

**Indian Institute of Technology Delhi**  
**Hauz Khas, New Delhi – 110016**

ADVERTISEMENT NO. IITD/2022(II)/SIRE/IPDF/06

**ADVERTISEMENT FOR THE POSITIONS OF POST DOCTORAL FELLOWS**

IIT Delhi invites applications from qualified Indian Nationals, Persons of Indian Origin (PIOs) and Overseas Citizens of India (OCIs) for the Post-Doctoral Fellows (PDF) in the Department of Mechanical Engineering in the specialization mentioned. The appointment will be made exclusively for research purposes and will be initially for one year and can be extended further by one more year contingent on the available project funding.

Qualified persons include:

- a) Institute specifically encourages applicants from SC/ST/OBC category as well as persons with disability to apply for these positions.
- b) Maximum age is 32 years for male and 35 years for female candidates (to be relaxed by 5 years in case of persons with physical disability, SC and ST and 3 years in case of OBC-NCL).
- c) Number of posts – **Two**

**Consolidated amount of Fellowship to Post-Doctoral Fellows (PDF):**

The consolidated Fellowship amount is **Rs. 75,000/- per month**. House Rent Allowance (HRA), in lieu of on-campus housing, will be @ **24%** of the fellowship amount.

**BACKGROUND AND SPECIALIZATION:**

A project is being initiated by IIT Delhi for conducting a feasibility study of improving the energy efficiency of commercial buildings and cluster of buildings (institutional campuses and district-scale systems) through centralized heat pump systems coupled with thermal energy storage (TES). Such systems have considerably lower carbon footprint and enable deeper penetration of renewable energy sources which are urgently needed for mitigating climate change.

The project is of an inter-disciplinary nature and includes (a) development of a generalized approach for the design of heating, ventilating and air-conditioning (HVAC) systems with coupled thermal energy storage, (b) cooling and heating load calculations for a variety of consumers, (c) design of cost-effective and high round-trip efficiency TES systems, and (d) development of methods for techno-economic analysis. The project will also involve development of system integration methods, carbon footprint assessment, and economic and regulatory aspects.

**Specialization:** Thermodynamic design and analysis of heating, ventilating and air-conditioning (HVAC) systems, thermal energy storage, building energy efficiency, heating and cooling load calculations, clean energy technologies, carbon footprint assessment methods, and technoeconomic analysis of emerging technologies in the areas of clean and renewable energy.

As a Post-Doctoral fellow at IIT Delhi you would benefit from exposure to world-class research and technology development in an upcoming energy efficient technology in

an inter-disciplinary setting. You will have opportunities to interact with academicians from diverse backgrounds, engineering consultants, and equipment manufacturers. You can also gain exposure to teaching-learning methods, particularly, in the context of clean energy technologies.

### **MINIMUM QUALIFICATIONS AND EXPERIENCE:**

#### **Essential Qualifications:**

1. Ph.D. in mechanical engineering or related engineering discipline with a focus on air-conditioning, thermal energy storage technologies, building energy efficiency, or thermal systems design and simulation.
2. Knowledge of thermodynamics of and simulation methods for HVAC systems
3. Ability to analyse and creatively visualize large datasets
4. Experience with CAD software packages for developing engineering drawings
5. Excellent written and verbal communication skills with prior record of publications in reputed journals and/or conferences in their field of research

#### **Desirable:**

1. Knowledge and prior experience with emerging HVAC technologies and system integration
2. Techno-economic analysis of new energy technologies
3. Prior experience with HVAC industry
4. Prior experience with project management

### **Documents Required for Application**

1. Latest CV/Resume.
2. A letter of motivation, also mentioning your experience and its relevance to the job description.
3. A copy of your academic transcripts for each college degree.
4. Names and contact information of two referees, persons with whom you have worked with, and we may contact for reference.

Clearly label the documents (in PDF format) as “CV”, “Motivation letter”, “Academic transcript PhD”, etc.) to complete your application.

### **NOTES:**

- The minimum requirement of qualifications and/or experience may be relaxed in respect of exceptional candidates.
- Mere fulfilment of the required minimum qualifications and experience does not entitle a candidate to be called for interview/discussion.
- The Institute reserves the right to fill or not to fill the posts advertised.
- The candidates called for presentation/discussion will be paid AC2-Tier fare by Train/Economy Class by Air or actual expenditure and AC Taxi by road (from Airport/Railway Station/ISBT and back) fare from their place of residence/work and back by the shortest route within India, subject to production of tickets/receipts.

**ACCOMMODATION:** Not eligible for residential accommodation on the Campus.

**ABOUT THE CAMPUS:** Extending into an area of 320 acres, the campus is imaginatively laid out with a picturesque landscape with clean and wide roads. The campus provides all essential amenities for community living including Staff Club, Hospital, Shopping Centre, Banks, ATMs, Post Office, Community Centre, etc.

It is a requirement that candidates visit the IIT Delhi website (<https://recruit.iitd.ac.in>), and submit the completed application for appointment against the above position. The website also contains useful information on various aspects of working and living at IIT Delhi and on the recruitment process. As a precaution, after submitting the application through the website, please retain a copy of the application with you. Candidates employed with Government/Semi-Government Organizations or with Autonomous Bodies must submit a printed version through proper channel at the address given below.

**Only in those cases where Internet access is not available**, an application form may be obtained from the Deputy Registrar (E-I) by sending a self-addressed envelope (26cm x 11cm) to the address given below. The completed application may be sent by postal mail to the address given below.

**The last date for submission of applications is June 30, 2022.**

**Contact Address:**

**Deputy Registrar (E-I)  
IIT Delhi, Hauz Khas,  
New Delhi-110016 (INDIA)  
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