



**ISTITUTO NAZIONALE DI ASTROFISICA
OSSERVATORIO ASTROFISICO DI ARCETRI**

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**Decreto n. 94
Anno 2019**

Selection procedure based on qualification and possible interview for the awarding of one research fellowship entitled: “Magnetic fields, cosmic rays, and atomic gas in the Milky Way and in nearby galaxies”, Category: “Assegni Giovane Ricercatore” (in accordance with Article 22, Law 240/2010)

THE DIRECTOR OF INAF ASTROPHYSICAL OBSERVATORY OF ARCETRI

- having seen** the Statute of the Istituto Nazionale di Astrofisica (INAF), adopted by INAF Administrative Council on May 25th, 2018 and entered into force on September 24th 2018;
- in accordance with** Italian Law n. 240 dated 30 December 2010, Article 22;
- having seen** the INAF Regulations for the awarding of research fellowships approved by INAF Administrative Council on 22 June 2011, Resolution n. 06/11 and subsequent modifications and integrations;
- having seen** the guidelines for the awarding of research fellowships approved by INAF Administrative Council on January 29th 2019;
- having seen** in particular, the part which defines that research fellowships can be financed either with ordinary funding or with external funding to carry out a scientific or technological research activity falling under INAF institutional activities as mentioned in art. 2 of the Statute;
- having seen** in particular, the part which defines that research fellowships are intended as occasions of high-qualification offered to young researchers interested in continuing their education within INAF, carrying out scientific or technological activities;
- having seen** in particular, the part which defines that research fellowships are dedicated to the realization of specific projects and cannot be used in order to cover INAF needs in staff;
- having seen** the note of INAF Scientific Directorate prot. n. 673/2018;
- considering** appropriate to issue an announcement of competition for the award of a research fellowship, and that, according to the “Programma Nazionale di Assegni di Ricerca” provided by INAF– Istituto Nazionale di Astrofisica, the present announcement is issued to offer the opportunity to carry out a research activity in the project environment to candidates who deem it profitable to their own career development;

given the availability of financing from fund Ob. Fu. 1.05.01.88.04, *CUP C52F14000410001* of the INAF OAA PRIN-SKA budget (PI Leslie Hunt); the availability of financing from fund Ob. Fu. 1.05.06.11 Premiale 2015 - FRONTIERA (PI Ernesto Oliva) *CUP C61I15000000001*; and the availability of financing from fund Ob. Fu. 1.05.06.05.01 *CUP C52I13000140001* (PI Leonardo Testi)

DECREES

Art. 1 – Research project

A selection based on qualifications, possibly integrated with an interview, is open to award one research fellowship, in the framework of the project “Empowering SKA as a probe of galaxy evolution with HI”. The fellowship is entitled “**Magnetic fields, cosmic rays, and atomic gas in the Milky Way and in nearby galaxies**” (“**Campi magnetici, raggi cosmici, e gas atomico nella Galassia e in galassie vicine**”), category c) Assegni Giovane Ricercatore.

The candidate will develop theoretical numerical models to analyse the non-thermal radio emission due to cosmic-ray particles, in the context of atomic and molecular gas content. These models will be developed as diagnostic tools for the determination of the magnetic field strength, and provide a framework to interpret future maps of synchrotron emission of star forming regions obtained by SKA and ALMA. The diagnostics can be incorporated in small-scale observations of star-forming regions in the Milky Way and also on larger scales in nearby galaxies.

The position is based in the INAF - Arcetri Astrophysical Observatory under the supervision of Dr. Leslie Hunt (email: leslie.hunt@inaf.it).

Art. 2 – Requirements

In order to participate in the selection, **under penalty of exclusion, applicants must possess** at the time of the deadline for application of the present position:

- PhD degree in Physics, Astronomy, or Natural Sciences awarded by an Italian university or by a foreign university, together with at least 3 years of documented experience after the degree in the field of astronomy or astrophysics

Or alternatively

- Degree in Physics, Astronomy, Natural Sciences, Mathematics, Informatics or equivalent, which would formally entitle for the admission to a doctorate, awarded by an Italian university or by a foreign university, together with at least 6 years of documented experience after the degree in the field of astronomy or astrophysics.

