THE ENGLISH LANGUAGE TRANSLATION DOES NOT HAVE LEGAL VALUE IN ITSELF, AND THUS DOES NOT SUPERSEDE THE ITALIAN VERSION OF THE CALL ANNOUNCEMENT (BANDO).

BANDO DI SELEZIONE N. 126.247.AR90

SELECTION PROCEDURE FOR N ° 1 (one) FELLOWSHIP (Assegno di Ricerca) FOR COLLABORATION TO RESEARCH ACTIVITIES IN THE EUROPEAN PROJECT: Marie-Curie Research and Training Network entitled "Photonic Integrated Compound Quantum Encoding" - (PICQUE 01/09/2013-31/08/2017) - Title of Bando "Development of superconducting single-photon detectors and their integration in photonic circuits for quantum optics applications" - Type D) "Graduate Fellowship (Assegno di Ricerca) Grant" - CNR-Istituto di Fotonica e Nanotecnologie, UOS di Roma, Via Cineto Romano 42, 00156 Roma, Italia.

THE DIRECTOR

CONSIDERING Legislative Decree 4 June 2003, n. 127 on "Reorganization of the National Research Council (CNR)";

CONSIDERING Legislative Decree 31 December 2009, n. 213 on "Reorganization of the research institutions to implement art. 1 of Law 27 September 2007, n.165";

CONSIDERING the Statute of the National Research Council, issued by order of President n. 000018 on March 10, 2011 published on the website of the Ministry of Education, University and Research on the Official Gazette of the Italian Republic n. 90 of 19 April 2011, entered into force on May 1, 2011;

considering the Rules of Organization and Functioning of the CNR DP CNR of May 4, 2005 published in the ordinary supplement n. 101 of the Official Gazette of the Italian Republic n. 124 of May 30, 2005, and in particular art. 47 as amended by Decree of the President of CNR n.000017, prot. n.21306 of 8 March 2011 published in the Gazette - General Series - n. 60 of 14 March 2011; CONSIDERING the DPR December 28, 2000, n. 445 on "Consolidated laws and regulations on administrative documentation" and successive amendments;

CONSIDERING the Legislative Decree 30 June 2003, n. 196, concerning "Code regarding the protection of personal data";

CONSIDERING art. 22 of Law 30 December 2010, n. 240 entered into force January 29, 2011;

CONSIDERING the guidelines for the assignment of grants for conducting research activities at CNR, approved by the Board of Directors with order n. 28 on February 9, 2011, subsequently amended by resolutions n. 62, March 23, 2011 and n. 186, September 22, 2011 and n. 189 November 27, 2013;

CONSIDERING the Ministerial Decree n. 102 of March 9, 2011, concerning the definition of the minimum amount of research grants;

CONSIDERING the Law 11 November 2011, n. 183, and in particular art. 15 (Stability Act 2012); **CONSIDERING** the directive of the Ministry of Public Administration and Simplification n. 14/2011 to implement the new provisions relating to certificates and affidavits of Article. 15 of Law November 12, 2011, n. 183;

CONSIDERING the Law 4 April 2012, n. 35 and in particular art. 8 paragraph 1;

CONSIDERING the D. LGS. 14 March 2013, n. 33 about "Riordino della disciplina riguardante gli obblighi di pubblicità, trasparenza e diffusione di informazioni da parte delle pubbliche amministrazioni";

VERIFIED that costs arising from the assignment of a research grant are covered by funds from EUROPEAN PROJECT: Marie-Curie Research and Training Network entitled "Photonic Integrated Compound Quantum Encoding", concerning the "Development of superconducting single-photon detectors and their integration in photonic circuits for quantum optics applications" under the responsibility of dr. Roberto Leoni; assessment decree n. 51811/2013.



