

राष्ट्रीय प्रौद्योगिकी संस्थान गोवा
NATIONAL INSTITUTE OF TECHNOLOGY GOA



CALL FOR
POST-DOCTORAL FELLOW (PDF) POSITIONS
2024-25 SESSION

INFORMATION BROCHURE

SELECTIONS TO POST-DOCTORAL FELLOWSHIP (PDF) PROGRAM FOR 2024-25 SESSION

1. INTRODUCTION

The PDF Program in Full-time (FT) mode is offered in the following Departments:

1. Applied Sciences (APS)
2. Computer Science and Engineering (CSE)
3. Electrical and Electronics Engineering (EEE)
4. Electronics and Communication Engineering (ECE)
5. Humanities and Social Sciences (HSS)

Departments and Specialization offered for Institutional Post-Doctoral Programme are listed in Annexure-I.

2. SCHEDULE

Announcement of inviting Applications:	October 11, 2024
Last date to receive applications:	November 19, 2024 November 11, 2024
Announcement of shortlisted candidates for written test/ interview:	November 30, 2024
Written test/ interview:	December 12, 2024
Announcement of selected candidates:	December 23, 2024
Reporting by the selected candidates (tentatively):	January 03, 2025

NOTE: The interested candidates who meet the eligibility criteria for admission may apply by filling this Google form at <https://forms.gle/V2fziusKFY2H9SC49> with the filled in application form and the supporting documents including the necessary annexures. Further details about Institute Post-Doctoral Fellow (IPDF) are available on https://www.nitgoa.ac.in/academics/rules_and_regulations.html

3. ESSENTIAL QUALIFICATIONS

- a. The applicant should be an Indian national, with a Ph.D. or equivalent doctorate degree (e.g., D.Sc) awarded from recognized Institute/University. The candidate must have secured 6.5 CGPA on a 10-point scale grading system or 60% marks in Bachelor's or Master's level from a recognized Technical Institute or University in relevant discipline. CGPA/Percentage relaxation will be followed as per GOI norms.
- b. The applicant should apply within five years from the date of award of Ph.D. degree (i.e, Defense date).
- c. The applicant, who has completed their Ph.D. from NIT Goa, can apply after 2 years of completion of their Ph.D. Defense viva-voce approval date.
- d. Publication requirements:
 - i. For Engineering and Science, the applicant must have a minimum of 03 (three) publications as first author in SCI/SCIE or 03 (three) granted Indian/US Patents or a combination of Journal(s) & Patent(s) listed above.
 - ii. For Humanities and Social Sciences, the applicant must have a minimum of 03 (three) publications as first author in the ABDC/SSCI/Scopus indexed journals (non-paid)/UGC CARE-A or 03 (three) granted Indian/US Patents or a combination of Journal(s) & Patent(s) listed above.
- e. The upper age limit of applicant should be 35 years at the time of submission of the

application. Age relaxation will be given as per GoI norms.

- f. Applicants working as regular employees need to produce a No objection certificate (NOC) from the employing organization.

4. SELECTION PROCESS

- a. The shortlisted candidates must appear for the written test/interview conducted by the departmental post-doctoral selection committee (DPDSC), and based on the performance and other credentials, the candidates will be selected for the Institute Post-doctoral Fellowship.

5. PERIOD OF ENGAGEMENT

- a. The appointment of Institute Post-doctoral Fellows (IPDF) is purely a temporary assignment and full time in nature. The duration of the fellowship will be normally for a period of 3 years. However, initially the offer will be made for one year and is extendable maximum upto three years based on performance evaluation.
- b. Review will be conducted every year, and will be on quantifiable outcomes based on the deliverable proposed and publications. A progress monitoring committee (PMC) will evaluate the progress annually and accordingly recommend for the extension. Based on the recommendations of the Progress Monitoring Committee (PMC), fellowship tenure may be extended.
- c. The continuation of IPDF of the candidate will depend on satisfactory report submission by the said committee. If the report is unsatisfactory, then the IPDF may be terminated even before one year period or as per the terms of appointment.