The following knowledge, skills and experience will be considered as **preferential qualifications**:

- 1) experience with the development of theoretical models, both numerical and analytical, that predict the behavior of magnetic fields and radio emission in star-forming regions;
- 2) experience with the development of theoretical models for the acceleration of cosmic rays;
- 3) development of tools for integrating observations and theoretical predictions in the context of atomic gas and molecular gas in galaxies.

Recent obtainment of academic qualifications (PhD or Master Degree), as well as other training activities, documented scientific activity, publications in scientific or technological fields inherent to the research program covered by the call. will be properly evaluated by the Selection Committee.

Art. 3– Application procedure

Applications must be submitted in English as closed envelope by:

- authorized carrier (ex. DHL, FedEx, UPS, etc., preferable choice for applications coming from outside Italy);
- “Raccomandata A/R” (registered mail);
- in person, to the address INAF-Osservatorio Astrofisico di Arcetri, Largo Enrico Fermi 5, 50125 Firenze (ITALY);
- Applications can be also submitted using applicant PEC account (Posta Elettronica Certificata: **no ordinary e-mail**) to the following PEC address: inafoaarcetri@pcert.postecert.it
The PEC account must be compulsory registered to applicant’s name, on penalty of exclusion from the present call.

Applications must arrive by **midnight (24:00 CET) 15th November 2019**. Late submissions will not be considered.

Applications must be delivered reporting on the envelope on in the PEC subject: **“Application for position DD n. 94/2019”**.

Aware that false declarations are punishable by law and that the Administration will carry out random checks on their accuracy, the applicant must state clearly and precisely in the application, under his/her own responsibility:

- name(s) and surname, date and place of birth, nationality, place of residence and address for correspondence;
- that s/he satisfies all the requirements described in article 2 of this Call, in particular the holding of the degrees; that s/he is aware of and is not ineligible under any of the restrictions described in article 4 of this Call.

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

For the purpose of this selection procedure,

- shall directly state any academic qualifications in the application form (Annex 1)

Applications must include the following documents:

- Annex 1 “Application Form” **signed and dated** by the applicant;
- Annex 2 **signed and dated** by the applicant;

- copy of a valid identity document (ID card or passport for EU-citizens, passport for non-EU-citizens);
- 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 previous main research achievements and of how the candidate plans to contribute to the PRIN-SKA project (maximum one A4 page).
- list of publications;
- any other qualification, working task, research activity for public and private institutions and publications that the applicant deems appropriate to submit;
- if obtained outside Italy, copy of the Master Degree with list of individual courses and exam grades or PhD certificate (**translated into English**);

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.

Applicants are admitted for selection with reservation and may – at any time – be excluded 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);
- failure to sign the curriculum vitae;
- lack of the copy of a valid identity document;
- lack of the requirements indicated in article 2 of this Call.

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; applicants providing any false statement or document will also be prevented from participation.

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 full professors, associate professors or research staff in Italian universities or by employees of Italian research public institutions.

The grant cannot be held at the same time with attendance at academic courses as those that formally give access to a doctorate, as well as with attendance at PhD courses with fellowship.

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

Aggregation of income from working activities, also part-time, carried out continuously is not allowed. 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 authorized in advance by the Director of INAF-Osservatorio Astrofisico di Arcetri.

Retired persons are not eligible for Research fellowship.

The candidate who does not satisfy the provision of co.3 and co.9 of article 22 of Italian Law 240/2010 is excluded from the selection.

Upon formally accepting the grant, the successful applicant will issue a declaration that none of the above exclusions apply.

Art. 5 – Duration of the Research fellowship

The Research fellowship is expected to begin as soon as possible (but not later than December 2019) and has a duration of **one year**. In any case, the exact initial date could be reasonably delayed if requested by the completion of administrative procedures and/or for the cases mentioned in the art. 10 of this call.

Extensions may be possible depending on performance and funding availability.

In accordance with Italian Law n. 240/2010 the duration of the fellowship, inclusive of possible renewal, will not exceed six years, excluding periods of maternity leave or sick leave, in accordance with current legislation.

Art. 6 – Host Institution

The fellow will carry out the research at INAF-Osservatorio Astrofisico di Arcetri - Largo Enrico Fermi, 5 – 50125 Firenze (Italy).

The activity will be carried out under the supervision of Dr. Leslie Hunt (email: leslie.hunt@inaf.it).

