राष्ट्रीय प्रौद्योगिकी संस्थान दिल्ली
NATIONAL INSTITUTE OF TECHNOLOGY DELHI
(शिक्षा मंत्रालय, भारत सरकार के अधीन एक स्वायत्त संस्थान)

(An autonomous Institute under the aegis of Ministry of Education, Govt. of India)
Plot No. FA7, Zone P1, GT Karnal Road, Delhi-110036, INDIA
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वेबसाइट/Website: www.nitdelhi.ac.in

Rolling Advertisement for Admission to Post-Doctoral Fellowship (PDF) Programme
(Autumn Semester, Academic Year: 2023-2024)

Advt. No.: NITD/R&C/01/PDF (2023-24)

Online Applications are invited for admission to the Post-Doctoral fellowship (PDF) Programme at NIT Delhi for the Academic Year 2023-2024 in the following Departments for Autumn Semester 2023-2024. Applicants have to apply online (via Google Form), as mentioned in the "**Procedure for Online Application/ How to Apply**" Section.

S. No.	Department	Discipline/ Area of Research
1.	Computer Science and Engineering (CSE)	Refer Table I
2.	Civil Engineering (CE)	
3.	Electrical & Electronics Engineering (EEE)	
4.	Electronics Communication & Engineering (ECE)	
5.	Mechanical Engineering (ME)	
6.	Applied Sciences(AS)	Physics (PH)
		Mathematics (MA)
		Chemistry (CY)
		Environmental Science and Engineering (ENVS)

Department wise Tentative Broad Areas of Research in which applications are invited:

Table I

Department	Broad Areas of Research
Computer Science and Engineering (CSE)	Wireless Sensor Networks, Network Theory, Data Analytics, Quantum Computing in Networks, Federated Learning, Machine Learning, Motion analysis, Computer Vision, Cloud Computing, Data Security, 5G, Artificial Intelligence, Data Science, Databases, Data Mining, Big Data Analytics, Health Informatics, Software Engineering, Natural Language processing, Disease Modeling, Network Reconstruction, Social Network analysis, Signal Processing
Civil Engineering (CE)	Structural Engineering, Transportation Engineering, Geotechnical Engineering, Water Resources Engineering, Surveying/ Geomatics Engineering, GIS, Remote Sensing, Environmental Engineering, Environmental Science and Engineering, Environmental Biotechnology, Waste Water Treatment, Waste to Energy Conversion.

