

**CALL for APPLICATIONS**
(Determina n. 68/2020)

Public competition, based on qualification and possible interview to award a Post graduate fellowship on the subject "Development of data analysis and Machine Learning services for Astrophysics" funded by H2020 project "NEANIAS"

The post-graduate fellowship within the research project H2020 NEANIAS is not intended to cover specific personnel needs of the Institute or of the project itself, but it offers the opportunity of undertaking research activity within the project to those candidates wishing to acquire knowledge and skills for their professional advancement. Besides, the research fellowship offers the fellow the opportunity of professional growth by pursuing her/his scientific or technological research activity within a highly qualified environment.

Art. 1 Research project

A public selection based on qualifications, possibly integrated by an interview, is open to award one postgraduate fellowship for one year, possibly extendable provided the financial funding, under the project "H2020 NEANIAS" (Grant Agreement n. 863448).

The purpose of this award is to enable qualified candidates, with an adequate scientific curriculum, to pursue the research entitled "**Development of data analysis and Machine Learning services for Astrophysics**" at the INAF – Osservatorio Astrofisico di Catania.

The successful candidate will carry out the following activities, under the scientific supervision of the technologist Dr. Eva Sciacca:

1. Use and development of Image Processing software for the analysis of astrophysical images (FITS files) and catalogues
2. Extraction, characterization and classification of astrophysical objects through the development of Machine Learning services;
3. Deployment of codes and software implemented on cloud infrastructure.

Art 2 Duration and fellowship amount

The fellowship is awarded for 12 months, with possible extension within the limit of 6 years, as set forth in art. 6 c. 2 bis of Legislative Decree 31 December 2014 n. 192 provided that the positive evaluation of the research and the financial availability occur.

The expected date of the fellowship start is 1 July 2020.

The gross annual amount of the fellowship, paid in 12 postponed instalments is Euro 26.000,00

This amount is net of burdens to be charged to INAF- Osservatorio Astrofisico di Catania, social charges, and includes the social security tax charged to the fellow.

Italian tax and social security rules will be applied.

Grants for research activities are subject to:

article 4 of Law 13 August 1984, n. 476 (concerning tax);

article 2, paragraph 26 and successive

clauses, of Law 8 August 1995 n. 335 and successive modifications (regarding social security);



Labour and Social Security Ministerial decree of 12 July 2007, published in the G.U. n. 247 dated 23 October 2007 (regarding obligatory suspension from work during maternity); art. 1, paragraph 78, of Law 27 December 2006, n. 296, and successive modifications (regarding sick leave).

During the period of mandatory maternity leave the allowance paid by INPS (Italian National Institute for Social Security) is supplemented by INAF up to the total amount of the grant. The period of mandatory maternity leave will not contribute to the duration of the fellowship.

The fellow will be requested to take out an accidents insurance for the duration of the fellowship.

Art.3 Eligibility

All nationals, both from the European Community and non-European countries having obtained a Master degree either in Physics, Astrophysics, Computer Science, Engineering or Mathematics are eligible.

The skills and the experiences in the topics listed in art. 1 must be described in the CV and proven with attached appropriate documents.

Applicants having obtained a Master Degree in any European or non-European country, which has not been declared "equivalent" to an Italian Master Degree according to the Italian legislation, must submit a specific request to the examination board to have the title examined and eventually declared correspondent to the Italian Master Degree, using Annex 1. The "declaration of equivalence" issued by the board of evaluation can't be used exclusively for this competition.

To this aim, applicants must attach the documents listed in art. 5 to the application form.

The requirements for participating to the competition must be met on the deadline for submitting applications.

Art. 4 – Ineligibility and incompatibility with other funding

Full professors, associate professors and researchers in Italian universities and employees of INAF or Italian University or research public institutions are all excluded from the competition.

Research grants may be assigned to personnel employed at public institutions other than those listed in the previous paragraph, provided they are on leave and do not receive any grant from their employer for the entire period of the contract.