Art. 7– Salary amount

The gross annual salary will be **34 000 Euro** (thirty-four thousand/00). This amount is net of burdens to be charged to INAF-Osservatorio Astrofisico di Arcetri, social charges and health coverage and will be paid in monthly installments. The fellow will be requested to acquire a personal accidents insurance for the duration of the fellowship.

Italian fiscal and social security rules will be applied.

During the period of obligatory 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 obligatory maternity leave will not contribute to the duration of the grant foreseen by the contract.

Art. 8– Selection Committee and selection procedure

The selection will be performed by a Selection Committee appointed by the Director of INAF-Osservatorio Astrofisico di Arcetri and composed of three members, at least one of whom should be a woman. The selection is based on qualifications possibly integrated by an interview

The Selection Committee can decide to conduct the interviews telematically. 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 activities on the specific subject of the research fellowship. Applicants selected for the interview will be summoned within 15 days of notice, containing the individual score for qualifications.

The total ranking score is 100 points, of which 70 points is the maximum score for qualifications and 30 points is the maximum score for the interview.

The evaluation criteria will be pre-determined by the Selection Committee according to the preferential qualifications indicated in art. 2. In addition, the following 10 points (max) out of 70 will be attributed by the Selection Committee according to the following scheme:

- 10 points, if the PhD or the conclusion of the experience activity after the Master Degree has been achieved within the past 3 and 4 years;

- 5 points, if the PhD or the conclusion of the experience activity after the Master Degree has been achieved within the past 4 and 6 years;
- 2 points, if the PhD or the conclusion of the experience activity after the Master Degree has been achieved within the past 6 and 8 years;
- 0 points, if the PhD or the conclusion of the experience activity after the Master Degree has been achieved since more than the past 8 years.

At the end of the selection procedure the Selection Committee will draw up the ranked list. The approval decree of the selection procedure and the ranked list will be published on the following website: <http://www.arcetri.astro.it>

Art. 9– Awarding of the fellowship

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

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

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

Art. 10– Fellowship obligations

The holder of the fellowship:

- will start the research activity at the date due as for the contract at INAF-Osservatorio Astrofisico di Arcetri, unless prevented by force majeure or exceptional circumstances, of which the Director of INAF-Osservatorio Astrofisico di Arcetri must be timely informed;
- will carry out her/his research activities under the supervision of Dr. Leslie Hunt (hereinafter *the supervisor*) who will monitor the fellow's progress.
- is required to issue an activity report after six months. The activity report will be subject to approval from the scientist in charge of the project and will be transmitted to the Director of INAF-Osservatorio Astrofisico di Arcetri. Any renewal of the contract will be decided after the evaluation of the activity report to be periodically produced as above established. Approval failing, duly reasoned by the scientist in charge, will give INAF-Osservatorio Astrofisico di Arcetri the right to terminate the contract;
- is required to send a written note in case of withdrawal, with at least 30 days notice, otherwise the INAF-Osservatorio Astrofisico di Arcetri is entitled to retain or request the reimbursement of the salary amount corresponding to the notice time-span she/he has failed to send.

The holder of the fellowship who does not carry out her/his research activity regularly without producing justified reasons or lacks repeatedly to fulfill requirements or, according to the evaluation of *the supervisor*, eventually shows evident lack of skills at the planned research activities, will incur the termination of the contract.

Temporary suspensions of the research fellowship are due in case of obligatory maternity leave or in case of illness lasting longer than one month or to any other serious reason. The reasons for suspending the research fellowship must be proved and certified, and promptly sent to the Director of INAF-Osservatorio Astrofisico di Arcetri.

Art. 11– Proceeding Responsible

The Responsible of this Call proceedings is Dr. Serena Donati (email: donati@arcetri.inaf.it).

Art. 12– Applicable regulation

The INAF- Osservatorio Astrofisico di Arcetri 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 INAF- Osservatorio Astrofisico di Arcetri shall act in compliance with the regulations in force concerning Italian public selection procedures, when applicable by analogy.