6. FELLOWSHIP AND OTHER BENEFITS

- a. A fellowship of Rs 60,000 per month (consolidated) will be offered.
- b. A contingency grant of Rs. 50,000 per annum towards purchasing consumables, attending conferences, meeting publication charges, etc., will be made available to the fellow on the recommendation of the mentor.
- c. No separate HRA is admissible. Institute accommodation shall be provided subject to availability with due charges as per institute norms.
- d. The IPDF will not be eligible to receive any other fellowship from government/non-governmental sources during the period of his/her engagement.
- e. If the candidate resigns from the postdoctoral fellowship before expiry of term, the candidate will have to give either one month notice or deposit one month fellowship to the Institute for the same.
- f. Leave rules will be followed as per Ph.D. rules and regulations of the Institute.

7. WORKS TO BE ASSIGNED

- a. The Head of the Department will assign the IPDF academic responsibilities such as taking lecture classes, tutorial classes, laboratory work, conduct of seminar, symposia, operation and maintenance of equipment, computer, etc.; not exceeding 8 hours per week.
- b. In addition to carrying out quality research work, the Post-Doctoral fellow is expected to assist the mentor (as Principal Investigator) in writing externally funded project proposals.
- c. IPDF are eligible to act as Co-guide for B.Tech/M.Tech students along with his/her Mentor with the approval of Dean (Academics) with the recommendations from Mentor, HoD and

Dean (R&C).

- d. IPDF will be attached to the Department and Mentor(s) for carrying out full-time research and teaching in an area approved by the Department.
- e. IPDF shall be required to submit a comprehensive progress report to the Dean (R&C) office at the end of each semester.

8. TARGETS TO BE ACHIEVED DURING THE PERIOD OF ENGAGEMENT

- a. In Engineering and Science stream, the Post-Doctoral fellow must have a minimum of one publication (accepted/published) in SCI/SCIE/Indian/US Patent per year along with the mentor.
- b. In Humanities and Social Sciences stream, the Post-Doctoral must have a minimum of one publication (accepted/published) in ABDC/SSCI/Scopus indexed journals (non-paid)/ UGC CARE-A/Indian/US Patent per year along with the mentor.
- c. The candidate will present a progress report to Progress Monitoring Committee (PMC) every year describing the research work carried out and research results, supported by reprints or proofs or manuscripts of the papers/patents published or accepted for publication for this purpose.
- d. Further extension of postdoctoral fellow every year will be based on quantifiable outcomes and deliverables proposed in the initial proposal and the recommendations of PMC.
- e. The fellowship may be terminated at any time by the Institute if the research progress/conduct of the candidate is unsatisfactory, by giving one month notice to the Post-Doctoral fellow, on the recommendation of Mentor, forwarded through HoD and approved by Chairperson, PAC. Similarly, the postdoctoral fellow must give one month's notice through Mentor, forwarded through HoD and approved by Chairperson, PAC, if he/she wants to leave the fellowship before tenure completion.
- f. Any rights related to the IP generated out of the post-doctoral research will be owned by the Institute and will be governed by the Institute's IPR policy amended from time to time.

9. DOCUMENTS TO BE ENCLOSED ALONG WITH THE APPLICATION

- Copy of SSC/ Class X certificate in support of Date of Birth
- Copy of Intermediate/ (10+2)/ Class XII certificate
- Copies of Provisional certificate/ Degree certificates and Marks Memos of the qualifying Examinations (UG, PG, and PhD)
- Attested copy of the caste certificate
- For GEN-EWS candidates, EWS certificate issued on or after April 1, 2024 as per the format given in the Annexure-II.
- For OBC-NCL candidates, OBC-NCL certificate issued on or after April 1, 2024 as per the format given in the Annexure-III along with undertaking.
- No Objection Certificate from the employer issued on or after September 02, 2024 only is acceptable (Annexure-IV)
- Relieving certificate from the employer (at the time of admission)
- Photograph on the application form
- Application fee payment receipt with transaction number
- A research proposal/ plan formulated with respect to the research areas/topics mentioned in the