Electrical Engineering (EE)	**Power & Energy Systems**: Power System Dynamics & Control, Stand Alone power System, Power system operation & Optimization, Renewable energy systems (solar, wind and Hybrid), Probabilistic Power System, Uncertainty quantifications, Deregulation, Distributed Generation, Applications of Energy Storage Devices to Power System. Flexible AC Transmission System, Energy System Planning & Auditing, Loss Allocation, Power Systems Stability & Control. Electricity Market, Security Analysis, Fault Detection, Smart Energy Network, Reliability Engineering, Power Systems Analysis and Smart Grid, Failure Analysis, RAMS. **Power Electronics & Electrical Drives**: Power Electronics, Power Quality, Improved Power Quality Convertors, Custom Power Devices (DSTATCOM, DVR & UPQC), Active Power Filters, Multi-level converters, Matrix converters, Electric Drives, Flexible AC Transmission System, DC-DC converters, AC – DC Micro grids, Smart Grids, Special Machines & Control, Modulation Techniques, Electric Vehicles, Control of Renewable Energy Systems, Variable frequency transformer. **Control & Automation**: Control Theory, Model Order Reduction of Linear, Non Linear and Parametric systems, Finite Element modelling of Distributed Parameter systems, efficient Algorithms for fast simulation of power electronics circuits & power systems, vector control of electric drives, Disease Modelling, Artificial Intelligence and Deep Learning. Cyber-Physical Systems, Learning Control, Networked Control Systems, Decentralized control, Constrained control systems, Mechatronics. **Signal Processing**, Biomedical Signal processing, Artificial Intelligence, Image Processing, Signal Processing Applications in Electrical Engineering.
Electronics and Communication Engineering (ECE)	Communication Systems & Networks, Optical & Wireless Communication Systems, Group IV Photonics, Semi conductor Opto-electronic Devices, Electronic Circuits & Devices, Nano-electronics and Nano-photonics, VLSI Design, VLSI Circuit Design Embedded Systems, VLSI Architecture for Signal and Image Processing, DSP in VLSI Circuits, Low Power VLSI Design, Under Water Image Processing, Signal Processing (Image Processing, Speech Processing, Bio-Signal Processing), Standard cell characterization of basic logic cells, Delay modeling, Device Circuit Co- design, Design and analysis of Novel devices like TFET etc, Artificial Intelligence, Analog and Mixed Signal IC Design, RF and Microwave Circuits and Devices, Antenna Design, Biosensors, Low Power VLSI Design. Embedded Systems, Nanoscale semiconductor devices, Electronic Circuits & Devices, Photonics devices, Semiconductor Opto-electronic Devices, RF and Microwave Circuits and Devices, Antenna Design, Communication Systems & Networks, Optical & Wireless Communication Systems, Image Processing, Signal Processing, Artificial Intelligence and Machine Learning, Block-chain, Peer-to-Peer Networks, Neural Networks, Game theory, Computer Vision, Robotics, Pattern Recognition, Data Science and Analysis, 3G, 4G and 5G Technology, Telecommunication Networks, IoT, High-Frequency Circuit Design, RF Energy Harvesting, Biosensors, MEMS.
Mechanical Engineering (ME)	Additive Manufacturing, Advanced Machining Processes, Nano-Finishing, Ultra Precision Finishing, Machining Sciences, Measurement and Metrology, Metal Matrix Composites, Materials, Boiling and Condensation Heat Transfer, Refrigeration, Two Phase Flow, Fluid Flow, CFD, Solar Energy, Bio-fuels, Thermal Energy Storage (TES), Renewable Energy, Thermal Aspects of Additive Manufacturing, Thermal Engineering, Numerical Modeling and Simulation, Strength of Materials, Rupture of Ductile Materials.
Applied Sciences (AS) Discipline: Physics (PH)	Nanophotonic Sensors and Devices, Plasmonics in thin films and nanostructures, Fiber Optics, Optical Device Modeling, Optical imaging & instrumentation, Biomedical optics, Digital Holography, Microwave imaging and instrumentation, EM Theory in different media, Antennas and wave propagation, MHD waves & Flow

Applied Sciences (AS) Discipline: Mathematics (MA)	Convection in Fluids, Heat Transfer, Nanofluids, Ferrofluids, Micropolar Fluids, Non-Newtonian Fluids, Porous Media, Computational Applied Mathematics.
Applied Sciences (AS) Discipline: Chemistry (CY)	Design and synthesis of new porous materials with metal skeleton and their application in catalysis, chemical technology, and host-guest chemistry (molecular adsorption and molecular recognition), electrical, optical and magnetic properties.
Applied Sciences and (AS) Discipline: Environmental Science and Engineering (ENVS)	Environmental Science and Engineering, Environmental Biotechnology, Waste Management, Waste to Energy Conversion

Minimum Eligibility/ Minimum Educational Qualifications and Student Category for Application:

a.   The candidate should be a Doctor of Philosophy (PhD) degree holder. Candidate with PhD Thesis submitted may also apply, but before joining the PDF program, he/she will be required to produce the certificate of award of PhD Degree from his/her University/Institute.
b.   All the degrees acquired by the candidate must be in first class (starting from Bachelor's Degree onwards), with at least one degree from CFTI/ Centrally Funded Institutes/ Institute of Repute.
c.   The candidate should apply within five years after completing his/her PhD Degree.
d.   The candidates, who have completed their PhD from NIT Delhi, can apply for the PDF program after 3 years of completion of their PhD degree. In the exceptional case, this condition may be relaxed, subjected to the approval of the competent authority.
e.   The maximum age of the candidate should be up to 35 years with relaxation of five years to applicants belonging to SC/ST/OBC/Physical Challenged/Women categories (as per available at PIB No. NB/KGS/(RSQ-141-02.02.2021) . Relaxation in age will be as per Government of India norms.