ANNOUNCES

Art. 1 Research Project

There will be a public selection procedure, based on qualifications and an interview, for the assignment of n. **1** (one) D) Grant - "Graduate Fellowship (Assegno di Ricerca)" in order to conduct research related to the Scientific Area "Physical Sciences" at the Istituto di Fotonica e Nanotecnologie (IFN), Consiglio Nazionale delle Ricerche, (CNR), Rome, in the scope of the European Project: Marie-Curie Research and Training Network PICQUE, in the following topic: "Development of superconducting single-photon detectors and their integration in photonic circuits for quantum optics applications" under the scientific responsibility of dr. Roberto Leoni.

Research Project: Integrated photonic circuits have a strong potential to implement quantum information processing in optical systems. In PICQUE, all the basic components of a photonic quantum processor will be addressed: generation, manipulation and detection of photon states. Furthermore, to obtain detectors suitable for scalable circuits involving tens of qubits, the PICQUE consortium will target to breakthroughs in terms of detectors functionality, efficiency and yield, including also their integration with a range of components. In this context, the research program at IFN, Rome, will be finalized in the improvement of the efficiency and yield of superconducting nanowires single photon detectors (SNSPDs)* by using different approaches:

- 1. Integrating SNSPDs in waveguides;
- 2. Developing a standalone system of SNSPDs coupled with optical fibers with system detection efficiency at the state of the art.
- 3. Investigating new types of photosensitive films.
- 4. Developing arrays of SNSPDs.
- 5. Integrating SNSPDs and SNSPD arrays with quantum-optics circuits.

*for a short tutorial see http://www.phy.bris.ac.uk/groups/cqp/quantip/Tuto SSPD.html

Art. 2 Duration and amount of the Research Grant

The research grant will run for **36** months and, as a result of any renewals, may not, however, have a cumulative duration of more than four years, according to art. 22 paragraph 3 of Law 240/2010, excluding the period in which the grant was received in connection with a PhD, not exceeding the legal length of its course.

According to Art. 4, paragraph 2 of the specifications for the assignment of grants, the total duration of fixed-term relationships with the CNR must not be above 10 years, even if not continuous, including all employment relationships, collaborations, research grants and scholarships. These do not include relationships of association, other, not paid, forms of cooperation, and the Ph.D.; the time spent on maternity leave or for reasons of health will not be taken into consideration in the calculation, according to current legislation and the periods prior to 1 May 2011.

Any postponement of the starting date of the grant research activity, or any disruption thereof, will be allowed in case of maternity or illness exceeding thirty days. The interruption of the grant assigned activity that is justified under the foregoing provisions, shall entail the suspension of the payment of the grant amount for the period in which the interruption itself occurs, excluding the provision of art. 13 of the disciplinary or other specific rules. The end date of the grant for the research activities will be extended by a period equal to the duration of the interruption.

The amount of the research grant, paid in deferred monthly instalments, is set to €40.508,00 (forty-eight thousands five hundreds eight) per year plus mobility allowances (max € 12.792,00,

min € 8.954,40 depending on family conditions) net of expenses in charge of CNR. Salary is tax free as regards personal income taxes and is only subject to contributions to the Italian social security system.

Salary does not include any remuneration for travels in Italy or abroad as may be necessary to carry out the research activities related to the grant. The emoluments of the travels are determined in proportion to that of employees engaged at the CNR at III professional level.

The grant recipient is covered by an insurance cumulative policy underwritten by the CNR.

The selected candidate will carry out her/his research activities in an autonomous manner, within the limits of the program prepared by the head of the research unit, without predetermined working hours.

Art. 3 Requirements for admission to the selection

Applications may be submitted by individuals who are in possession of the following requirements at the date of expiry of the deadline for submission of applications:

- a) Degree (or equivalent) in Physics or Engineering or disciplines close to the project research areas. (This is in accordance with the regulations referred to in D.M. 509/99);
- b) Be, at the time of recruitment by the host organization, in the first 4 years (full-time equivalent) of their research careers and have not yet been awarded a doctoral degree. This is measured from the date when they obtained the degree, which would formally entitle them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate is envisaged.
- c) Researchers can be of any nationality. They are required to undertake trans-national mobility (i.e. move from one country to another) when taking up their appointment.
- d) At the time of recruitment by the host organization, must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the reference date. Short stays such as holidays and/or compulsory national service are not taken into account.
- e) At the starting time of the positions, the candidates must have completed the courses that would have allowed them to enroll in a doctorate program either in the country where they are studying or in the country offering the position.
- f) All qualifications obtained abroad (bachelor's degree, doctorate, and any other qualification) shall be previously recognized in Italy in accordance with current legislation (information on the website of the Ministry of University and Scientific Research: www.miur.it.) The equivalence of those diplomas obtained abroad who have not already been recognized in Italy with the expected formal procedure above, will be evaluated, with the only purpose of the present selection, by the Examining Committee constituted according to art. 6, paragraph 1 of the Regulations;
- g) A good command of English language.

Person Specification:

- h) A preferential title will be a documented experience in applied optics;
- i) A keen interest in pursuing research in photonic device physics, nanotechnologies and in particular the science and technology of superconducting nanowire single-photon detectors;
- j) Ability to work independently, and as a member of a research team;
- k) Excellent interpersonal and communication skills.

Istituto di Fotonica e Nanotecnologie

The research grant cannot cumulate with scholarships provided by the CNR or other organizations and research institutions, except those granted by the CNR or national or foreign institutions which serve to supplement the research activities of grant holders with visiting periods abroad.

Employees of the CNR with permanent or fixed term contract and permanent staff employed by other parties as indicated in art. 22, paragraph 1, of Law n. 240/2010 cannot apply, and application involves the placement on leave without pay to the contractor/employee employed by government.

Art. 4 Applications and deadlines

A) APPLICATIONS

Applications, written using the attached form (attachment A), are to be sent only by e-mail to roberta.bertoli@ifn.cnr.it. Please indicate "Notice of selection n. 126.247.AR90" on the envelope or in the email subject.

Candidates will receive an e-mail as acknowledgment of receipt.

Applications must be submitted within the fixed deadline of **April 1st 2014**; applications submitted after the deadline and incomplete applications will not be taken into account.

Applicants must produce:

- a curriculum vitae in PDF format;
- form B properly filled (in accordance with Art. 46 and 47 of Presidential Decree 445/2000 and subsequent amendments, this testifies the truthfulness of the contents of the Curriculum Vitae);
- a photocopy of a valid identity document (art. 76 DPR445/2000). The same identity document, with readable signature, should be presented at the oral selection or at the remote interview. No other documents will be accepted.
- at least one reference letter from former university lecturers, professors, tutors.

In the curriculum the applicant will indicate personal facts and qualities, such as studies, qualifications, publications in print and/or patents, services provided, functions performed, the positions held and any other scientific, professional and educational activity, bringing the exact references for each indicated qualification.

The aforementioned declarations have to be analytically detailed and contain all elements needed for the selection, so that the examining commission could evaluated the titles to which they refer. All information furnished in a form different from what stated above will not be evaluated.

Auto-certification foreseen for Italian citizens apply to EU citizens (Article 3, paragraph 1 of Presidential Decree 28 December 2000, n. 445). Non-EU citizens resident in Italy can use the affidavits only in cases where facts and qualifications are certifiable or ascertainable by public or private Italian subjects.

The administration will perform suitable checks on the truthfulness of the declarations furnished under art. 71 of DPR 445/2000.

Applicants with disabilities, in relation to their disability, in the application to the selection must explicitly request the required support.

The applicant's products (e.g., technical reports, monographs, book chapters, and patents) that cannot be found on the internet or those that can be found on the internet but are not access free, should be sent by the applicant by e-mail.

The applicant must not produce any further documentation in accordance with art. 15 L. 183/2011.

All the communication regarding this call announcement will be sent to the email address of the candidates.



Art. 5 Exclusion from the Selection

Applicants are conditionally admitted to the selection.

The exclusion from the selection process for lack of requirements can be arranged at any time with a motivated order by the Director of the Institute. The exclusion will be communicated to the applicant.

