



Call 13/2018

Announcement of public selection based on qualifications and interview for no. 3 professionalizing fellowship in the field of “High Performance Computing (HPC) and High Performance Data Analysis (HPDA) for Earth System”, by the scientific research section “Oceanografia” – OCE of the Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – OGS.

Description of the activity

The Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – OGS and CINECA drew up an agreement to implement a training program focussed on High Performance Computing (HPC) applications for Earth Sciences, the “HPC Training and Research for Earth Sciences” (HPC-TRES). The program is co-sponsored by the Minister of Education, University and Research (MIUR) under its extraordinary contribute for the Italian participation to activities related to the international infrastructure PRACE – The Partnership for Advanced Computing in Europe.

The major objectives of the program are: capacity building, enhancement of human resources, and advanced training in the fields of Earth System modelling (atmosphere, hydrosphere, lithosphere and biosphere) and numerical models, the latter considered as a strategic cross-cutting element for modelling activities. These objectives will be pursued through the use of national and European HPC infrastructures and services in the framework of PRACE the optimization of algorithms and numerical codes, the optimal management of “Earth Sciences Big Data”, and the graphical visualization techniques for multidisciplinary applications in the Earth Sciences, also in the frame of the “Blue Growth” strategy.

Therefore, HPC-TRES agreement will establish, sponsor and oversee training and research awards (i.e. contributes for training and research activities set up according to current regulations that regulate scholarships – to be also used for masters and specialized courses in HPC -, research grants and PhDs) that will support the research lines scientific plan of the HPC-TRES program.

The grants are part of the Training Program HPC-TRES as described in the introduction.

Profile 1: Multi-component operational modelling systems for Regional Environmental Protection. The activity is set within the field of High Performance Computing (HPC) applied to oceanographic and biogeochemical modelling, and is specifically finalized to contribute to research line A6 “Multi-component operational modelling systems for Regional Environmental Protection” described in detail in the scientific plan of the HPC-TRES program (http://www.ogs.trieste.it/sites/default/files/hpc-tres-scientificplan_1_0.pdf). Keywords: operational multi-component coupled regional models, marine and lagoon environmental forecasts.

Profile 2: New algorithmic approaches for ocean models at exascale. The activity is set within the field of High Performance Computing (HPC) applied to Earth System modelling, and is specifically finalized to contribute to research line A5 “New algorithmic approaches for ocean models at exascale” described in detail in the scientific plan of the HPC-TRES program (http://www.ogs.trieste.it/sites/default/files/hpc-tres-scientificplan_1_0.pdf). Keywords: architecture-oriented technologies, machine learning, Hybrid Numerical Models (HNMs).

Profile 3: Large scale data analysis for climate data. The activity is set within the field of High Performance Computing (HPC) applied to Earth System modelling, and is specifically finalized to contribute to research line E1 “Large scale data analysis for climate data” described in detail in the scientific plan of the HPC-TRES program (http://www.ogs.trieste.it/sites/default/files/hpc-tres-scientificplan_1_0.pdf). Keywords: machine learning, High Performance Data Analytics, climate data science.

Art. 1 – Vacancies and general part

A public selection based on qualifications and interview, with the possibility to be carried out through videoconference, is open to award no. 3 professionalizing research fellowship in the field of “High Performance Computing (HPC) and High Performance Data Analysis (HPDA) for Earth System”, by the scientific research



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section "Oceanografia" – OCE of the Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – OGS – Scientific Disciplinary Sector GEO/12.

Officials belonging to Italian Universities, Public Research Bodies (OGS included), ENEA and ASI are not eligible to take part in the selection and are therefore automatically excluded.

The research fellowship may not be combined with any other fellowships with the exception of those awarded by national or international institutions aimed at integrating the research activity of the grantees with stays abroad.

The holder of the fellowship is not compatible with the participation in degree courses, master's degrees, fellowship PdD, in Italy or abroad both on fixed-term or full-time, with the exception of unpaid leave from work.

OGS may not pay any additional payments to grantees.

A copy of this selection notice is available by the OGS Headquarters as well as on the OGS institutional web page at <http://www.ogs.trieste.it/it/job-opportunities>.

All information, news and notices referred to this call may be found at <http://www.ogs.trieste.it/it/job-opportunities>.

