CALL FOR APPLICATIONS FOR THE AWARD OF TEMPORARY RESEARCH FELLOWSHIPS FOR RESEARCH ACTIVITY UOR DMAT

Article 1
Subject:

A public call for applications is issued for the award of **1 *(one)* temporary research fellowships** for research activities pursuant to the "*Regulations for the award of temporary research fellowships for research activities in independently funded research programmes*", issued with Rectoral Decree no. 667/AG (28 February 2011), as modified with R.D. no. 3398/AG - 29 July 2016, for **36** *(thirty six)* months in the Department of Mathematics as part of the research programme called:

"Numerical simulations and reduced models of the fluid-structure interaction arising in blood pumps based on wave membranes"
(This project has received funding from the European Union's Horizon 2020 Research and Innovation Program under the Maria Sklodowska-Curie Grant Agreement No 765374
European Innovative Training Network - Reduced Order Modelling, Simulation and Optimization of Coupled systems - ROMSOC)

The above mentioned research programme will be carried out as described in the annexes to this call for applications.

Article 2
Scientific Supervisor

The proposing professor, Scientific Supervisor of the research program, is Prof. Christian Vergara.

Article 3
Participation requirements

A) To be included in the selection process, applicants are required to have **a "Laurea Magistrale" (corresponding to a Master of Science) in LM-44 – Mathematical modelling for engineering; or LM-20 – Aerospace and astronautic engineering; or LM-21 – Biomedical engineering; or LM-40 Mathematics or equivalent degrees** *ex lege* **or other**

possible academic qualifications that have been considered equipollent *ex lege* to the corresponding degrees of the old Italian university system.

Interministerial Decree 9.7.2009 regarding the **equivalence** of degrees awarded in the old Italian university system, "lauree specialistiche" and "lauree magistrali" (corresponding to a Master of Science) is available at the link below: http://attiministeriali.miur.it/UserFiles/3160.pdf
The Interministerial Decree that establish the **equipollence** of Italian academic titles applied to participation in public calls for applications are available at the link below: http://hubmiur.pubblica.istruzione.it/web/universita/equipollenze-titoli

If the **academic qualification(s)** listed above have been **awarded abroad (in countries other than Italy),** said qualification(s) must be included in that country's university system and must have been awarded by an institute that is officially included in the country's university system. For purposes solely related to the selection, said qualification(s) **must be equivalent by nature, level and correspondence of study subjects** to the Italian academic qualification(s) listed above. With reference to the "Laurea Magistrale" indicated in the previous paragraph (corresponding to a Master of Science), when it has been obtained abroad, it shall allow the enrolment in a PhD course in Italy.
The Head of the Department, where the research will be carried out, will establish the correspondence of study subjects.

Applicants must have obtained the required academic qualifications no later than the deadline for applications listed in article 5 or they will be excluded.

B) *According to the Guide for Applicants - Marie Sklodowska-Curie Actions - Innovative Training Networks (ITN) Call Identifier: H2020-MSCA-ITN-2016:*

- Shall, at the time of recruitment/starting date of the activities by the host organisation, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full¬ Time Equivalent Research Experience is measured from the date when a researcher obtained the MSc (or equivalent qualification) which would formally entitle him/her to embark on a doctorate in ltaly.
- At the time of recruitment by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc.) in ltaly for more than 12 months in the 3 years immediately prior to the recruitment date/starting date of the activities. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.
- Applicants must work exclusively for the project during the employment contract.
- Applicants must fulfil the conditions to be admitted in the PhD programmeindicated in the job vacancy. These conditions must be fulfilled at the

starting date of the contract. The starting date for each position is tentative.

- Any nationality and gender is allowed to participate in the selection and transnational mobility availability is required for up to 50% of the duration of the contract even with non-academic partners.