Annexure-I

- List of publications along with the proof of indexing (e.g. SCI/ ESCI etc)
- Attach copy of the publications

10. LINK TO PAY THE APPLICATION FEE

The application fee (Non-refundable) is Rs. 1000/- for GEN/ GEN-EWS/ OBC-NCL candidates and Rs.500/- for SC/ ST/ PwD candidates.

PDF Application Fee Payment Link – September 2024

<https://pmny.in/PAYUMN/Trf5mWtHpWFd> (for GEN/ GEN-EWS/ OBC-NCL candidates)

<https://pmny.in/PAYUMN/ZIQRACOrP0lO> (for SC/ ST/ PwD candidates)

Annexure-I

Sl. No	Department	No.	Area of Research	Title of the Proposal from Mentor	Name, Designation, and Contact Details of the Mentor
1.	CSE	1	Brain Computer Interface	EEG Signal Classification for Neural Prosthetic Devices.	Dr. Damodar Reddy Edla Associate Professor in Computer Science & Engineering National Institute of Technology Goa Cuncolim, South Goa, Goa-403703 Office: +91-832-2404216, Mobile: +91-9373151004, +91-9765127163 Email: dr.reddy@nitgoa.ac.in, dr.reddy.cse@gmail.com
		2	Medical Imaging	Early Stage Detection of Diabetic Retinopathy on OCT Images using Deep Learning	
		3	Soft Computing	Bio-Inspired Feature Selection Algorithms	
		4	Machine Learning	Deep learning on medical image dataset	Dr. Venkatanaresbhabu Kuppili Assistant Professor, Computer Science and Engineering, National Institute of Technology Goa, Goa-India.
		5	Data Mining	Developing novel cluster validity indexes and its application	
		6	Adversarial Machine Learning	AI Enabled Malware Analysis toward Offensive and Defensive Security	
		7	Machine Learning	Federative learning using Bioinspired algorithms	Dr. Modi Chirag N Associate Professor, M. 9423918821/8080053822 Email: cnmodi@nitgoa.ac.in
		8	Social Media Mining	Identify the personality of user by Twitter analysis	
		9	Data Mining	Market Basket analysis using Federative learning	
2.	EEE	1	Smart Electric Grid, Electric vehicles, Grid connected/Stand-Alone PV Systems, Wireless Power Transfer, and Applications of Soft Computing Techniques	Smart and Secure Wireless Power Transfer for EVs: Exploring IoT, Edge Computing, And Blockchain Solutions	Dr. Suresh Mikkili Associate Professor, Electrical and Electronics Engineering, National Institute of Technology Goa, Cuncolim Municipal Area, Salcete Taluka, South Goa District, State of Goa, Pin-403703 Ph. 7588133009.
		2	Smart Grids, Micro Grids, Electric Vehicles, Battery Management Systems, Cyber Security in Power Grids	Grid Integration and battery management aspects for Electric Vehicles in a Smart Grid framework	
3.	ECE	1	Analog and Mixed signal Circuit Design	Delta- Sigma Modulator for the next generation 5G/6G applications	Dr. Vasantha M H. Associate Professor, vasanthmh@nitgoa.ac.in Ph:8217046754
		2	Image and Video Processing	Deep fake detection and classification using deep learning Approaches	
		3	Microstrip Antenna Design; dielectric resonator antenna (DRA) design; Terahertz (THz)	Design of reconfigurable antenna array	Dr. T. Veerakumar Associate Professor, Department of ECE tveerakumar@nitgoa.ac.in Ph:9976534050
					Dr. Anirban Chatterjee Assoc. Prof., Dept. of ECE, NIT Goa

