



NATIONAL CENTRE FOR POLAR AND OCEAN RESEARCH  
NORSK POLARINSTITUTT · NORWEGIAN POLAR INSTITUTE



## **PhD fellowships in Polar Sciences for Indian nationals in Norway**

**Advt. No. NCPOR/59/18**

*The National Centre for Polar & Ocean Research (NCPOR), an autonomous R & D organization under the Ministry of Earth Sciences, Government of India, New Delhi is the nodal agency for planning, coordinating and executing the Indian polar and ocean programs. For more information: [www.ncaor.gov.in](http://www.ncaor.gov.in).*

*The Norwegian Polar Institute (NPI), under the Norwegian Ministry of Environment, is Norway's main institution for research, environmental management and monitoring, mapping and field work in the polar regions. The Institute is under the auspices of the Norwegian Ministry of the Environment and is a contact and service body for national and international polar research. For more information: [www.npolar.no/en](http://www.npolar.no/en).*

### **PhD fellowships in polar sciences for Indian nationals in Norway**

In order to strengthen the field of polar science in India, NCPOR, in collaboration with the Norwegian Polar Institute (NPI) is establishing two PhD fellowships in polar oceanography and glaciology. Applications are invited from young and enthusiastic Indian citizens, with a zeal to take up scientific work in polar regions, for consideration under these PhD studentships. The successful students will perform research based at NPI's Headquarter in Tromsø, Norway. The details are given below:

#### **Work content**

##### ***Physical Oceanography (01 Post)***

*Post Code # 01*

The successful candidate will be involved in a multidisciplinary group at NPI with close collaboration with University of Tromsø, NCPOR, and other partners, which will investigate regional ocean circulation and mesoscale processes in the Svalbard area of the European Arctic. Topics may include glacier-ocean interaction, coastal circulation, and exchanges between the Atlantic and Arctic Oceans. Focus will mainly be on physical oceanography but candidates with the right interest and background may also study sea ice dynamics or lower trophic level ecosystem processes. Numerical ocean modeling will be a key tool in the project, both for understanding the local circulation regime and to assess implications for the sea ice regime, the local ecosystem and regional circulation. NPI and Fram Centre partners have developed a high-resolution model setup (ROMS and CICE) covering the Svalbard area. The study will also utilize existing and new observational data from cruises, instrument moorings and sensors on marine mammals, along with data on glacial runoff and satellite-derived sea ice data.

The student will carry out research based at NPI's Headquarters in Tromsø, and is expected to follow and complete PhD courses at the University of Tromsø (UiT) - The Arctic university of Norway. The student will be jointly supervised by researchers at NPI, UiT, and NCPOR.

##### ***Glaciology (01 Post)***

*Post Code # 02*

The successful candidate will be part of an active glaciology research group at NPI with close collaboration with University of Oslo, NCPOR, and other partners. The PhD project will focus on satellite remote sensing of glacier and ice-sheet changes at regional scales. The main data sources will be historical satellite imagery (optical and synthetic-aperture radar) and newer high-resolution digital elevation models (DEMs), in combination with satellite altimetry from CryoSat-2 and ICESat-2.

The candidate shall analyse the data to study the evolution of glacio-hydrologic elements (melt ponds and streams, firn swamps, subglacial lakes, etc.), ice dynamics (from surface velocity) and mass balance (from surface elevation changes). The results will be interpreted in light of available field data, climate reanalysis products and glacier modelling output. The main study region will be Dronning Maud Land in East Antarctica where NPI and NCPOR have ongoing activities, but similar applications will also be considered for the Indian Himalayas and/or Svalbard in the European Arctic. Participation in glacier fieldwork is desired, but not a prerequisite.

The student will carry out research based at NPI's Headquarters in Tromsø, and is expected to follow and complete PhD courses approved by the University of Oslo (UiO). The student will be jointly supervised by researchers at NPI, UiO, and NCPOR.

## Qualifications

### 1. *Physical Oceanography*

- ) Master's degree in physics, geophysics, physical oceanography, marine science and related subjects or Master's degree in Engineering / Technology relevant to the work mentioned above with at least first class (60% marks or equivalent GPA) at post graduation level from a recognized University.
- ) Experience with numerical ocean modeling (e.g. ROMS, FVCOM or similar) and advanced data analysis are desirable.

