



OGS

Istituto Nazionale
di Oceanografia
e di Geofisica
Sperimentale

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Call 20/2021

Announcement of public selection based on qualifications and interview for no. 3 Junior fellowships in the field of “Modeling of marine ecosystems”, by the Research Section “Oceanography” – OCE of the National Institute of Oceanography and Applied Geophysics – OGS.

Description of the activities

The profiles of the 3 junior fellowships are the following:

PROFILE 1: *Development of modelling systems for operational oceanography: application to the Mediterranean Sea, its marginal seas, and coastal areas.*

The research activity aims to develop, apply and analyze numerical models for the study of marine systems within a multidisciplinary team and in the framework of international projects (e.g., FORCOAST: Earth Observation Services for Fishery, Bivalves Mariculture and Oysterground Restoration along European Coasts; SHAREMED: Sharing and enhancing capabilities to address environmental threats in Mediterranean Sea) or within research activities with similar topics. In particular, the activity will focus on the development and implementation of operational modeling systems at the sub- regional scale, for monitoring and forecasting the physical and biogeochemical properties of the sea. The models will be based on the coupled MITgcm-BFM system and they will be calibrated and validated in each study area. To reduce the uncertainty of the forecasts, the models will be integrated with observational data through data assimilation schemes.

SCIENTIFIC DISCIPLINARY SECTORS:

- GEO/12 – Oceanography and Physics of the atmosphere;
- FIS/06 – Physics of the Earth and of the circumterrestrial medium.
- INF/01 - Informatics

PROFILE 2: *Development and analysis of food web models to support the implementation of Marine Strategy Framework Directive for the Mediterranean, its marginal seas and coastal areas.*

The activity will focus on the development of high trophic level models and their implementation in Italian seas case studies at different spatial scales. Objective of the study is the improvement of the actual skill of such models to describe marine ecosystem dynamics. Specifically, the activity includes validation and calibration of models with different sources of observations (e.g., stock assessments, data from monitoring systems and other sources). A further objective is the use of model results to define and test indicators supporting MFSD D4 descriptor.

SCIENTIFIC DISCIPLINARY SECTORS:

- GEO/12 – Oceanography and Physics of the atmosphere;
- FIS/06 – Physics of the Earth and of the circumterrestrial medium;
- INF/01 – Informatics;
- BIO/07 - Ecology

PROFILE 3: *Development of methodologies for high performance computing and 3D scientific visualization.*

The activity will focus on the development of methods and codes (e.g., Fortran, Python and C) for data analysis and high-performance computing for oceanographic models using CPU and GPU parallel computing paradigms, and on the development and implementation of methods and codes for high performance 3D scientific visualization of oceanographic model results.



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SCIENTIFIC DISCIPLINARY SECTORS:

- GEO/12 – Oceanography and Physics of the atmosphere;
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- INF/01 - Informatics

Art. 1 – Vacancies and general part

A public selection based on qualifications and interview is open to award no. 3 Junior fellowships in the field of “*Modeling of marine ecosystems*”, by the Research Section “*Oceanography*” – OCE of the National Institute of Oceanography and Applied Geophysics – OGS.

According to art. 22, paragraph 1 of the Law no. 240/2010, officials or permanent members of staff working for Italian Universities and Public Research Bodies (OGS included) 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 except for those awarded by national or international institutions aimed at integrating the research activity of the grantees with stays abroad.

The research fellowship is compatible neither with the participation in degree courses, master’s degrees, fellowship PhD, in Italy or abroad, nor with fixed-term or permanent contracts, apart from unpaid leave from work.

OGS may not pay any additional payments to grantees.

This selection notice is available on the OGS institutional web page at <https://www.inogs.it/it/job-opportunities> together with all the information, news and notices referred to this Call.