		antennas; Smart Antennas, Antenna array design for 5G MM-Wave; Adaptive Beamforming; Power Divider Network for Array; Fractal Antenna; Phased Array Antenna; Wearable and Conformal Arrays; Array Pattern Synthesis; Evolutionary Algorithms. Transmitter/receiver design, Fast Addar, Multiplier, multiply-divide unit		
		4	Analog and Mixed Signal Design	Comparator design for next generation ADC Dr. Nithin Kumar Y B Associate Professor Dept of ECE nithin.shastri@nitgoa.ac.in 8275681684
		5	Applied Signal Processing in Wireless networks, Wireless Channel Estimation, Equalization and Precoding	Reaching the unreachable by using RIS assisted wireless communication system Dr. Trilochan Panigrahi Associate Professor Department of ECE Email: tpanigrahi@nitgoa.ac.in Mobile:7028746736
		6	Biomedical Signal Processing	Analysis of Heart Sound Signals using Time-frequency Methods Dr Shivnarayan Patidar Assistant Professor, Email ID: shivnarayan.patidar@nitgoa.ac.in Mobile No.: 8329138521
		7	Thermal Imaging (Infrared Thermography) Applications, Microelectronics	Thermal Imaging (Infrared Thermography) Applications, Microelectronics Dr Lalat Indu Giri
		8	RF and Microwave AI and Microwaves Antenna Engineering	1. Design and Development of various passive microwave components for millimeter waves 2. AI and ML for antenna optimization 3. Design and Development of planar and non-planar antennas for wireless communication Dr. Pragati Patel Assistant Professor Department of ECE Ph. No. 7588471862 Email pragati@nitgoa.ac.in
		9	Microwave imaging	Inverse solutions with Deep-learning in Microwave imaging Dr. E. Mallikarjun Asst. Professor, Department of ECE, NIT Goa emallikarjuna@nitgoa.ac.in 9404763245
4.	APS	1	Photonics & Materials Sciences	Development of High Sensitive Gas Sensors for Industrial Applications Dr. Saidi Reddy Parne Associate Professor of Physics Department of Applied Sciences, National Institute of Technology Goa Mob: 9049108036 Email id: psreddy@nitgoa.ac.in

		2	Chemistry	Design and synthesis of efficient CHNO ligands for effective and selective separation of Uranyl and Thorium ions	Dr. Velavan K Associate Professor of Chemistry Department of Applied Sciences, National Institute of Technology Goa Email id: velavan@nitgoa.ac.in
		3	Hydrodynamic Stability, Fluid Instabilities and Applied Mathematics	Analytical and Numerical Approaches to Hydrodynamic and Hydromagnetic Flow Problems	Dr. Ravi Ragoju Associate Professor of Mathematics Department of Applied Sciences National Institute of Technology Goa Mob: 9404715466 Email id: ravi@nitgoa.ac.in
		4	Differential Equations, Finite Element Methods and Mathematical Biology	Theoretical and Numerical Analysis of Differential Equations Models with Applications in Science and Engineering	Dr. L. Shangerganesh Assistant Professor of Mathematics, Department of Applied Sciences, National Institute of Technology Goa. Mob: 9843517272 Email id: shangerganesh@nitgoa.ac.in
5.	HSS	1	(i) Dalit Literature (ii) Blue Humanities	(i) Dalit Feminism / Dalit Masculinity (ii) Representation of Ocean in American Poetry (iii) Metaphor of Ocean in Select Works of Amitav Ghosh	Dr. Sarani Ghosal Associate Professor of English, Department of HSS, National Institute of Technology Goa. Email id: sarani@nitgoa.ac.in
		2	Economics of Innovation, IPR and firms' Performance	Innovative activities and performances of foreign firms in India with respect to the domestically owned firms.	Dr. Sunil Kumar A Assistant Professor of Economics, Department of HSS, National Institute of Technology Goa. Mob: 9895631011 Email id: sunilkumar@nitgoa.ac.in