Art. 2 – Duration and salary amount

The fellowship will have a duration of 12 months and cannot be renewed automatically. On request from the Tutor, the fellowship renewal may be proposed by the Director of the Section where the fellowship holder is implementing the research activities to the General Director of OGS. The renewal proposal shall be accompanied by a short report written by the fellowship holder detailing the implemented activities and which should be countersigned by the Tutor.

Even in the case of any possible renewals, the duration of the fellowship cannot exceed six years. The total duration of the fellowships also includes the fellowships implemented in other organizations or universities, with the exception of the time during which the fellowship overlapped a PhD course (not paid) to a maximum duration of the course itself.

The fellowship cannot be awarded to applicants who have already benefited from a fellowship, further renewals included, for a period of time of six years, with the exclusion of the above-mentioned paragraph.

In the case that the successful applicant has already benefited from fellowships for a period of less than six years, the annual research fellowship and/or its possible renewal shall be granted within the above-mentioned termination.

The gross annual salary of the research professionalizing fellowship, net for charges borne by OGS and including the social security contributions concerning the part borne by the grantee, is equal to € 21.000,00 and shall be paid in monthly instalments.

From the third year, the annual amount of the fellowship, net for charges borne by OGS and including the social security contributions concerning the part borne by the grantee, will be remodulated for the total amount of € 23.000,00, when there is financial provision and subject to the positive evaluation of the research activities of the fellow by a Selection Board appointed by the Director of the Section and consisting of the same Director of the Section, the person in charge of the research project and an expert in the field.

The amount of the fellowship does not include any possible allowance for missions in Italy and abroad which may be deemed necessary for the implementation of the research activities connected to the fellowship. The mission allowance is determined in proportion to the allowance paid to the OGS staff belonging to the III professional level.



Fiscal and social security regulatory provisions in force are applied to all fellowships.

Art. 3 – Requirements

The requirements for the admission to the public selection are:

Profilo 1:

- a) Degree obtained in accordance with the current legislation before Ministerial Decree no. 509/99 in Physics, Mathematics, Engineering, Environmental Sciences or Master's Degree as per Ministerial Decree no. 270/04 in all assimilated classes pursuant Interministerial Decree dated July 9 2009 and according to the table annexed to the same Decree obtained by Italian Universities or degrees issued by Universities abroad;
- b) A suitable scientific CV;
- c) Good knowledge of the English language;
- d) Knowledge of programming languages;
- e) Knowledge of the Italian language (only for foreign applicants).

Profilo 2 e Profilo 3:

- Degree obtained in accordance with the current legislation before Ministerial Decree no. 509/99 in Computer Engineering, Computer Sciences, Mathematics or Master's Degree as per Ministerial Decree no. 270/04 in all assimilated classes pursuant Interministerial Decree dated July 9 2009 and according to the table annexed to the same Decree obtained by Italian Universities or degrees issued by Universities abroad;
- A suitable scientific CV;
- Good knowledge of the English language;
- Knowledge of programming languages;
- Knowledge of the Italian language (only for foreign applicants).

In the case of qualifications awarded abroad that have not already been legally recognised in Italy in accordance with the applicable law (as per art. 38 Legislative Decree no. 38 dated March 30 2001, no. 165, which forms is available on the website of the Public Services Department), degree and PhD only for the admission to the selection of the fellowship may be recognised by the Selection Board. To this end, the candidate shall provide detailed records concerning his/her education to allow the Selection Board to approve the equivalence of his/her foreign qualification.

The admission requirements must be fulfilled at the date of this notice of recruitment.

Art. 4 – Application form: terms and conditions

The application forms for the participation in the call shall be sent in simple paper, according to the form herewith attached (Annex 1), agreed with handwritten or digital signature by the relevant parties and sent by one of the following options:

- a) Hand delivery at OGS Località Borgo Grotta Gigante 42/c – 34010 Sgonico (TS), Ufficio Affari Generali e Protocollo Room no. n.34, 1st floor, from Monday to Friday from 9.30 to 12.30 am.
Application forms submitted in this way must be handed in at the latest by 12.30 (midday and a half) on the closing date.
The postmark date and time will serve as proof as well as the form filled in by the Ufficio Affari Generali e Protocollo of OGS;
- b) By registered mail with notice of delivery to:
Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – OGS
Ufficio Affari Generali e Protocollo (Room no.34, 1st floor)
Località Borgo Grotta Gigante, 42/c
34010 Sgonico – TS.
The application form shall be presented at the latest the fifth day following the date of closure of the call.



