

Determinazione numero 311 del 6 Dicembre 2018

Subject: Selection for the assignment of one postdoctoral research grant entitled “Mapping the magnetic field of the Fornax galaxy cluster”.

THE DIRECTOR

in accordance to the preamble available in the Italian version of this job advert,

DECREES

Art. 1 - Research project

A call is open for the assignment of one postdoctoral research grant of the duration of 3 years entitled: “Mapping the magnetic field of the Fornax galaxy cluster”. The selection will be carried out on the basis of the applicants’ qualifications, possibly integrated by an interview.

The research activity will take place at INAF - Cagliari Astronomical Observatory (hereafter OAC), under the supervision of Dr. Paolo Serra and in close collaboration with Dr. Matteo Murgia and Dr. Federica Govoni. It will be conducted in the context of the *MeerKAT Fornax Survey* – a large survey of the Fornax galaxy cluster to be carried out with the SKA precursor MeerKAT. The goals of the research grant are to:

- Process the MeerKAT data obtained for the *MeerKAT Fornax Survey* with the goal of studying the magnetic fields in Fornax. This will result in radio continuum images of the polarised intensity and in rotation measure cubes.
- Analyse the above images and cubes.
- Improve and analyse existing numerical simulations of the distribution of magnetic fields in a Fornax-like galaxy cluster.
- Compare the simulations to the MeerKAT data.
- Publish the results in peer-reviewed journals.

Questions on the project can be addressed to Paolo Serra (e-mail: paolo.serra@inaf.it).

The top-ranked applicant will formally accept the grant offer by stating his/her intention to enroll in this postdoctoral research and training program for his/her own career necessity. The award of the present grant does not imply any rights to access to permanent INAF staff positions.

Art. 2 - Requirements for application and selection criteria

The selection is open to Italian and foreign citizens meeting the following minimum requirements:

- A Ph.D. degree in either Engineering, Physics, Computer Science or Astronomy – or an equivalent degree – issued by an Italian or a foreign advanced studies institute or university;

or, alternatively

- a masters degree in either Engineering, Physics, Computer Science or Astronomy – or an equivalent degree, including the Italian university degree obtained under the “vecchio ordinamento” – awarded by an Italian or a foreign advanced studies institute or university, which would entitle the applicant to enrolment in a PhD programme; followed by at least three years of documented experience in scientific or technological activities (including any years spent as a Ph.D. student).

For the sole purpose of the present selection, the equivalence of any qualifications obtained outside Italy with the corresponding Italian qualifications will be established by the Selection Committee (Art. 9).

Applications will be further evaluated on the basis of the following selection criteria:

- Experience with radio interferometry and/or development of numerical simulations at research institutes and universities, with focus on extra-galactic astronomy.
- Motivation and skills to take a leading role within the Fornax project.
- The ability to work efficiently within a team and to obtain results in an independent way.
- A strong track record of peer-reviewed publications.
- A record of oral presentations at international conferences.
- Successful applications for observing time and for funding grants.
- Good programming skills and a good level of English language (oral and written).
- Reference letters.

Art. 3 - Application procedure

Applications must be submitted in English or Italian via e-mail to the following email address: protocollo.oaca@inaf.it. The e-mail subject should indicate the position which is being applied for.

Applications must be submitted by noon (CET) January 8, 2019. Late submissions will not be considered.

Applicants must state clearly and precisely, using the attached Application Form (Annex 1), the following (under their own responsibility and being aware that false declarations are punishable by law and that the administration will carry out random checks on their accuracy):

- name(s) and surname, date and place of birth, nationality, residential address and email address for correspondence;
- that the applicant satisfies all the requirements described in article 2 of this Call;
- that the applicant is aware of the restrictions described in article 4 of this Call.

In the absence of any of the above the applicant will be excluded from the selection procedure.

For the purpose of this selection procedure, applicants shall list any academic qualifications in the same Application Form (Annex 1).

Applicants must fill in and include in the applications also Annex 2.

Applications that are not consistent with the attached forms (Annexes 1 and 2) or have not been **signed** by the applicant will be excluded from the selection procedure.

If successful, non-EU citizens residing outside Italy must produce originals or suitably certified copies of the academic qualifications obtained outside Italy.