Article 4
Application for participation

For selection purposes, applicants must:
1) **complete every field in the application form,** according to the example available on the Politecnico di Milano's web site together with the call: http://www.polimi.it/en/work-with-us/research-collaborations/research-grants/?aa=2012
   date and sign the application.
   The Italian academic qualifications required for admission to this selection (as listed in art. 3 above) are declared directly in the application form, which is also a self-certification (declaration in lieu of certification and notarial deed pursuant to articles 46 and 47 of the D.P.R. no. 445/2000);

2) attach to the application:

   a) a professional, scientific CV, dated and signed, where applicants highlight
   - *Experience in numerical solution of differential equations and, possibly, in fluid-structure interaction, model order reduction.*
   - *Experience in modeling biological systems.*
   - *Programming skills in object oriented languages as well as Python/Matlab;*

   b) the photocopy of a valid identification document;

   c) the substitutive notary deed declaration stating that the applicant, at the time of the expected start of the activity indicated in the attachment to this call, is in the first four years of his research career, he/she has not been awarded a PhD and that he/she has not resided or carried out his/her main work or study activities in Italy for more than 12 months in the 3 years prior to the time of the expected start of the activity as indicated in the attachment to this call (Annex A);

   d) a copy of the participation fee payment receipt (see below, article 6);

e) the self-certification concerning the additional qualifications that applicant deems useful for demonstrating his/her suitability for performing the research activities (Annex B - forms);

f) the original[1] or a copy authenticated by an Italian authority, of the **academic qualification(s) obtained abroad** (required at art. 3 above):

- legalized[2] and accompanied by a certified (or sworn) translation into Italian or English;
- with attached the diploma supplement, or the declaration of value ("dichiarazione di valore"), or the academic transcripts of the Master of Science required to participate in the selection[3].

In order to guarantee the largest participation in the procedure, candidates who, on submitting their application, **cannot provide the academic qualification(s) obtained abroad as specified above, have to attach to their application a photocopy of the academic qualification(s) together with a translation in Italian or English**; then, in case they will result winners of the selection procedure, they must deliver the academic qualification(s) as described above and as indicated at art. 12 below.

g) the originals or the photocopies of **the other qualifications obtained abroad** that the applicants consider useful for selection process;

h) the Master degree (originals, or true copies certified via declaration in lieu of notarial deed - Annex C – forms);

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[1] **Please note that, according to art. 16 of this call, the documentation submitted by the candidates, will remain in the records of the Administration and will not be returned.**

[2] **Please, note that in the countries that signed The Hague Convention on 5th October 1961 regarding the abolition of the legalization of public documents obtained abroad, the need to legalize documents issued by foreign institutes is replaced by another formality: the application of the "apostille" by a Competent Authority generally designated by the State on whose territory the public document has been executed.**

On the other hand, it is not mandatory to legalize qualifications or put the Hague Apostille if the qualification has been issued by one of the countries that ratified the Brussels Convention on 25th May 1987, or if the qualification has been issued by a German institution (Italian-German convention on the exemption of public documents from legalization).

For information regarding how to get the requested documents, it's recommended to contact Italian embassies/consulates in the country of the university which issued the qualification.

Useful links: Ministero degli Affari Esteri e della Cooperazione Internazionale's website http://www.esteri.it/MAE/IT/Italiani_nel_Mondo/ServiziConsolari/TraduzioneLegalizzazioneDocumenti.htm?LANG=IT;CIMEA's website http://www.cimea.it/;

Hague conference Apostille section, https://www.hcch.net/en/instruments/conventions/specialised-sections/apostille

[3] The diploma supplement, the declaration of value ("dichiarazione di valore") and the academic transcripts are not required for the PhD.

i) no more than 5 scientific publications[4] and/or certified scientific products (originals[5], or true copies certified via declaration in lieu of notarial deed - Annex C – forms);

l) a detailed list of all the documents annexed to the application (2 copies);

m) only for **non-EU applicants** who already have it: a copy of the <u>permit to stay in Italy</u> (or a copy of the request for such permit);

With regard to paragraphs 1) and 2) sections c), g) and h) above:
- **non-EU applicants who at the time of request submission <u>have a permit to stay in Italy (or have a receipt for the request for the permit),</u>** <u>can use the above mentioned declarations in lieu of certification and/or notarial deed</u> only for the statuses, personal qualities and facts that can be certified or stated by Italian state bodies, with the exception of special provisions contained in the laws and regulations governing immigration and the status of foreigner.