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The official postmark date will serve as proof;

- c) By PEC (Electronic Certified Email), in conformity with the current legislation on the matter, to the following PEC address: ogs@pec.it.

The application form must be handed in at the latest by 12.30 (half past midday) on the closing date;

Different methods of delivery will not be accepted.

Only and exclusively for non-national candidates, applications to the call drafted on plain paper and in accordance to the table in annex to the present call (Annex sub 1), with the applicants handwritten or digital signature by the usual European standards, may also sent according to the following procedure.

- d) By email, to the following email address: protocollo@ogs.trieste.it.

The application form must be handed in at the latest by 12.30 (half past midday) on the closing date.

For a), b), c) the not undersigned applications with handwritten or digital signature as well as the applications received after the deadline will not be considered and excluded from the selection.

Only and exclusively for non-national candidates with reference to the means of transmission laid down in point d) of this clause, all applications not containing the candidates handwritten or digital signature by the usual European standards, as well as all applications received after the set deadline, shall not be taken into account.

As per point d) in the case of applications sent with handwritten signature, such applications shall be validated with handwritten signature to be signed in the presence of the Commission before the interview.

Under his/her own responsibility, the candidate, must declare the following information:

- Surname and name
- Place and date of birth
- residence
- citizenship
- Not have been convicted or found guilty of any criminal offence, or, if any, what kind of criminal offence the candidate has been found guilty;
- To be in possession of the requested qualifications, with all the details concerning date, place of issue, final mark;
- The candidate's position with reference to the award of other fellowships;
- To be in possession of further requirements as per art. 3 of this call
- Knowledge of the Italian language (only for foreign candidates)
- The chosen address for the call

The candidate shall attach to the application form the following documents:

- Scientific cv demonstrating relevant expertise for the implementation of the research activities (dated and undersigned);
- List of publications (undersigned).

The candidate may attach all documents, qualifications and publications that he/she deems appropriate to present in his/her own interest.

The candidate shall also attach to the application:

- 1) Self-declaration affidavit in accordance with art. 46 Presidential Decree dated. 28.12.2000, no. 445 (Annex 2), concerning the degree obtained;
- 2) Self-declaration affidavit, in accordance with art. 47 Presidential Decree dated 28.12.2000, no. 445 (Annex 3), concerning the scientific cv, the implemented research activities and the list of publications.



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As an alternative to the declaration as per paragraph 1) copy of the degree may be attached to the application form accompanied by the self-declaration affidavit certifying the exact copy of the original in accordance to art. 47 Presidential Decree dated 28.12.2000, no. 445 (Annex 3).

The self-declaration affidavit shall be accompanied by a copy of a valid identity card.

Application forms not accompanied by the self-declaration affidavit as per paragraph 1) or the copy of the degree certificate with the relative self-declaration affidavit will not be taken into consideration; Application forms not accompanied by the declaration as per paragraph 2), filled under the provisions thereof.

Special needs candidates, with reference to their own disability, shall mention their specific request for assistance in the application form.

Art. 5 – Exclusions

The following reasons constitute ground for ex-officio exclusion:

- Applications not submitted within the fixed deadline referred to in Art. 4;
- Applications sent under conditions other than those referred to in Art. 4;
- Partial or total omission of the information requested as per Art. 4;
- Being in one of the conditions referred to in Art. 1, paragraphs 2, 3 and 4;
- Fail to submit the application form;
- Failure to submit a copy of a valid identification document attached to the application form;
- Failure to comply with any of those requirements as per art. 3;
- Failure to attach the self-declaration affidavit as per art. 4, paragraph 1) as well as the self-declaration affidavit as per art. 4 paragraph 2).

Candidates are admitted to the selection with right to reserve approval. The Director of the Human Resources management has the faculty to exclude a candidate at any time in case of lack of the above-mentioned requirements by providing a valid justification.

If the motivations that determined the exclusion are verified after the completion of the selection, the Director General, with a valid justification, provides automatic forfeiture of any rights connected to the participation in the selection itself.

Exclusion of candidates shall also be applied in case of failure in presenting inaccurate declarations requested by the application form in accordance with Presidential Decree dated 28.12.2000, no. 445.

Art. 6 – Selection Board: measurable qualifications, interview and ranking list

The Selection Board is appointed by an official Act of the General Director of OGS.

The Selection Board preliminary adopt the criteria and the parameters to which it intends to apply, with specific reference to the characteristics of the research project.