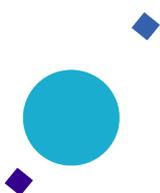
During the duration of the fellowship, the grant holder cannot enrol in any academic course giving access to a doctorate, Phd programmes, or any other academic course.

The grant cannot be held contemporarily with whatever fellowships, except those awarded with the aim of supporting the training or research activity of the fellow during a period spent abroad.

Full-time or part-time job, cannot be carried out during the duration of the fellowship, while limited self-employed temporary job is compatible with the grant, provided that the job commitment does not compromise the research activity carried out for INAF.

In this case the Director of INAF – Osservatorio Astrofisico di Catania formally authorizes the fellowship.

Retired people are not eligible for Research fellowship.



Any person who has held Research fellowships under article 22 of Italian Law 240/2010 (namely Assegno di Ricerca) for a total period exceeding six years, are ineligible for the competition. The above period does not include extensions or periods in which the grant has been held in coincidence with doctoral studies up to the maximum time limit of the course and the periods of maternity leave or sick leave, in accordance with current legislation.

Research grants cannot be awarded to those who have signed contracts, pursuant to Art. 22 (Research grants) and Art. 24 (Temporary research positions) of Law n. 240 dated 30 December 2010, with other universities and/or other Italian public institutions, whose duration together with that of the contract outlined in this call for applications, exceeds 12 years, even non-continuous, as set out in Art. 22, comma 9 of the cited Law; maternity leave and sick leave are not taken into consideration when calculating the time limit.

Art.5 Application process

Applications, with attached CV and any document or publication deemed useful for the purposes of this competition must be submitted, in Italian or in English, filling the attached forms (Annexes 1, and 2 the latter only for EU citizens) exclusively via mail at the following PEC address: inafoacatania@pcert.postecert.it and must **arrive not later than h. 13:00 (local time) of 3 June 2020**. Late arrival will not be considered.

Please quote "Assegno di Ricerca NEANIAS" in the subject of the e-mail.

For Italian participants: the forwarding will be valid only if the applicant sends the application form from his/her own PEC email box.

For European and non European participants: the application form must be sent to the PEC address: inafoacatania@pcert.postecert.it from his/her email address.

The forwarding time and date is certified by the IT system.

The applicant must clearly and precisely state in the application form, under his/her own responsibility:

1. name(s) and surname,
2. date and place of birth,
3. nationality, Italian tax code (if any),
4. place of residence and address for correspondence and email address if available or PEC
5. the possession of a Master degree in one of following fields: Physics, Astrophysics, Computer Science, Engineering, Mathematics, the University which awarded the Master degree and the obtained marks;
6. to enjoy civil and political rights,
7. not to have reported convictions, or ongoing pending convictions (if not, please specify)
8. titles of any other qualifications awarded (e.g. specialization diplomas, attendance certificates for post-graduate specialization courses held in Italy or abroad, documented research, under contract, conducted at public or private bodies, scholarships or appointments, both in Italy and abroad);
9. not to hold scholarships, research grants or contracts or to be willing to terminate them in case of successful evaluation,



10. that s/he will communicate promptly any changes in the positions referred to in the application as well as changes to the residence and contact details;
11. that s/he has read and understood the regulations governing the call for applications.

The lack of any of the above mentioned declarations causes the exclusion from the selection procedure for incomplete application.