### 2. *Glaciology*

- ) Master's degree in earth sciences, glaciology, geophysics, remote sensing and related subjects or Master's degree in Engineering / Technology relevant to the work mentioned above with at least first class (60% marks or equivalent GPA) at post graduation level from a recognized University.
- ) Experience with geodata analysis (e.g. satellite imagery, DEMs, Geographical Information Systems) and programming (e.g. MATLAB, Python or similar) are desirable. Glaciological experience from fieldwork, data analysis and numerical modeling is an asset.

Standard formal requirements for enrolling in the PhD program of the respective universities (University of Tromsø / University of Oslo) must be met. The candidates should have good working knowledge of English (both oral and written), the ability to work in teams as well as independently, and be well structured and organized. In addition to grade certificates, documentation of extent of training in English, and descriptions of exposure to English as teaching language should therefore be submitted when required.

## General

Only Indian nationals are eligible to apply. As per NCPOR requirements, the maximum age limit of the candidates should be 28 years, on the prescribed closing date for receipt of the applications.

The primary residence of the student will be Tromsø. The town of Tromsø is a vibrant, international, and growing town located above the Arctic Circle in Northern Norway (see <http://destinationtromso.com>).

The positions are for a fixed term of three years, fully funded by NCPOR. The fellowships will be according to the Norwegian State salary code 1378, with starting salary range NOK 435,500 per year depending on experience. The position is open immediately and the selection interviews will be held at Goa or New Delhi.

Further inquiries about the Physical Oceanography position may be directed to Arild Sundfjord (e-mail: [arild.sundfjord@npolar.no](mailto:arild.sundfjord@npolar.no), tel. +47 47 30 41 97), Nalan Koc (e-mail: [nalan.koc@npolar.no](mailto:nalan.koc@npolar.no), tel: +47 77 75 05 30), or at UiT Rune Graversen (e-mail: [rune.graversen@uit.no](mailto:rune.graversen@uit.no) ], tel: +47 77 62 52 42) or Nuncio Murukesh (e-mail: [nuncio@ncaor.gov.in](mailto:nuncio@ncaor.gov.in)).

Further inquiries about the Glaciology position may be directed to Geir Moholdt (e-mail: [moholdt@npolar.no](mailto:moholdt@npolar.no), tel. +47 99 10 29 00), Nalan Koc (e-mail: [nalan.koc@npolar.no](mailto:nalan.koc@npolar.no), tel: +47 77 75 05 30), Thomas V. Schuler (e-mail: [t.v.schuler@geo.uio.no](mailto:t.v.schuler@geo.uio.no) , tel: +47 22 85 89 28) or Thamban Meloth (e-mail: [meloth@ncaor.gov.in](mailto:meloth@ncaor.gov.in))

Application deadline is **21<sup>st</sup> January 2019 (Monday)** (1730 Hrs Indian Standard Time). Please submit your application online at <http://www.incois.gov.in/jobs/ncpor1218/home.jsp>. Only the applications submitted online within the deadline shall be considered.

In order to achieve the objectives of the programme and to ensure the continued involvement of the selected students in the Indian Polar programmes during and on completion of their PhD, the students shall execute a Bond Agreement with NCPOR before the final selection for the fellowship.

All applications should be submitted online with the following documents:

- ) The completed application form together with a statement of interest (related to the research tasks relevant to the positions) and the reference number of the position applied for.
- ) Curriculum vitae in pdf format, including detailed academic qualifications.
- ) Legible & scanned copies of educational qualification, experience certificates, date of birth / age proof certificates in PDF format not exceeding 100 KB for each document/attachment. If the certificates are in a language other than English or Hindi, then attested translation should be uploaded
- ) Copies of published and unpublished scientific work in PDF. Copies of not more than three published work shall be uploaded.

#### **Application Procedure:**

The entire application process is online. Copies of certificates in support of educational qualifications, date of birth / age proof certificate, disability, experience, scanned signature, Photograph etc. should be uploaded along with the online application. All the uploaded documents should be in the form of PDF file and photograph and signature in the form of .jpg format. Candidates must produce the original certificates while appearing for interview or as and when required. If the certificates are in a language other than English or Hindi, attested translation should be enclosed.

#### **How to apply:**

To apply, the applicant must fill the online application form available at <http://www.incois.gov.in/jobs/ncpor1218/home.jsp> and upload the scanned documents in the online application form. The candidates are not required to send any hard copies by post or through e-mail. Applicants are requested to carefully go through the full text of the advertisement and the instructions in particular.

In case of any difficulty in the submission of online application form (not for other queries), please mail to [ictd@ncaor.gov.in](mailto:ictd@ncaor.gov.in).