Important Notes:

a.   Merely fulfilling above minimum eligibility criteria does not ensure the selection or even eligibility for the entrance test/ interview or both.
b.   Regarding selection, the decision of the Competent Authority will be treated as final one.

Rules and Regulations:

All the applied/ selected candidates will be governed by the rules and regulations of the PDF Ordinance 2022-2023 of the Institute. Candidates are advised to read the ordinance clearly before proceeding for the application.

[NITD Website → Academics → Academic System → PDF Ordinance → PDF ordinance 2022-2023]

Procedure for Online Application/ How to Apply:

a.   The Candidates have to fill up the online Google Form within stipulated time mentioned. Late submissions will not be entertained, under any circumstances.
b.   Link for the Online Form: **https://forms.gle/L1LJWYQBoXEXaP34A**
c.   During filling up the online Google Form, candidates are advised to read up all the requisite details very carefully, correctly and upload all the relevant documents along with application form (available at the end of this advertisement) in PDF format. The same application form is available in doc format with the advertisement over the institute website also.
d.   Candidates are advised to visit the institute website: **www.nitdelhi.ac.in** for frequent updates.
e.   A candidate interested in applying in more than one department/ category shall be required to submit separate application forms along with appropriate fees and documents.
f.   There is no application fee for PDF programme.
g.   Incomplete, improper and wrong applications will not be considered for short-listing.

Admission Process:

a.   Applications for Post-Doctoral Fellowship (PDF) programs are invited from Indian and foreign nationals on the prescribed format (via online Google Form). Applications as received will be scrutinized at the departmental/ central level as per Institute norms. After scrutiny, the candidates will be communicated

regarding their candidature.

b.   The selection process mainly includes Interview of the provisionally eligible candidates after document verification. The selected candidates will be informed and offered the Post-Doctoral Fellowship (PDF). The provisionally selected candidates are expected to join in a month and should submit relieving certificate, if employed somewhere.

Important Notes:

Regarding short listing and selection of the candidates, the decision of the Competent Authority will be treated asfinal one.

Reservations:

The reservation rules will be followed as per Government of India guidelines prevailing at the time of admission. Category (General/OBC/SC/ST/PH/EWS) once chosen by the applicant in his/her application form shall not be changed at a later stage. Candidate(s) claiming any reservation category (OBC/SC/ST/PH/EWS) shall attach a valid caste certificate w. e. f 1st April, 2023 along with the application.

Scholarships:

a.   A fellowship of Rs 60,000/- per month plus HRA will be offered throughout the duration of the engagement. No other allowances will be provided by the Institute.

b.   The fellowship offered is purely temporary in nature and the Institute will have the right to review the fellowship based on the performance/conduct of the fellow. Similarly, the postdoctoral fellow must give one month's notice if he/she wants to leave the fellowship.

Period of Engagement:

The duration of the fellowship will be for a period of 3 years. However, initially the offer will be made for one year and extendable for two more years based on performance evaluation. Review will be conducted every year. Review will be based on quantifiable outcomes based on the deliverables proposed in the initial proposal and publications. A progress monitoring committee (PMC) will evaluate the progress and recommend the extension.

For any query please contact on following:-

Contact numbers: 011 – 33861112, 011 – 33861104
Email address: phdadmission@nitdelhi.ac.in

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Dean Research & Consultancy
NIT Delhi

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Application Form for Admission to Post-Doctoral Fellowship (PDF) Programme
for Academic Year 2023-24 (Autumn Semester)

1. **Select program (Any one)**
   Ensure your eligibility before selecting the program. If you wish to apply for more than 1 program, please apply separately.