The following documents have to be submitted:

1. Annex 1 "Application form" signed and dated;
2. Annex 2 "Self-declaration" (only for EU citizens)
 - i. that the copy of the thesis, publications or any other document attached to the application are compliant to the original versions;*
 - ii. that the applicant holds a Master Degree in Physics or Astrophysics or Computer Science or Engineering, or Mathematics awarded by a foreign institute;*
 - iii. any other degree or certificate of schools and specialization course he/she has taken in Italy or abroad and/or any contract he/she has been assigned in the form of fellowship by Italian or foreign research institutions or Universities, and/or any other contract or working experience;*
3. Master thesis;
4. Only for non-EU citizens residing outside Italy: suitably certified copies of academic qualifications obtained outside Italy, together with a declaration of value, certified, translated and legally validated, complete with an indication of the examinations taken, relative marks and course duration;
5. Only if the qualification has not been deemed valid for Italian law: request of validity for the sole purposes of participation in the competition together with mentioned declarations (Annex 1);
6. "Curriculum vitae", signed and dated by the applicant, providing evidence of qualifications, professional experience and the skills required to carry out the research and including a list, if applicable, of grants and fellowships held in the past and a statement of research interests;
7. copy of a valid identity document (ID card or passport);
8. List of publications;
9. PDF Copies of any document deemed useful for the evaluation, e.g. post graduate diplomas, certificate of attendance at post-graduate courses, schools, conferences scholarships, or research contracts
10. List of every documents attached.

For selection purposes:

- EU citizens shall directly state any academic qualifications in the application forms (Annexes 1 and 2)
- non-EU citizens residing outside Italy, together with ANNEX 1, must attach suitably certified copies of academic qualifications obtained outside European countries, together with a **declaration of value**, certified, translated and **legally validated**, complete with the record of the examinations taken, relative marks and course duration.



- The declaration of value is issued by the competent Italian diplomatic representatives in the country where the academic institution/university which issued the master degree is based.

Art. 6 Causes of exclusion from the competition

Applicants are admitted to the selection with reserve and may – at any time – be notified of exclusion from the selection procedure for the following reasons:

- Applications arrived after the deadline mentioned above or
- Applications with incomplete documentation
- unsigned application form, curriculum or declarations
- Applications lacking of requirements listed in art. 3
- Applications lacking of ID
- Applications with false declarations or false documents

will not be considered.

Art 7 Board of evaluation

The board of evaluation, made of three members and a secretary, is appointed, ensuring an adequate balance of gender, by the Director of Osservatorio Astrofisico di Catania.

Art 8 The selection process

The selection is based on qualifications possibly integrated by an interview (which can also be done remotely).

The Selection Committee can establish a short list of the eligible applicants to be interviewed, on the basis of qualifications and documented experience in scientific or technological activities on the specific subject of the research fellowship. All the stages of the selection procedure can be performed also using electronic devices for the communications.

The assessment of the CV and of the qualifications precedes any interview and will be made on the basis the documents attached and their relevance to the scientific/technological research programme.

The total ranking score is 100 points, 60 points are the maximum score for qualifications and 40 points are the maximum score for the interview.

The candidate must obtain a minimum score of 36 points for qualifications to be eligible.

The maximum of 60 points reserved for the evaluation of the CV and qualifications are assigned as follows:

1. Master degree mark, up to a maximum of 10 points;
2. University study plan (exam record), up to a maximum of 5 points;
3. Graduation thesis, up to a maximum of 10 points;
4. Any post-graduate specialization courses (e.g. master or doctorate), up to a maximum of 5 points;
5. Curriculum vitae et studiorum, up to a maximum of 15 points;
6. Experiences related to the technological foreseen activity with public or private subjects both in



- Italy and abroad, up to a maximum of 10 points;
7. Other evaluable qualifications, for a maximum of 5 points

Applicants selected for the interview will be informed with a minimum of 15 days notice by e-mail, containing the individual score for qualifications.

Any interview will be aimed at verifying the applicant's specific experience and will focus on the topics of the research project listed in art. 1

It will be assigned up to a maximum of 40 points.

Applicants are expected to get the minimum score of 24 points to be eligible.

At the end of the selection process the board of evaluation will draw up the ranked list.