The evaluating titles are:

- Degree
- PhD
- specialization diplomas and certificate of attendance to post lauream training courses, both in Italy and abroad
- Implementation of research activities by public or private organisations, based on contracts, fellowships or assignments, both in Italy and abroad
- Scientific publications on peer-reviewed magazines.

In particular, for the purpose of awarding the fellowship, the PhD or any title obtained abroad would be considered as an asset.



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The Selection Board may set a minimum score above and/or below which candidates may gain access to the interview. After the qualifications have been evaluated, the Selection Board may make a shortlist of applicants who will be invited to the interview. The candidates who will not obtain the minimum score will not be included in the shortlist of the applicants admitted to the interview.

The list of applicants admitted to the interview and details on date, time and place will be published at least 20 days prior on the website of OGS <http://www.ogs.trieste.it/it/job-opportunities>.

Such publication constitutes effectively an official notification.

On request of the candidates to be detailed on the application form, the interview could be taken by using remote audio/video computer tools. The interview may be both in English or Italian upon request of the candidate.

For the interview the candidates shall present a valid identification document.

Candidates failing to present a valid identification document or in possession of expired ID cards will not be admitted to the interview.

After completion of the interviews, the Selection Board makes a shortlist in descending order of the final ranking obtained by the candidates.

The selection is considered as passed if the applicant obtains at least 7/10 or equivalent on the total points decided by the examining board.

Candidates ranking list is drawn up according to the overall votes each candidate received. In the case of candidates with the same score, the preference will be attributed to the younger candidate.

The ranking list with the indication of the grant winner or winners will be published by the President of the Selection Board with the same forms of advertising provided in the call.

Art. 7 – Ranking list approval and appointment of the grant winner

The Director of the Human Resources Department, once ascertained the formal validity of the documents transmitted to the Selection Board, approves the ranking list and appoints the grant winner.

The ranking lists shall remain valid for 18 months after the date of approval.

In case of formal renunciation of the grant winner, or if the grant winner does not accept the fellowship within the prescribed period according to Art. 8 of the present call, the grant shall be awarded to the next eligible candidate in the ranking list.

The grants available following renunciation or resolution of the grant winner may be awarded to the candidates indicated in the ranking list within the limits of its duration.

Art. 8 – Awarding of the fellowship

After budget and provisions verification, the OGS General Director, bestows the fellowship to the grant winner.

The grant winner will be duly notified of the result and shall send an official declaration of acceptance of the grant within 15 days after acknowledgement of receipt of the above-mentioned notice.

Once obtained the declaration of acceptance from the winner candidate, a contract between the General Director of OGS and the grant winner is prepared and signed, a document which defines the terms and the research activities object of the collaboration.



Concerning taxation all the regulatory provisions referred to art. 4 of the Law dated August 13 1984 no. 476 are applied to research fellowships and, in terms of social security, the applicable law is referred to art. 2, paragraphs 26 and following, Law no. 335 dated August 1995 and subsequent amendments; for maternity leave matters the applicable law refers to provisions as per Ministerial Decree dated July 12 2007, published on the Official Journal no. 247 dated October 23 2007 and for matters concerning sick leave, art. 1 paragraph 788 of Law no. 296 dated December 27 2006 and subsequent amendments. During the maternity leave, the allowance paid by the Italian Social Security Institute (INPS) with reference to art. 5 of the above-mentioned decree dated July 12 2007 is integrated by OGS up to the total amount of the research fellowship

Art. 9 – Implementation of the research activities

The activities of the fellowship holder are carried out in complete autonomy and with no scheduled working time, within the specific research programme and according to the guidance provided by the scientific tutor.

The scientific tutor must coordinate the activities of the fellowship holder together with other participants in the programme, by providing all the necessary indications for the implementation of the activity object of the collaboration.

The activity of the fellowship holder under any circumstances foreshadows a status of employment.

Art. 10 – Fellowship obligations

The fellowship holder must carry out the commitments foreseen by the research programme prepared by the scientific tutor and under his supervision. At the end of the fellowship the grant holder shall submit to OGS a final research report that includes the obtained results. The report must be approved by the tutor. All technical, scientific and administrative data and information gathered by the fellowship holder during the implementation of the activity shall be considered confidential and therefore the use such information for purposes different than those for which the grant has been awarded. Concerning the protection of the intellectual property of the results or products obtained on the performance of the activity of the fellowship please refer to OGS regulations on patents and protection of intellectual property.