Applications must include the following documents:

- Application Form (Annex 1) **signed and dated**;
- Annex 2 **signed and dated**;
- copy of a valid identity document (ID card or passport);
- Curriculum vitae providing evidence of possession of the requirements and the skills required to carry out the research and including a list, if applicable, of grants and fellowships held in the past;
- a description of the main research achievements and of how the candidate plans to contribute to this project (one A4 page);
- publication list;
- any other qualification, work experience, research activity for public and private institutions and publications that the applicant deems appropriate to submit;
- a maximum of three reference letters, to be sent directly by the referees to the address protocollo.oaca@inaf.it **by noon (CET) January 8, 2019**. Letters received after this deadline will not be considered;

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:

- submission of the application after the deadline;
- incomplete and/or unsigned application forms (Annexes 1 and 2);
- lack of the copy of a valid identity document;
- lack of the requirements indicated in paragraph 2.

Should the reasons for exclusion be ascertained after completion of the selection procedure, the applicant will lose any right deriving from participation in the selection procedure; the same will apply to applicants providing any false statement or document.

INAF accepts no responsibility for lost applications or documents where this is due to the applicant having provided incorrect contact details or having failed or delayed in notifying any changes to these details.

Art. 4 – Ineligibility and incompatibility with other funding

The grant cannot be held by INAF staff on a indefinite/term contract and by staff of institutes listed in law 240/2010, art. 22, comma 1.

The grant cannot be held simultaneously with attendance of academic courses (such as those that formally give access to a PhD programme) or with enrolment in a PhD programme. For employees of the Italian Public Administration (Italian State) compulsory unpaid leave of absence is required.

The grant cannot be held contemporarily with other fellowships of whatever kind, except those awarded with the aim of integrating the training or research activity of the grant holder through a period spent abroad.

Aggregation of income from working activities, also part-time, carried out continuously is not accepted. Instead, limited self-employed occasional work is compatible with the grant, only if this is not prejudicial to the research activity carried out for INAF. This must be authorised in advance by the Director of INAF-OAC.

When formally accepting the grant, the successful applicant will issue a declaration of absence of inadmissible cumulating of grants/fellowships.

Art. 5 – Host Institution and duration of the research grant

The host institution of the grant is INAF-OAC. The applicant will be requested to travel abroad, also outside the European Union.

The grant has a duration of 3 years.

The total duration of the grant cannot exceed 6 years (including any interruptions occurred according to Italian law). This limit excludes any period of time during which the grant holder was following an unpaid Ph.D. program within the limits of the legal duration of that program.

Art. 6 - Salary and related items

The grant amounts to 30,000.00 (thirty-thousand) Euros gross per year. This amount is net of burdens to be charged to INAF-OAC and will be paid in deferred monthly instalments.

Applicable fiscal rules are the provisions of art. n. 4 of Italian law n. 476/1984 and subsequent modifications and integrations. Applicable social security rules are art. n. 2, paragraph 26 and following paragraphs of the Italian law n. 335/1995 and subsequent modifications and integrations. Applicable rules for obligatory maternity leave are provided in the Decree of the Ministry of Labour and Social Security dated 12 July 2007, published in the "Gazzetta Ufficiale" n. 247 dated 23 October 2007. Applicable rules for sick leave are provided by art. n. 1, paragraph n. 788 of Italian law n. 296 dated 27 December 2006 and subsequent modifications. During the period of obligatory maternity leave the allowance paid by INPS (Italian national institute for social security) according to art. n. 5 of the above Decree dated 12 July 2007 is supplemented by INAF up to the total amount of the grant. The period of obligatory maternity leave will not contribute to the duration of the grant foreseen by the contract.

The grant holder must stipulate the mandatory insurance against accidents at work, and exhibit the relevant documents prior to signing the contract with INAF. Failure to do so will result in withdrawal of the grant offer.

As for third party liability, the grand holder will be covered by insurance policy drawn up by INAF. This insurance policy will not cover the civil liability of the grant holder towards INAF.

Art. 7 - Selection committee

Applications will be evaluated by a Selection Committee appointed by the Director of INAF-OAC. The Selection Committee is composed of three members from both Italian and foreign research staff, including also University staff, with expertise in the research field of the position offered in this announcement, and will include the principal investigator of the project. According to the law in force, the composition of the Selection Committee should comply, when possible, with gender balance. The president of the Selection Committee is nominated in the appointment decree and is chosen between the Committee members. In the decree the Selection Committee Secretary is also appointed.

Art. 8 - Selection procedure

The selection is based on qualifications, possibly integrated by an interview. At the interview, applicants must exhibit their identity documents unless the interview is being carried out remotely via electronic devices. In the latter case the Selection Committee verifies the applicant's identity.

