in the current financial year.
- 10. OBC-NCL certificate should not be more than one year old from the last date of application. However, if the certificate is not readily available, you may upload the available old certificate and will have to produce a fresh valid certificate at the time of interview.
- 11. Degrees obtained by the applicant should have been awarded by a recognized University/ Institute.
- 12. All Educational qualification certificates including the date of PhD defense must be submitted/uploaded along with the application form.
- 13. Political and security clearance from Ministries of External Affairs and Home Affairs is necessary in every case for individuals with foreign passports.
- 14. The Institute reserves the right to call for interview only those applicants shortlisted on the basis of their qualification, experience, research, publication records, and requirements of individual academic units.
- 15. Mere eligibility will not vest any right on any applicant for being called for an interview. The decision of the Institute in all matters will be final.
- 16. Applicants, if called for interview in physical mode, will be reimbursed airfare within India by Economy class from the place of their residence and back by the shortest route. Air tickets should be booked through the following agencies only.
 - a. M/S Balmer Lawrie & Co. Ltd
 - b. M/S Ashoka Travels and Tours
 - c. M/S Indian Railways Catering and Tourism Corporation Ltd.