Proforma for Economically Weaker Section (EWS) Certificate

Government of

(Name & Address of the authority issuing the certificate)

[This certificate MUST have been issued on or after 1st April 2024]

Certificate No. _____

Date: _____

VALID FOR THE YEAR 2024-2025

1. This is to certify that Shri/Smt./Kumari _____, s o n / daughter/ wife of _____ permanent resident of _____, Village/Street _____ Post Office _____ District in the State/Union Territory _____ Pin Code _____ whose photograph is attested below belongs to Economically Weaker Sections, since the gross annual income* of his/her family** is below Rs. 8 lakh (Rupees Eight Lakh only) for the financial year 2022-2023. His/her family does not own or possess any of the following assets***:
 - I. 5 acres of agricultural land and above;
 - II. Residential flat of 1000 sq. ft. and above;
 - III. Residential plot of 100 sq. yards and above in notified municipalities;
 - IV. Residential plot of 200 sq. yards and above in. areas other than the notified municipalities.
2. Shri/Smt./Kumari _____ belongs to the _____ caste which is not recognized as a Scheduled Caste, Scheduled Tribe and Other Backward Classes (Central List).

Signature with seal of Office _____

Name _____

Designation _____

Recent Passport size attested photograph of the applicant

The income and assets of the families as mentioned would be required to be certified by an officer not below the rank of Tehsildar in the States/UTs.

Note:

- * Income covered all sources i.e. salary, agriculture, business, profession, etc.
- ** The term 'Family' for this purpose includes the person, who seeks benefit of reservation, his/her parents and siblings below the age of 18 years as also his/her spouse and children below the age of 18 years.
- *** The property held by a 'Family' in different locations or different places/cities have been clubbed while applying the land or property holding test to determine EWS status.

Proforma for Other Backward Class (OBC Certificate)

(CERTIFICATE TO BE PRODUCED BY CANDIDATES FROM OTHER BACKWARD CLASSES APPLYING FOR ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER GOVERNMENT OF INDIA)

This is to certify that Shri/ Smt./ Kum. _____ Son/ Daughter of Shri/ Smt. _____ of Village/Town _____, District/ Division _____ in the _____ State belongs to the _____ Community which is recognized as a backward class under:

- i) Resolution No.12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
- ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- iv) Resolution No. 12011/96/94-BCC dated 09/03/96.
- v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.

Shri/ Smt./ Kum. _____ and/ or his family ordinarily reside(s) in the _____ District/ Division of _____ State. This is also to certify that he/ she does not belong to the Persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M.No.36012/22/93-Estt. (SCT) dated 08/09/93 which is modified vide OM No.36033/3/2004 Estt. (Res.) dated 09/03/2004 or the latest notification of the Government of India.

Dated:

**District Magistrate/ Competent Authority:
Seal**

NOTE:

- (a) The term “Ordinarily” used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
 - i) District Magistrate/ Additional Magistrate/ Collector/ Deputy Commissioner/ Additional Deputy Commissioner/ Deputy Collector/ 1st Class Stipendiary Magistrate/ Sub-Divisional Magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistrate).
 - ii) Chief Presidency Magistrate/ Additional Chief Presidency Magistrate/ Presidency Magistrate.
 - iii) Revenue Officer not below the rank of Tahsildar, and
 - iv) Sub-Divisional Officer of the area where the candidate and/ or his family resides.
- (c) The annual income/ status of the parents of the applicant should be based on financial year ending March 31, 2023.