The total ranking score is 100 points. Of these, a maximum of 40 points are assigned based on the applicant's qualifications prior to the interview. A maximum of 60 points are assigned at the interview.

Applications are evaluated based on the criteria listed in Art. 2 above.

All the stages of the selection procedure (e.g. meetings of the Selection Committee, interviews and so on) can be performed using electronic devices.

The Selection Committee will assign a maximum score to the various selection criteria listed in Art. 2 above. Following that, the Committee evaluates the qualifications of the applicants.

The Selection Committee can establish a short list of eligible applicants to be interviewed. In order to do so, before evaluating the applications the Committee will agree on a minimum score for candidates to be invited at the interview.

Applicants selected for the interview will be informed with a minimum of 10 days notice via email. The email will include the final score assigned to the applicant's qualifications.

At the end of the selection procedure the Selection Committee will release a ranked list of applicants. The approval decree of the selection procedure and the ranked list of applicants will be published on the website www.oa-cagliari.inaf.it.

In case an applicant declines the offer, the grant can be offered to the next applicant following the ranking of applications.

Art. 9 - Award of the grant

The highest ranked applicant will be notified of the award of the research grant via email. S/he must provide a formal declaration of declination/acceptance of the research grant within 10 days of such formal notification. Prior to signing the contract, the selected applicant must also provide a written statement that s/he is not subject to any of the exclusion conditions listed in Art. 4 of this Call.

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

Under no circumstances the signing of the contract starts a subordinate employment relationship or ensures any rights to access to permanent INAF staff positions.

The insurance against injuries at work should be established prior to the beginning of employment.

The grant holder is required to issue an activity report every six months. The activity report will be subject to approval from the scientific advisor and will be forwarded to the Director of INAF-OAC. Approval failing, duly motivated by the scientific advisor, will give INAF-OAC the right to terminate the contract.

The grant holder is required to send a written note in case of withdrawal, with at least 30 days notice starting on the 1st or 16th of each month. Failing that, the INAF-OAC is entitled to retain or request the reimbursement of the salary amount corresponding to the period not notified. The remaining grant amount can be used for the next applicant on the ranking list.

Art. 10 - Deadlines and grant holder's obligations

The grant starting date is decided by the OAC Director and notified to the candidate. The expected starting date is 01/09/2019. The exact initial date could be reasonably modified if necessary.

The grant holder:

- will sign the contract regulating the fruition of the research grant;
- will start the research activity at the date specified in the contract with OAC unless prevented by force majeure or exceptional circumstances, of which the OAC Director must be timely informed;
- will continue his/her research work for the entire duration of the grant with no interruption;

- will follow all OAC internal regulations and the instructions given by the OAC director and the scientific advisor;
- will send periodic reports on his/her activity to the OAC Director, following approval by the scientific advisor.

The grant holder who does not carry out her/his research activity regularly without producing justified reasons or lacks repeatedly to fulfil requirements or, according to the evaluation of the supervisor, Paolo Serra, eventually shows evident lack of skills at the planned research activities, will incur the termination of the contract. The grant holder will be informed at the beginning of any such procedure at OAC, and will have the right to submit his/her own written version of the facts to the OAC Director. All further actions and decisions will be communicated to the grant holder.

Temporary interruptions of the grant are possible in case of pregnancy, post-partum period, long-term illness (more than 1 month) or other serious circumstances. Such circumstances should be readily communicated and motivated.

Art. 11 - Administrative staff in charge of the selection procedure

In accordance with Art. 8, paragraph 3 of INAF's provisions on the assignment of research grants, Claudio Pili is the administrative staff responsible of the selection procedure for the present research grant (e-mail: claudio.pili@inaf.it).

Art. 12 – Dissemination of the job ad

The present job ad will be disseminated online at www.inaf.it, www.oa-cagliari.inaf.it, on the website of the Ministry for Education, University and Research (MIUR) and on EU research websites as indicated by the MIUR. It will also be forwarded to other astronomical observatories and research institutions.

Art. 13 - Applicable regulation

The Astronomical Observatory shall abide by provisions in force promoting equal opportunities for women and men, non-discrimination and respect of privacy in processing personal data. For what not explicitly mentioned in this announcement, the Observatory shall act in compliance with the regulations in force concerning public selection procedures, when applicable by analogy.

IL DIRETTORE
(Dott. Emilio Molinari)