Art. 2 – Duration and salary amount

The fellowships will have a duration of 12 months and may be renewed. On request by the scientific Tutor, the fellowship renewal may be proposed by the Director of the *Oceanography* Section to the OGS General Director. Even in the case of any possible renewals, the duration of each 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 fellowships cannot be awarded to applicants who have already benefited from a fellowship, further renewals included, for a period 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 a research Junior fellowship, net for charges borne by OGS and including the social security contributions concerning the part borne by the grantee, is equal to € 25,000.00 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 re-modulated for the total amount of € 27,000.00, 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/Department and consisting of the same Director of the Section/Department, 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



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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, for the 3 profiles, are:

- MSc Degree in: Physics, Engineering, Mathematics, Computer Science, Environmental Sciences, or related disciplines, obtained either in accordance with the Italian legislation prior to Ministerial Decree no. 509/99, or Master's Degree as per Ministerial Decree no. 270/04 in all the subject classes that have been equalized under the Italian Interministerial Decree dated July 9 2009 and according to the table annexed to the above-mentioned Decree, obtained at any Italian University or at any foreign University;
- Suitable and fitting scientific CV (post-graduate specialization courses, research activities at public or private institutions, fellowships, grants in Italy or abroad);
- Either at least two years of research activities or enrolment to the third year of a PhD course in the topics related to the present call;
- Good knowledge of the English language.

Candidates who obtained a qualification abroad that has been declared equivalent by the Italian competent educational authorities or validated according to the rules in force (Art. 38 Legislative Decree 165/2001), are admitted to participate in the call.

The candidate without such requisite at the date of the application shall submit a detailed documentation concerning his/her education in order to allow the Selection Board to evaluate the application limited to the present call for applicants.

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

Art. 4 – Application form: terms and conditions

The application forms for the participation in the call shall be drafted on plain paper, according to the form herewith attached (Annex 1), signed with handwritten or digital signature by the applicants and sent by one of the following options:

- By personal PEC (Electronic Certified Email), in conformity with the current legislation on the matter, to the following PEC address: ogs@pec.it
Please note: the maximum PEC size limit is **30 MB**. Should the attachments exceed this limit the candidate has to send more than one PEC (indicating in the subject the e-mail number, for example: "Name, surname, title of the call, e-mail no. X"). Files with **“.zip”** extension are **not** accepted.

Only and exclusively for non-national candidates, applications to the call drafted on plain paper and in accordance to the form herewith attached (Annex 1), with the applicant's handwritten or digital signature according to the usual European standards, may also be sent:

- By e-mail, to the following e-mail address: protocollo@inogs.it.
Please note: the maximum e-mail size limit is **30 MB**. Should the attachments exceed this limit the candidate has to send more than one e-mail (indicating in the subject the e-mail number, for example: "Name, surname, title of the call, e-mail no. X"). Files with **“.zip”** extension are **not** accepted.

The application form must be sent at the latest **by 11.59 pm** on the closing date.

Different methods of delivery will not be accepted.



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

- Name and surname;
- 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 awarding of other fellowships;
- To be in possession of further requirements as per art. 3 of this call;
- The chosen address for the call.

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

- The **Curriculum Vitae et Studiorum** (possibly in European format) written either in Italian or English, dated and signed with handwritten or digital signature; in the CV the applicant shall include all the useful information for the evaluation. **At the end of the CV the candidate shall insert the following declaration:** *"All the information contained in this Curriculum Vitae et Studiorum is accurate and truthful and is given under my responsibility according to articles 46 and 47 of the Presidential Decree dated 28.12.2000, n. 445. I am aware that false declarations are punishable by law in accordance with art. 76 of the same Presidential Decree dated 28.12.2000, n. 445"*.
- **Qualifications and documents** that will be considered useful by the applicant to submit to the Selection Board. These qualifications and documents shall be presented by filling in either a self-declaration affidavit in accordance with art. 46 of the Presidential Decree dated 28.12.2000, no. 445 (Annex 2), concerning the degree obtained, or a self-declaration affidavit, in accordance with art. 47 of the Presidential Decree dated 28.12.2000, no. 445 (Annex 3), concerning, for example, the implemented research activities, the list of publications, etc.
- **A copy of a valid Identity Document.**

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 of the present call;
- Applications sent by other means other than those referred to in Art. 4;
- Partial or total omission of the information requested as per Art. 4;
- Failure to submit the application form duly signed as per Art. 4;
- Failure to submit a copy of a valid Identification Document attached to the application form;
- Failure to comply with any of the requirements as per art. 3.