Art. 11 – Personal data management

In accordance with current legislation, personal data provided by candidates in the application form will be settled by the Head of Human Resources Office of OGS and processed for the only purpose of the assignment of the grant and the ensuing relevant procedures.

Art. 12 – Final proceedings

For matters not covered by this notice selection please refer to Grant and Research Fellowship rules of OGS. This call for individual grant will be posted on the OGS website, on the calls website of MIUR and on the European Commission Internet portal-Euraxess. In accordance to the Law dated 7/08/1990 no. 241 art. 5 the Responsible of the Proceedings is the Director of the Human Resources Office.



Application form

To: Istituto Nazionale di Oceanografia
e di Geofisica Sperimentale – OGS
Località Borgo Grotta Gigante, 42/c
34010 Sgonico – TS

Call _____

_____ (1)

(1) (indicate number call and call)

The undersigned (name) _____ (surname)

born _____ (Province _____) on _____
and resident in _____ address _____ n.

requests to participate in the selection of the call in object.

For this purpose the applicant declares under his/her own responsibility:

- citizenship _____
- not have been convicted or found guilty of any criminal offence (please specify, if any)

- to hold a degree (please cross the type of degree you hold)

- preceding university's reform pursuant Ministerial Decree no. 509/99
- master's degree pursuant Ministerial Decree no. 509/99
- master's degree pursuant Ministerial Decree no. D.M. 270/04

- in _____ obtained on date

_____ from the University of _____

- with the score of _____ / _____

- to have knowledge of the Italian language (only for foreign candidates)

- no fellowships have been awarded before
- the following fellowships have been awarded

from _____

to _____

by _____

from _____ to _____

by _____

from _____ to _____



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by _____

- to currently hold a fellowship

from _____ to _____

by _____

- to hold the following titles that may be evaluated:

Here attached papers no. _____, of which:

- no. _____ printed, collaborative papers no. _____ ;
- no. _____ typescripts, collaborative papers no. _____ .

To be attached to this form

to wish to receive all communication referring to this call to the following address:

(street) _____

(town) _____

(ZIP code) _____

Telephone _____

e-mail _____

Date _____

Signature



**Istituto Nazionale
di Oceanografia e di Geofisica Sperimentale**

The undersigned _____
For participating in this call _____ requests to carry out the interview via videoconference
through the following videoconference account _____

Signature

The undersigned _____
For participating in this call _____ request to take the exam in one of the following languages

- Italian
- English

Signature



SELF DECLARATION AFFIDAVIT

(art. 46 Presidential Decree 28.12.2000 no. 445)

The undersigned (name) _____ (surname) _____
born in _____ (province _____) on _____
and resident in _____ address _____ no.

aware that false declarations are punishable by law (art. 76 Presidential Decree 28.12.2000 no. 445)

DECLARES

- to hold a degree (please cross the type of degree you hold)
 - preceding university's reform pursuant Ministerial Decree no. 509/99
 - master's degree pursuant Ministerial Decree no. 509/99
 - master's degree pursuant Ministerial Decree no. D.M. 270/04

in _____ obtained on date

from the University of _____

- with the score of _____ / _____
- to be in possession of the following title of specialisation or certificate of attendance to a post lauream specialisation course _____
obtained on date _____ issued by _____
with the score of _____

The undersigned also declares that he/she has been informed that, in accordance with current legislation, personal data will be treated, by computer tools also, exclusively within the object for which the declaration has been drawn up.

Date _____

Signature



SELF DECLARATION AFFIDAVIT
(art. 47 Presidential Decree 28.12.2000 no. 445)

The undersigned (name) _____ (surname) _____
born in _____ (province _____) on _____
and resident in _____ address _____ no. _____
aware that false declarations are punishable by law (art. 76 Presidential Decree 28.12.2000 no. 445)

DECLARES

_____ (1)

Purely by way of example here below a list of options that may be used in the self declaration affidavit

- the copy of the degree certificate attached to the application form of no. _____ pages is a true copy of the original
- the copy of the following title or document or publication

_____ of no. _____ pages is a true copy of the original.

The undersigned also declares that he/she has been informed that, in accordance with current legislation, personal data will be treated, by computer tools also, exclusively within the object for which the declaration has been drawn up

Date _____

Signature

(1) The declarant shall send attached to the declaration a photostatic copy of a valid identification document.