Art. 9 – Awarding of the fellowship

The highest ranked candidate will receive the written notification awarding of the research fellowship. Within 10 days from receipt of the formal notification the successful applicant must send a formal declaration of acceptance of the research grant. The declaration will also state that s/he is not subject to any of the exclusion conditions listed in article 4 of this Call.

If the candidate does not provide the declaration of acceptance within a time limit of 10 days, s/he will lose her/his entitlement to the research fellowship, which can be awarded to the next ranked candidate.

Before the start of the research fellowship, the successful applicant is requested to take out an insurance against accidents at work, valid for the duration of the fellowship. As for third party liability risks the fellow will be covered by the insurance policy drawn out by INAF.

If the fellow is employed by a public or private employer, before the start of the fellowship, s/he is requested to submit a copy of employee leave, shall the forfeiture of the fellowship.

The fellow will carry out the research activity in a flexible, autonomous, continuous way and in coordination with the scientific supervisor and the research team.

The fellow who after starting the research activity interrupts it for no valid reason or proves to be unsuitable for it, will lose the right to the fellowship, on the advise of the scientific supervisor.

The contract will be terminated without notice if:

- the fellow does not carry on the research activity;
- the fellow incurs in the one of the incompatibility clauses stated in art. 4;
- the fellow lacks repeatedly to fulfil requirements or, according to the evaluation
- of the scientific responsible, dr. Eva Sciacca, eventually shows evident lack of skills at the planned research activities;
- the fellow has presented false declarations or false documents.

The fellow can terminate the contract giving 30 days notice to the administrative office.

If the notice is not given, the amount corresponding to the missing days of notice will be withheld from the paycheck, or directly reimbursed by the fellow.



Under no circumstances the fellowship implies a subordinate employment relationship or gives right to access to permanent INAF staff positions.

Art.10 Evaluation of research activity

Before the expiration of the contract, the fellow will submit a detailed report, describing the progresses in the research topic. The extension of the contract will be based on the positive evaluation of the report.

Art. 11 – Information under articles 13 and 14 G.D.P.R. 2016/679

1. Pursuant to Article 13 of the “**Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC**” (“**General Data Protection Regulation**”), the National Institute for Astrophysics, acting as data controller, hereby informs that the personal data of applicants will be processed exclusively for the purposes connected to the aforementioned procedure by INAF personnel who, under the direct authority of the controller, are authorized to process personal data.
2. The personal data shall be processed even through automated means, also in case of communication to third parties.
3. The provision of such data is necessary to verify the participation requirements and failure to indicate them may preclude such verification.
4. Pursuant to Articles 15-21 of the “**General Data Protection Regulation**” the applicants can require anytime the access to his/her personal data, the rectification and correction of his/her personal data and/or, where possible, the erasure of his/her personal data and/or the limitation of his/her data processing and the opposition of his/her data processing.
5. Applicants can exercise the abovementioned rights by addressing to the Data Protection Officer of the National Institute of Astrophysics at the following addresses:
 - a) Viale del Parco Mellini, 84 - 00136 Rome (registered letter);
 - b) rpd@inaf.it (Email);
 - c) rpd-inaf@legalmail.it (Certified mail).

Art 12

The present call will be advertised on the website of the INAF-Osservatorio Astrofisico di Catania. Moreover, it will be sent to the Scientific Director of INAF for publication on INAF and MIUR websites. For further scientific information about the position and planned activities, contact the Scientific Responsible, Dr. Eva Sciacca (email: eva.sciacca@inaf.it). For further administrative information contact Dr. Daniela Recupero (email: daniela.recupero@inaf.it). For what not explicitly mentioned in this call, please refer to the Italian Call (Determina n. 68/2020) which contains detailed information on the laws and regulations in force which rule Italian public selection processes.

Catania, 29 aprile 2020

IL DIRETTORE

Dott.ssa Isabella Pagano



INAF



ISTITUTO NAZIONALE DI ASTROFISICA
OSSERVATORIO ASTROFISICO DI CATANIA

(firmato digitalmente)

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