Art. 6 Examining Committee

The Examining Committee shall be appointed by order of the Director of the Institute and is composed of three components, who may be internal or external to CNR, with profiles of researchers and experts in the field and two alternate members, internal or external to the Institute; one of them will be the project supervisor. The Director, if deemed necessary to activate the procedure of equivalence of qualifications obtained abroad, as in the last sentence of paragraph 1 art. 3 of the Regulations, may appoint, among the components of the Committee, a university professor. The functions of secretary may also be provided by a member of the Committee.

In the first meeting, the Committee will appoint its own President, and, if necessary, the component who will perform the functions of secretary.

The Committee may carry out the procedure also with the aid of videoconference tools.

The Committee shall conclude its work within sixty days after the deadline for submitting applications, except cases of motivated impossibility.

Art. 7 Selection procedure and Ranking

The Committee will make its selection in two steps, by evaluating first Curriculum Vitae and qualifications, and then an interview. The Committee has a total of 100 points, namely 60 points for the first phase and 40 points for the interview.

The Commission will declare preliminary criteria and parameters adopted in the selection, with specific reference to the characteristics of the research project. These criteria and parameters include the requirements for the type of grant of the selection such as assessment of the degree of the research activities in public or private institutions, under contracts, grants or assignments of collaboration, both in Italy and abroad, in the manner stated in Article. 4.

Candidates that score less than 50 points in the CV evaluation will not be admitted at the interview and then will not take part in the final ranking. All candidates will receive a communication informing them whether they passed or not. Those passed are admitted to the second step consisting of an interview.

Interviews are public and will be carried out on the premises of Istituto di Fotonica e Nanotecnologie, CNR, via Cineto Romano 42, 00156 Roma (Italy), starting on **May 15th, 2014**, at 10 a.m. (Rome local time) and continuing in the following days, if necessary; in the latter case the exact day and time will be communicated to those concerned.

Interviews for candidates living abroad will be carried out remotely, by telematic means; detailed instructions will be provided by e-mail.

After the interview, the Committee will compile a list of the examined applicants, giving the score each candidate obtained in the interview; the list, signed by the President and the Secretary of the Committee, is posted on the site of the examination the same day of the interview.

To be interviewed, applicants must present a valid identity document.

Applicants who are not present at the interview (either on site or remotely) will be declared uneligible.

At the end of its work, the Committee shall prepare a report in which motivated judgments on each applicant are expressed, even in a synthetic form.

The committee sums up, for each candidate admitted to the final phase, the scores achieved in the evaluation of qualifications and in the interview, forming the merit ranking in descending order, and indicates the winner/s. In case of equal ratings, the younger candidate is preferred.

The merit ranking will be approved by the Director of the Institute, and will be published by the Director herself, to the notice board of the examination site, and on the CNR website: www.urp.cnr.it and with all other forms of advertising provided for this notice of selection.

Final results of the selection procedure may be verified by all participants on the following CNR website: www.urp.cnr.it.

Should the winner renounce the grant, the Director of the Institute, after consulting the head of the research project, can replace her/him with the following person in the merit ranking.

The National Research Council will not reimburse any expenses incurred by candidates for participation in the interview.

Art. 8 Formalization of the relationship and termination of the contract

Within 15 days after publication of the list, the Director of the Institute should submit to the winner of the selection, in two copies, the order of assignment of the research grant, in which, among other things, the starting date of the research will be mentioned. By the deadline of 15 days from the date of receipt of said notice, the winner of the selection must mandatorily return a copy of the said notice, countersigned for acceptance and a declaration that she/he is not under any of the impediments of Art. 3, paragraphs 3,4,5 and art. 4 of the Specifications. Any delay in the beginning of the research can be justified only in cases provided for by art. 2 of this notice of selection or for reasons of force majeure duly substantiated.