Candidates are admitted to the selection with right to reserve approval. The Director of the Human Resources Department 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 General Director, 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 accurate and truthful declarations requested by the application form in accordance with Presidential Decree dated 28.12.2000, no. 445.



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Art. 6 – Selection Board

The Selection Board shall be appointed by the OGS General Director and shall be composed of three members, including the scientific Tutor.

The Selection Board may carry out the evaluation procedure by means of videoconference tools, ensuring in any case the complete communication security and traceability.

The session is open and closed by the President, who governs its execution and could suspend it in every moment where necessary. The President has the duty of checking, before the start of the meeting, the participants' identity and the presence of the required conditions of participation. It is also necessary to specify these elements in the minutes, together with the indication of the technologies used by each member.

Art. 7 Evaluable qualifications, interview and ranking list

The selection is based on qualifications and interview.

The Selection Board can assign up to 100 points, divided as follows:

- 30 points for the evaluation of the qualifications
- 70 points for the interview.

Only candidates obtaining at least 21/30 points in the evaluation of qualifications will be admitted to the interview.

In order to pass the interview, the candidate should obtain a minimum score of 49/70.

QUALIFICATIONS (max 30 points out of 100)

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

The evaluating titles for Profiles 1 and 2 are:

- Master's Degree (final mark) and its connection with the subject of the present Call;
- PhD title obtained either in Italy or abroad;
- On-going PhD course or equivalent either in Italy or abroad;
- Specialization diplomas and certificates of attendance to post lauream training courses, both in Italy and abroad;
- Research activities in public or private organizations based on contracts, fellowships or assignments, both in Italy and abroad in the subject of the selected research open position;
- Knowledge and use of the most common scientific programming languages;
- Publications on scientific journals and any other contribution to reports, documents and books in the subject of the selected open position.

The evaluating titles for Profile 3 are:

- Master's Degree (final mark) and its connection with the subject of the present Call;
- PhD title obtained either in Italy or abroad;
- On-going PhD course or equivalent either in Italy or abroad;
- Specialization diplomas and certificates of attendance to post lauream training courses, both in Italy and abroad;
- Research activities in public or private organizations based on contracts, fellowships or assignments, both in Italy and abroad in the subject of the selected research open position;
- knowledge and use of the main scientific programming languages, such as Fortran, C and Python, of the programming languages for 3D high-performance visualization, such as Paraview and Blender, and knowledge and use of parallel programming for CPU and GPU;



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- Publications on scientific journals and any other contribution to reports, documents and books in the subject of the selected open position.

In particular, a Ph.D. title, or an equivalent title obtained abroad, would be considered as an asset for the purpose of awarding the fellowship.

After the qualifications have been evaluated, the Selection Board makes a shortlist of applicants who will be invited 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 before the interview on the website of OGS <https://www.inogs.it/it/job-opportunities>.

Such publication effectively constitutes an official notification.

INTERVIEW (max 70 points out of 100)

The interview will focus on general themes related to the profile of the present call, on the past experiences and the possible publications submitted. The interview could be held in English.

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

The candidates who will not be present at the interview, or those who will not be connected in videoconference call according to the indications given by OGS, should the interview take place this way, will be excluded from the competition.

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.

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 lists with the indication of the fellowship winner will be published by the President of the Selection Board on the website of OGS at the following page: <https://www.inogs.it/it/job-opportunities>.

Such publication effectively constitutes an official notification.

Art. 8 – Ranking list approval and appointment of the fellowship winner

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

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

In case of formal renunciation of the winner, or if the winner does not accept the fellowship within the prescribed period according to art. 9 of the present call, the fellowship shall be awarded to the next eligible candidate in the ranking list.

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

Art. 9 – Awarding of the fellowship

The OGS General Director, in compliance with the current legislation on the matter, awards the research fellowship to the fellowship winner.

The fellowship winner will be duly notified of the result and shall send an official declaration of acceptance of the fellowship within 15 days after acknowledgement of receipt of the notice. Once obtained the declaration of acceptance from the winner candidate, a contract between the OGS General Director and the fellowship winner is prepared and signed. This contract states the terms and conditions of the cooperation, together with the research activities to be carried out.