Declaration/ Undertaking for OBC Candidates only

I, _____ Son/ Daughter of Shri/ Smt.
_____ resident of _____ village/ town/ city,
_____ district, _____ State,
hereby declare that I belong to the _____ community which is
recognized as a backward class by the Government of India for the purpose of
reservation in services admission in Central Government Institutions as per orders
contained in Department of Personnel and Training Office Memorandum No.
36012/22/93 – Estt. (SCT), dated 8/9/1993. It is also declared that I do not belong to
persons/ sections (Creamy Layer) mentioned in Column 3 of the Schedule to the above
referred Office Memorandum, dated 8/9/1993, which is modified vide Department of
Personnel and Training Office Memorandum No. 36033/3/2004 Estt. (Res.) dated
9/3/2004 or the latest notification of the Government of India.

I also declare that the condition of status/ annual income for creamy layer of my parents/
guardian is within prescribed limits as on financial year ending on March 31, 2023.

Place:

Signature of the Candidate

Date:

Applications without declaration/undertaking not signed by Candidates will be rejected.

No Objection Certificate for Post-Doctoral Fellow Position

(Should be on the letter head of the employee's organization)

Ref. No.

Date:

To
The Director,
National Institute of Technology,
Cuncolim, Salcete-403703,
Goa

Sub.: No objection certificate for taking up Post-Doctoral Fellow Position at NIT
Goa

Dear Sir,

We have no objection if Mr./ Mrs./ Ms. _____ an employee of our Organization/ Institute, joining as Post-Doctoral Fellow on full-time basis in the Department of _____ at National Institute of Technology Goa and we will relieve him/her from the duty along with a relieving certificate.

It is certified that he/she has completed _____ years of service in our Organization/ Institute as a regular employee.

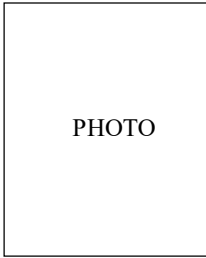
Signature and Seal
Head of the Organization/ Institute

Note: No Objection Certificate issued on or after September 02, 2024 only is acceptable.

APPLICATION FORM

**Application for Institute Post-Doctoral Fellow
2024-25 Session**

**National Institute of Technology Goa
Cuncolim, Salcete- 403703, Goa, India**



(Please type or write using BLOCK LETTERS)

Advertisement Reference

Post Applied for

Department

1. Name in Full

(Please underline surname)

Married

Single

Male

Female

(Please tick)

2. Address:

Present

Permanent

Fax																							
Email																							
Telephone	Office																						
	Mobile																						

3. Date of Birth:

--	--	--	--	--	--	--	--	--	--

Day Month Year

4. Nationality

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

5. Present Employment:

Designation			
Organization			
	Date of Joining		
	Scale of Pay Rs.		
	Pay Rs.		
	Total emoluments (per month) Rs.		

6. (a) Which Category do you belong to? (you must tick one and attach the supporting document)

General GEN-EWS OBC-NCL SC ST

(b) Please tick the box if you qualify for consideration under 'Person with Disability (PwD)'.

7. Areas of specialization: _____

8. Current areas of research: _____

9. Academic record starting with graduation: (please attach the copies of degree certificate)

Degree	College / University / Institute	NIRF Rank	Year of Joining	Year of Leaving	Percentage	Class / Division

10. Employment/Post-doctoral Experience [Particulars of your past position(s)]

Employer	Position held	Date of Joining	Date of Leaving	Pay with Scale of Pay

11. Names and addresses of three References (at least two of them should be familiar with your recent work)

Name			
Occupation or Position			
Address			
Fax			
E-mail			
Phone No.			

Please enclose the following files with the application

12. Research Project Proposal

13. List of publications with impact factor and indexing (e.g. SCI/ESCI etc) (Also attach the copy of the publications)

I hereby declare that I have carefully read and understood the instructions and particulars supplied to me, and that all entries in this form as well as the attached sheets are true to the best of my knowledge and belief.

Date:

Place: **Signature of the Applicant**

The completed application form along with all the required documents and annexures should be submitted via Google Form at: <https://forms.gle/V2fziusKFY2H9SC49>