The contractor shall submit to the Director, within thirty days from the date of acceptance of the grant, the following documents prepared in accordance with the provisions of Presidential Decree 445/2000:

- a) self-certification, indicating date and place of birth, citizenship, political rights, education;
- a declaration in lieu of affidavit, on ordinary paper, of not having been dismissed or retired from the Public Administration for persistent poor performance, and not having been revoked by another state employment for having achieved it through the production of false or invalid documents and that she/he was not disqualified from holding public office on the basis of res judicata;
- c) Photocopy of italian fiscal code card ("codice fiscale");
- d) In case the winner is an employee of Public Administration, before beginning the research activity she/he must submit a copy of the order of placement on leave without pay.

Documents issued by the competent authorities of the State of which the foreign candidate is a citizen must comply with the provisions in force in that State.

The fellow who, after starting the planned activity, will interrupt it without justification, or will not carry it on regularly and continuously for the entire term, or is responsible for serious or repeated misconduct or, finally, proves not to have sufficient attitude, may be revoked, with motivated decision of the Director of the Institute, from the further reception of the payment of the grant.

The measure referred to in the preceding paragraph will be taken on the proposal of the Research Project Supervisor. If the grant recipient, on the grounds of personal reasons, cannot carry through the planned activities and decides to give up the grant in advance, she/he shall promptly inform the Director of the Institute and the Research Project Supervisor. It is understood, in this case, that the grant holder must return any amounts received and not due.



Art. 9 Evaluation of the research activity

The research project supervisor and the grant recipient shall forward to the Director of the Institute before the expiry of the contract, a complete report showing the progress of research.

The Director will consider the report with reasoned judgment and at her own discretion. In case of positive evaluation, and at the request of the Research Project Supervisor, the Director will decide on the renewal of the grant.

Art. 10 Privacy policy

Under Article. 13 of Legislative Decree 30 June 2003, n. 196, the personal information provided by applicants will be collected at the Institute for the purposes of organizing the selection and will be processed in an automated database for the management of the relation consequent to such selection. The documents must be retained for a period of at least five years.

Providing such data to CNR is compulsory for the evaluation of the participation requirements and those who will not provide such data will be excluded from selection.

The same data may be disclosed only to Public Administrations directly involved in the selection process or to the legal position of the candidate.

The applicant has the rights described in Art. 7 of the said decree, which include the right of access to data concerning her/him and some additional rights including the right to correct, update or delete incorrect, incomplete or not collected in accordance with law data, and the right to oppose their processing for legitimate reasons. These rights may be asserted against the Director of the Institute who is also Head of the procedure and the holder of their treatment.

The right of access to the records of the competition, under the Law of 7 August 1990 n.241 and subsequent additions and modifications shall occur in the manner described in art. 10 of the legal measure n. 22 of 18 May 2007, as supplemented and amended by order n. 62, 8 November 2007 (available on the web page of the CNR www.cnr.it under "utilities") and with the limitations of Art. 12 of the same order.

Article 11 Advertising

The notice of selection shall be made public by the Director of the Institute, by posting at the Institute itself by publication on the website of the CNR <u>www.urp.cnr.it</u>, and MIUR and later on the website of the European Union, in addition to particular forms of advertising specifically required by the funders of programs.

Article 12 Final Provisions

Where not explicitly indicated in this notice, for the compatible parts, the provisions of Regulations currently in force, relative to research grants, and, mutatis mutandis, to competitions, apply.

IFN - CNR - IFN

Tit: VI.2 CI: CONCORSI F:

N. 0000498 14/02/2014

Robertakarepour

DIRETTORE Istituto di Fotonica e Nanotecnologie Prof.ssa Roberta Ramponi

(to be sent on plain paper) Annex A
To the Director of Istituto di Fotonica e Nanotecnologie
Subject: Selection Call nº 126.247.AR90
The undersigned born in date and resident in Street n z.i.p
asks, according to art. 22 of L. 240, 30/12/2010 to be admitted to the public selection no 126.247.AR90, with evaluation of qualifications and interviews, for nr. 1 research grant (assegno) for conducting research activities in the framework of the european project: Marie–Curie Research and Training Network entitled "Photonic Integrated Compound Quantum Encoding" - (PICQUE 01/09/2013-31/08/2017) - Title of Bando "Development of superconducting single-photon detectors and their integration in photonic circuits for quantum optics applications" - Type D) "Graduate Fellowship (Assegno di Ricerca) Grant" - Istituto di Fotonica e Nanotecnologie CNR UOS di Roma - Via Cineto Romano, 42, 00156 Roma, Italia - under the scientific responsibility of Dr. Roberto Leoni.
To this aim, the undersigned declares under her/his responsibility: 1) to be
// at the University with score (if any);
 to have no prior criminal convictions and have no criminal proceedings pending at her/his own expense (otherwise, please specify);
The undersigned attaches to the present application:
 Annex B duly filled (i.e. self-certification compliant to art. 46 and 47 of the DPR 445/2000 stating the truth of any part of the included curriculum vitae); curriculum vitae reference letter(s) from former university lecturers, professors, tutors. a photocopy of a valid identity document
Place and date SIGNATURE

^{*} If the qualification has been obtained abroad, documentation showing the equivalence with a qualification obtained in Italy must be presented, according to what established by art. 3, point d) of the present notice.

FAC-SIMILE

Annex B

DICHIARAZIONE SOSTITUTIVA DI CERTIFICAZIONE DICHIARAZIONE SOSTITUTIVA DELL'ATTO DI NOTORIETÀ (SELF-CERTIFICATION) (art. 46 e 47 del DPR 445/2000 s.m.i.)

DICHIARAZIONE SOSTITUTIVA DELL'ATTO DI NOTORIETÀ (SELF-CERTIFICATION) (art. 47 del DPR 445/2000 s.m.i.)

The undersig	ned	(name)	(surname)		
born	in (Place)		the		(date)
resident in _	(Place)				
Address		(address)		n°	

CONSIDERING the DPR December 28, 2000, n. 445 on "Consolidated laws and regulations on administrative documentation" and successive amendments;

CONSIDERING the Law 12 November 2011, n. 183, and in particular art. 15 (Stability Act 2012) (*);

Being aware that, according to art. 76 of the DPR 445/2000, false declarations, falsity in public acts and use of false acts are punished according to the Penal Code and to special laws on the subject, the undersigned declares under his/her own responsibility:

That what declared in the attached curriculum vitae et studiorum including information on the scientific production corresponds to the truth

Curriculum vitae et studiorum

Studies, qualifications, publications and/or technical reports and/or patents, services executed, functions accomplished, tasks and every scientific, professional and teaching activity (chronologically ordered starting from the most recent qualification)

date	protocol		
delivered by			
period of activity from		to	
			CYCNATURE
			SIGNATURE

(*) According to art. 15, paragraph 1 of the Law 12 November 2011, n. 183, self-certifications released from the Public Administration relative to states, personal qualities and facts are valid and usable only in the private sector; in relations with the Public Administration and providers of public services, certificates are always substituted by self-certifications as in art. 46 and 47 of the DPR 445/2000

N.B.

- 1) Date and sign all the pages that make up the statement.
- 2) According to Article 38 of Presidential Decree 445/2000 the subscriber must attach to the declaration a photocopy of a valid identification document.
- 3) All provided information with self-certification must be correctly identified with single reference elements (example: date, protocol, title of the publication, etc.).
- 4) The CNR has the right to control pursuant to art. 71 and for the purposes of articles. 75 and 76 of Presidential Decree 445 of 28/12/2000, the veracity of the affidavits produced and signed by the parties concerned.
- 5) The rules on affidavits applies to Italian nationals and European Union.
- 6) Citizens of countries outside the EU, legally residing in Italy, can use the affidavits of Articles. 46 and 47 of Presidential Decree 445 of 28.12.2000 limited to, the personal qualities and facts certifiable or ascertainable by Italian public entities, subject to any special provisions contained in laws and regulations governing immigration and the condition of stranger.

Outside of the cases aforesaid, the citizens of non-EU authorized who reside in the State may use affidavits in cases where production of the same stems from the application of international conventions between Italy and the country origin of the registrant.