Sl. No.	Department/Discipline	Tick (✓) in the Department/ Discipline you wish to apply
1	Civil Engineering (CE)	
2	Computer Science and Engineering (CSE)	
3	Electrical Engineering (EE)	
4	Electronics and Communication Engineering (ECE)	
5	Mechanical Engineering (ME)	
6.1	Applied Sciences (Chemistry) (CH)	
6.2	Applied Sciences (Mathematics) (MT)	
6.3	Applied Sciences (Physics) (PH)	
6.4	Applied Sciences (Environmental Sciences) (EVS)	

2. **Faculty name(s) from NIT Delhi as Mentor:** _____

   _____

3. **Whether NET/NET-JRF/GATE Qualified. If yes, mention Year, Score and Rank.**

   _____

4. **Name in Full(in BLOCK Letters):** _____

5. **Father's Name(in BLOCK Letters):** _____

6. **Mother's Name(in BLOCK Letters):** _____

7. **Date of Birth (DD/MM/YYYY format):** _____

8. **Gender: Male/Female/Others:** _____

9. **Address (in BLOCK Letters):** _____

   _____

   District:_____ **State:**_____ **Pin code:** _____

   Mobile No.: _____**E-mail:** _____@_____

10. **Aadhar No:** _____

11. **Nationality:** _____ **Religion:** _____

12. **Category(UR/EWS/OBC-NCL/SC/ST/PwD):** _____

13. **Details of Examination Passed (from Class X onwards):**

Sl. No.	Examination Passed (Fill the applicable only)	Subject/ Discipline/ Specialization	Year of Passing	CGPA/ Percentage of Marks Obtained	Name of the Institute &University /Board (NIRF Ranking of Institute/ University)	Whether Documentary Evidence attached (Yes/No)
1	Secondary School Certificate (Class X)					
2	Higher Secondary School Certificate (Class XII)					
3	Diploma in Engineering/BSc					
4	BE/B.Tech/ MSc					
5	ME/MTech/MPhil					
6						
7						

14. **Details of PhD:**

  Title of Thesis:_____

  _____

  Name of University/Institute:_____

  Supervisor Name: _____

  Full Time/Part Time: _____ **NIRF Ranking:**_____

  Month & Year of passing: _____

15. **Experience details:**

S. No.	Institute/ Company	From	To	Position	Nature of work	Gross Salary

16. **Research papers/ publications**

   a) **Referred Journal Papers (Accepted/Published):**
(Please attach reprints of each paper claimed below)

(**Please use separate sheet, if required**)

S.N.	Details of research paper: Authors names (sequence as in paper), Title of paper, Name of Journal, Vol. No. (Year) Page nos., DOI	Please mention if the journal is indexed with: SCI & Web of Science/SCI/SCOPUS	Name of co-authors	*Status of paper (Accepted/ Published/ Online)	DOI	During PhD/ After PhD

(*Claim of marks can be made only for once, i.e., either at the time of acceptance or its publications/ online)

   b) **Refereed Conference Research Papers**

S.N.	Details of paper: Authors names (sequence as in paper), Title of paper, Name of Conference, (Year), Page nos. of proceedings, DOI	Please mention indexed with: SCI & Web of Science/SCI/SCOPUS/not indexed	Names of Co-authors	DOI	During PhD/ After PhD

   c) **Books, Book chapters, Monographs, Lab or Design manuals:**

S.N.	Authors name (same order as in publication)	Title, Publisher, ISBN	Vol No., (Year) Page nos., DOI	Authored/Edited

17. **Products/ Processes/ Development and Technology Transfer/ Patents/ Copyright: (Give particulars with names of group members involved)**

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DECLARATION BY THE CANDIDATE

I clearly understand that my application to the Post-Doctoral Fellowship (PDF) program to the National Institute of Technology Delhi is subjected to the applicable regulations from time to time. I also understand that the admission is being allowed to me on the basis of the certificates and documents produced by me. I also undertake that the certificates and documents produced by me in original are correct, genuine and true to the best of my knowledge. If any information/ documents/ particulars is found to be forged or false at any stage in future, then the NIT Delhi can cancel my admission and all the fees deposited by me shall be forfeited. If any degree will be awarded based on my admission on the basis on my forged documents then that certificate/degree awarded by NIT Delhi shall be automatically cancelled. In such case, I shall have no claim, whatsoever, in respect of my admission.

Date…………………   *Signature of the Candidate*