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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. 10 – 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. 11 – Fellowship obligations

The fellowship holder must carry out the commitments foreseen by the research programme prepared by the scientific tutor and under his/her supervision. At the end of the fellowship the holder must 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 fellowship 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. 12 – Personal data management

Data Controller: National Institute of Oceanography and Applied Geophysics – OGS.

Data Protection Officer: dr. Luca Zenarolla – dpo@inogs.it

In accordance with Article 13 of EU Regulation 2016/679, required personal data will be exclusively collected and treated for purposes strictly connected to the selection procedure, with or without the aid of electronic tools, according to current law and regulations concerning the implementation of this kind of activity.

Providing such data to OGS is necessary for the evaluation of participation requirements and of the holding of titles: failure to provide these data may compromise such evaluation.

Data will only be kept for the period required by the selection, and successively for storing purposes only.

Art. 13 – Final proceedings

For matters not covered by this selection notice please refer to the OGS Grant and Research Fellowship Rules and Regulations. This call for individual fellowship will be posted on the OGS website, on the call's website of MIUR and on the European Commission Internet portal Euraxess.

In accordance with the Law dated 7/08/1990 no. 241 art. 5, the Responsible of the Proceedings is dr. Marzia Micottis - Human Resources Department, e-mail: mmicottis@inogs.it



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Annex 1

Application form

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

Call 20/2021

Announcement of public selection based on qualifications and interview for no. 3 Junior fellowships in the field of “Modeling of marine ecosystems”, by the Research Section “Oceanography” – OCE of the National Institute of Oceanography and Applied Geophysics – OGS.

PROFILE no. and title: _____

The undersigned (name) _____ (surname) _____
Born in _____ (Province _____) on _____
and resident in _____ address _____
n. _____,

requests to participate in the present selection.

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

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

- to hold a Master's 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. 270/04in _____ obtained on date
_____ from the University of _____
with the score of _____ / _____

if the qualification is obtained abroad

- to have already obtained the recognition of the equivalence as per Art. 38 of the Legislative Decree dated March 30 2001, n. 165, in view of the documents annexed to the application
or
- to have already applied for the recognition of the equivalence as per Art. 38 of the Legislative Decree dated March 30 2001, n. 165, in view of the documents annexed to the application
or



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- to present the following detailed documentation of the attended training in order to allow the selection board to assess the recognition of equivalence only for the purposes of the applicant's participation in the mentioned call for applicants _____

_____;

- to be in possession of the PhD in _____
_____ obtained on date _____
from the University of _____

if the qualification is obtained abroad

- to have already obtained the recognition of the equivalence as per Art. 38 of the Legislative Decree dated March 30 2001, n. 165, in view of the documents annexed to the application
- or
- to have already applied for the recognition of the equivalence as per Art. 38 of the Legislative Decree dated March 30 2001, n. 165, in view of the documents annexed to the application
- or
- to present the following detailed documentation of the attended training in order to allow the selection board to assess the recognition of equivalence only for the purposes of the applicant's participation in the mentioned call for applicants _____

- to have carried out the PhD course without fellowship (to be declared only in the case of fellowship not awarded by the University)
from _____ to _____

- no fellowships have been awarded before;
- the following fellowships have been awarded:
from _____ to _____
at _____
from _____ to _____
at _____
from _____ to _____
at _____

- to currently hold a fellowship
from _____ to _____
at _____

- to possess the further requirements included in the art. 3 of the present call;
- to hold the following titles that may be evaluated:



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To attach 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



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The undersigned _____

For participating in this Call no. _____ requests to take the exam in one of the following languages:

- Italian
- English

Signature



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Annex 2

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 PhD in _____
_____ obtained on date _____
from the University of _____
or
- to be enrolled on a PhD course in _____
by _____
from _____ and to have completed no. of year(s) _____

- to be in possession of the following specialisation title 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



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Annex 3

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)

DECLARES¹

_____ (1)

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 **copy of a valid identification document**.

¹ Purely as an example:

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