



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

L.GO E. FERMI, 5, 50125 – FIRENZE
TEL. +39-055-27521; FAX: +39-055-220039
C.F: 97220210583 P.IVA: 06895721006
pec: inafoarcetri@pcert.postecert.it

Decree n. 15
2016

Selection procedure based on qualification and possible interview for the awarding of one research fellowship entitled: “SKA-CSP software prototypes development” - Category: A/Post-Doc (in accordance with Article 22, Law 240/2010, and in support of SKA industrial activity)

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 7 March 2011 and entered into force on 1 May 2011;

in accordance with having seen Italian Law n. 240 dated 30 December 2010, Article 22; 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;

considering it appropriate to issue an announcement of competition for the award of a research fellowship;

given the availability of finance from fund cap. 1.01.01.01.009 Ob.Fu.: 1.05.03.37.01 Astronomia Industriale (SKA e CTA) (ref. Giovanni Comoretto) CUP C12114000250001

DECREES

Art. 1 – Research project

A selection based on qualifications, possibly integrated by an interview, is open to award one research fellowship, funded under the project “**SKA-CSP software prototypes development**” A/Post-Doc - cap. 1.01.01.01.009 Ob.Fu. : 1.05.03.37.01 Astronomia Industriale (SKA e CTA) (ref. Giovanni Comoretto) CUP C12114000250001

The technologies employed in the SKA CSP software use Commercial of the Shelf (COTS) products packages that may be defined as software infrastructure or software environment, such as operating system, programming languages, communication protocols, etc. However the custom implementation of those tools and the custom part to be developed specifically for SKA cannot be defined as COTS., and so poses still significant technological risk. Several prototypes are under development to mitigate this risk. Each prototype addresses a specific area of the whole software structure.

The winner of this fellowship will participate, at different levels, to the development and testing of two different prototypes, namely a portion of the Pulsar Search Survey pipeline and of Local Monitor and Control structure.

The research will be in support of SKA industrial activity.



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Art. 2 – Requirements

In order to participate in the selection, applicants must possess, on penalty of exclusion, the following requirements:

1. PhD degree in Astronomy or Physics or Engineering awarded by an Italian university or by a foreign university

or, alternatively

Degree in Astronomy or Physics or Engineering which would formally entitle for the admission to a doctorate, awarded by an Italian university or by a foreign university, together with at least three years of documented experience in scientific or technological activities carried out after the degree.

2. Documented experience in C++ programming.

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

- Knowledge of the architecture of the commercial graphical processing units and of their programming languages (CUDA, OpenCL).
- Experience on Monitor and Control software in a scientific environment.
- Experience on Tango Control system.
- Knowledge of Python Language.

Art. 3 – Application procedure

Applications must be submitted in English, as closed envelope by “Raccomandata A/R”, authorized carrier (ex. DHL, FedEx, UPS, etc.) or, in person, at the Protocol Office to the address INAF – Osservatorio Astrofisico di Arcetri, Largo Enrico Fermi, 5 – 50125 Firenze (ITALY).

Alternatively the application can be submitted using applicant PEC account (*Posta Elettronica Certificata* - **NO ordinary e-mail**) to the following PEC address: inafoarcetri@pcert.postecert.it
Applications are to be submitted by and not after **midday (UT) on March 25th, 2016**.

Late submissions will not be considered.

Applications that are not consistent with the attached forms (Annexes 1,2) or without the applicant’s signatures will be excluded from the selection procedure.

The application must be delivered reporting on the envelope or the PEC subject: **Application for “SKA-CSP software prototypes development” – DD n. 15/2016”**.



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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 she/he satisfies all the requirements described in article 2 of this Call;
- that she/he is aware of and is not ineligible under any of the restrictions described in article 4 of this Call.

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

For selection purposes the applicant:

- shall state any academic qualifications in the application form (Annex 1);
in addition
- EU citizens and non-EU citizens residing outside Italy, if successful, must produce originals or suitably certified copies of academic qualifications obtained outside Italy.

The following documents have to be submitted:

- Annex 1 “Application form”;
- Annex 2 “Curriculum vitae”, **signed and dated** by the applicant, providing evidence of possession of the titles 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;
- copy of a valid identity document (ID card or passport);
- list of publications;
- any other qualification, working task, research activity for public and private institutions and publications that the applicant deems appropriate to submit.

Applicant should also arrange for two signed letters of reference by persons familiar with her/his work who shall send them directly and within the deadline by e-mail with acknowledgement of receipt to the following address: baffa@arcetri.inaf.it

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

- submission of the application after the deadline;
- failure to complete and sign the application form;
- failure to sign the curriculum vitae;
- 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; similar loss will be applied 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.



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Art. 4 – Ineligibility and incompatibility with other funding

Full professors, associate professors and “ricercatori” in Italian universities and employees of Italian research public institutions are all excluded from entering the competition.

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 contemporarily 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 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 and it must be authorized in advance by the Director of INAF-Osservatorio Astrofisico di Arcetri.

Retired persons are not eligible for Research fellowship.

Also excluded from participation are any person who has carried out Research fellowships under article 22 of Italian Law 240/2010 for a total period exceeding six years, including extensions, but excluding the periods in which the grant has been held in coincidence with doctoral studies up to the maximum legal time limit of the course and excluding periods of maternity leave or sick leave, in accordance with current legislation.

Art. 5 – Duration of the Research fellowship

The Research fellowship is expected to begin as soon as possible and with duration of one year renewable up to three years.

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.

Art. 6 – Host Institution

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

Art. 7 – Salary amount

The gross annual salary will be **28.000** (twenty-eight thousand) Euro.

This amount is net of burdens to be charged to INAF - Osservatorio Astrofisico di Arcetri, social charges and will be paid in deferred monthly instalments.

This amount, paid in different monthly instalments, includes the provisions for all compulsory deductions under national applicable legislation, social charges.

The fellow will be requested to have 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.



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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 is composed of 3 members, including the scientist in charge of the project, Dr Carlo Baffa.

The selection is based on qualifications possibly integrated by an interview. 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.

Applicants selected for the interview will be summoned with 15 days notice by e-mail with acknowledgement of receipt, 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. 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 to permanent INAF staff positions.

Art. 10 – Fellowship obligations

The holder of the fellowship:

- will start the research activity at the date due as per the contract at INAF-OAA, unless prevented by force majeure or exceptional circumstances, of which the Director of INAF-OAA must be timely informed;
- will carry out her/his research activities under the supervision of the scientist in charge of the EURO-CARES project, Dr/Prof Carlo Baffa, who will also monitor the fellow's progress;
- is required to issue an activity reports when requested by the director and in any case at the end of the first year. The activity reports will be subject to approval from the scientist in charge of the project and will be transmitted to the Director of INAF-OAA Approval failing, duly reasoned by the scientist in charge, will give INAF-OAA 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-OAA is entitled to retain or request the reimbursement



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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 fulfil requirements or, according to the evaluation of the local coordinator of the activities, Dr Carlo Baffa, 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, which lasts 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-OAA.

Art. 11 – Proceeding Responsible

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

Art. 12 – Applicable regulation

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

Firenze, February 18th 2016

Dr. Filippo Mannucci