Article 13

Personal Data processing

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 candidates who submit an application for participation in this selection will be processed exclusively for the purposes connected to the aforementioned procedure by persons who, under the direct authority of the controller, are authorised 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 data subject has the right, at all time, to require National Institute of Astrophysics (Viale del Parco Mellini, 84 - 00136 Rome - Italy), free of charge, the access to his/her personal data, the rectification and correction of his/her personal data, the erasure of his/her personal data, the limitation of his/her data processing and the opposition of his/her data processing.
5. The data subject can exercise his/her abovementioned rights by writing to the Data Protection Officer of the National Institute of Astrophysics under the following addresses:
 - Viale del Parco Mellini, 84 - 00136 Rome (registered letter);
 - rpd@inaf.it (Email);
 - rpd-inaf@legalmail.it (Certified mail).
6. The data subject has also the right to an effective judicial remedy, pursuant to Article 79 of the GDPR, or to lodge complaints with the Garante per la protezione dei dati personali, the Italian Controller Authority, according to the provision of Article 77 of the GDPR.

Firenze, October 23rd 2019

Dr. Maria Sofia Randich

**ANNEX 1
APPLICATION FORM**

To the Director of INAF-Osservatorio Astrofisico di Arcetri

I, THE UNDERSIGNED,

(Forename(s))

(Surname)

Place of birth (Town/State/Country)

.....

Date of birth (dd/mm/yy)

.....

.....

Nationality

Gender

.....

Permanent residence address (number/street/town/postal code/Country):

.....

.....

Email address:

agree to the processing of my personal data, in accordance with Italian Leg. Decree n. 196/2003, for the purposes of the present selection procedure.

having read the Call for applications **D.D. n. 94/2019** for the appointment of one research fellowship entitled: **“Magnetic fields, cosmic rays, and atomic gas in the Milky Way and in nearby galaxies”**

REQUEST

to apply for the above mentioned fellowship, and to this end, aware that false declarations are punishable by law and that this Administration will carry out random checks on the accuracy of the declarations made by candidates,

DECLARE

under my own responsibility,

1. that I hold the following **(fill one of the two choices)**

- Research Doctorate (PhD)

..... awarded by

..... on date

.....

Title of thesis

.....

.....

.....
 together with years of documented experience after the PhD
 on topics related to the ones of relevance for the present fellowship;

Or alternatively

- Master Degree, which would formally entitle for the admission to a doctorate, awarded by on date

.....
 Title of thesis

.....
 together with years of documented experience after the Master Degree in research activities on topics related to the ones of relevance for the present fellowship;

2. that I hold these preferential qualifications (specify if in possession)

3. that I am aware of the restrictions described in Article 5, of the Call for applications for this research fellowship;
4. that I am aware that, under art. 22 Italian Law 240/2010, the research fellowship:
 - cannot be held contemporarily with attendance at academic courses as those that formally give access to a doctorate, as well as with attendance at PhD courses with fellowship;
 - cannot be held simultaneously with other fellowships of whatever kind, except those awarded with the aim of integrating the training or research activity of the fellowship holder through a period spent abroad;
 - cannot permit aggregation of income from working activities, also part-time, carried out continuously.

5. that I hold the following fellowships under L. 240/2010

From Day/month/Year	To Day/month/Year	Institution

6. that I wish to receive any communication relating to the selection at the following address and that I will give due notice of any change of address:

Address (number/street/city/postal code/Country):

.....
 Email address:

List of the documents attached to this form:

- Attachment 2 “Curriculum vitae”, **signed and dated** by the applicant, providing evidence of possession of the skills required to carry out the research and including a list, if applicable of grants and fellowships hold in the past;
- copy of a valid identity document (ID card or passport);
- a description of previous main research achievements and of how the candidate plans to contribute to the PRIN-SKA project (maximum one A4 page).
- list of publications;
- any other qualification, working task, research activity for public and private institutions and publications that the applicant deems appropriate to submit;
- if obtained outside Italy, copy of the Master Degree with list of individual courses and exam grades or PhD certificate (translated into English);

Date

Signature

**ANNEX 2
CURRICULUM VITAE**

I, THE UNDERSIGNED,

aware that false declarations are punishable by law and that this Administration will carry out random checks on the accuracy of the declarations made by candidates

DECLARE UNDER MY OWN RESPONSIBILITY

THAT THE CONTENT OF THE ATTACHED "CURRICULUM VITAE" IS TRUE

That the following titles are true copies of the originals (specify)

Date

Signature