- **non-EU applicants who at the time of request submission <u>do not have a permit to stay in Italy,</u>** <u>cannot use the above mentioned declarations in lieu of certification and/or notarial deed</u>. They must supply:
  - the originals [6] or copies authenticated by an Italian authority of the academic qualification(s) obtained in Italy and required for participating in the selection (article 3 above);
    In order to guarantee the largest participation in the procedure, candidates who, on submitting their application, **cannot provide the academic qualification(s) obtained in Italy as specified above, have to attach to their application <u>a photocopy of the academic qualification(s)</u>**; then, in case they will result winners of the selection procedure, they must deliver the academic qualification(s) as described above.
    The delivery of <u>the academic qualification(s) in original or copy authenticated by Italian authority</u> is a necessary requirement for the start of the activity.
  - the originals or the photocopies of all the other qualifications obtained in Italy.
  - instead of referring to Annex A as in paragraph g) above, such candidates must declare that, at the time they applied, they are in the first four years (full-time equivalent research experience) of their research career, that

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[4] Publications or texts accepted for publication can be considered for the assessment. The abstracts of scientific publications can be considered as well.

[5] **Online scientific publications are considered <u>originals</u> if the applicant provides the <u>relevant web site address.</u>** In any case publications must be attached for assessment purposes

[6] **Please note that, according to art. 16 of this call, the documentation submitted by the candidates, will remain in the records of the Administration and will not be returned.**

they have not yet been awarded a doctoral degree and that they have net resided or carried out their main activity (work, studies, etc.) in ltaly for more than 12 months in the 3 years immediately prior to the date of their application using Annex D to the application farm and must therefore attach appropriate documentation (rental agreements, enrolment in study courses, etc..) to support the declarations.

The Administration reserves the right to perform random controls on the statements related to the qualifications (obtained in Italy or abroad) and on the submitted publications/scientific products.

Article 5
Application submission terms and deadlines

The application to the selection must be signed, dated and completed as shown in the sample form available on the web site of the Politecnico di Milano. It must be addressed to the Director General of Politecnico di Milano, P.zza L. da Vinci, 32 – 20133 Milano, and submitted **no later than December, 5th 2017**, under penalty of exclusion. Should that date be an Italian public holiday, the deadline will be the first working day after it.

Applications will be considered submitted on time if they are submitted in one of the ways described below:

- **by hand,** no later than the deadline listed above, to the "SPPA- Servizio Posta, Protocollo e Archivio" (Post Office, Electronic Recording and Archive Service) of Politecnico di Milano - Piazza Leonardo da Vinci, 32 - Milano - Mondays to Fridays, from 9.30 to 12.30 and from 13.30 to 16.00.
  The application shall be delivered in a close envelope/package. On the envelope/package applicants must include the details of the call as listed below: "Admission Application – Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DMAT05-deadline 05/12/2017"

- **via registered letter with advice of receipt/courier**, no later than the deadline. The envelope must be addressed to Director General of Politecnico di Milano, P.zza L. da Vinci, 32 – 20133 Milano (for this purpose, the date of the postmark will be considered as proof).
  On the envelope applicants must write the details of the call as listed below: "Admission Application – Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DMAT05-deadline 05/12/2017"

- via **Certified E-mail Address (PEC)** [7] no later than the deadline, sent to the pecateneo@cert.polimi.it PEC address. Applicants must use their own certified e-mail address (PEC).

  Submission is only permitted by other certified e-mail addresses (PEC); submissions made from an uncertified e-mail address will be disregarded.

  The subject line of the certified e-mail must contain information on the call for applications as listed below: ""Admission Application – Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DMAT05-deadline 05/12/2017"

  The application and accompanying documentation must be submitted in a non-editable, portable, static format (preferably .pdf). They should not contain macros or executable code, and should not exceed 35 MB in size.

Applicants whose applications are submitted after the deadline will be automatically excluded from the selection process.

Article 6
Participation fee

Applicants must pay, within the deadline of the call, the participation fee of € 25,82 or they will be excluded from the selection process. The fee is non-refundable, regardless of the reason applicants are unable to participate. Payment must be remitted to "Agenzia 21" of Banca Popolare di Sondrio, Via Bonardi 4 - 20133 Milano, bank details:

IBAN   IT34T0569601620000001600X69
SWIFT POSOIT22

Politecnico di Milano - Piazza Leonardo da Vinci 32 - 20133 Milano, reference: " Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DMAT05-deadline 05/12/2017"

Article 7
Exclusion and loss of rights

Applicants are admitted to the selection process on condition. The Head of the Procedure can, at any time, **exclude applicants from the selection** and inform them of the fact via fax, registered letter with advice of receipt, telegram or P.E.C., for the reasons listed below:

  – submission of the **application after the deadline** indicated in **article 5** above;
  – the **application form** was **not submitted and signed**[8];
  – **no** scientific and professional **curriculum vitae was supplied**;
  – **no** copy of a valid **identification document was supplied**;

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[7] The certified e-mail address system (PEC from the Italian acronym of Posta Elettronica Certificata) is an **Italian e-mail system** that ensures the sender of the actual delivery and receipt. Politecnico di Milano has a certified e-mail address (PEC) which can be contacted only by users in possession of a an **Italian certified mail box (PEC).**
[8]An application submitted via the applicant's **personal** Certified E-mail Address, is considered undersigned by the applicant at the time of submission.

- the **participation fee** was **not paid;**
- **lack of the requirements** set forth in **Article 3** above;
- **failure to submit at least a photocopy, together with a translation in Italian or English, of the academic qualification(s) obtained abroad** and required at **Article 3** above;
- **for non-EU applicants who at the time of request submission do not have a permit to stay in Italy, failure to submit at least a photocopy of the academic qualification(s) obtained in Italy** and required at **Article 3** above;
- in the case the applicant **cannot carry out research activity for the entire period** stated in article 1 above, because the **temporal limits** set forth in art. 22, third paragraph or ninth paragraph of Italian law 240/2010[9], as completed by art. 6, paragraph 2*bis* of Italian Legislative Decree 192/2014, **are exceeded;**

- in the case of **marriage, kinship or affinity, up to the fourth degree, or same-sex registered partnership (as per art. 1 of Law No. 76 of 20.05.2016), or cohabiting couple (as per art. 1, paragraphs 37 et seq. of Law No. 76 of 20.05.2016) with a Full professor and Associate professor belonging to the Department/Campus that issued this call for applications or with the Rector, or with the Director General or with a member of the Politecnico's Board of Governors;**

- any other violation of the provisions included in this call for applications.

Should the reasons for exclusion be determined after the selection process, the Head of the Procedure **prescribes the loss of all rights resulting from participation in the selection**. Similar loss of rights will be applied to applicants whose declarations, in the application form or in the declarations provided pursuant to Presidential Decree 445/2000, are false.

Article 8
Selection Committee
Applicants are selected by a Selection Committee. The Committee members, designated by the Head of the Department offering the position, are appointed by a Director General's Decree, pursuant to article 4, paragraph 6 of the Regulations issued with R.D. no. 667/AG on 28 February 2011 as modified by R.D. no. 3398/AG issued on 29 July 2016.

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[9] Art. 22, third paragraph, of law 240/2010 establishes that "*the total duration of the relationship established pursuant to this article, including renewals, cannot […] be more than **four years**, with the exclusion of the period in which the fellowship overlapped with a PhD course, with the legal duration of that course as the upper limit*".
Art. 6, paragraph 2*bis* of D.L. 192/2014 establishes that "*the total duration of the relationship established pursuant to art. 22 third paragraph, of law 240/2010 **is extended for two years***";
Art. 22, ninth paragraph, of law 240/2010 establishes that "*the total duration of the relationship established pursuant to this article and the contracts listed in art. 24, which applies also to those established with other universities (state, private or long-distance universities) and the bodies listed in paragraph 1 of this article, with the same subject, cannot, in any case, last more than 12 years in all, regardless of whether they were continuous or not. For purposes related to the duration of the above mentioned relationship, periods of maternity and sick leave pursuant to the laws in force do not count.*"

The Selection Committee normally includes the Scientific Supervisor and two other members who are either professors or researchers with experience in the research fields of this call. The Committee may also include Italian and foreign experts.

Article 9
Selection procedure

The Selection Committee selects the applicants by assigning up to **100 points**, through the assessment of the applicants' academic qualifications and curriculum vitae and through an interview, held with the procedure established by the Committee, aimed at assessing the applicant's aptitude for research, according to the criteria listed below:

- **possession of additional qualifications (other than the ones required for the participation in the selection) regarding topics relevant to the research programme, 10 points;**

- **tight relevance of the Master degree with the research programme of the fellowship, 30 points;**

- **no more than 5 publications/scientific products regarding topics relevant to the research programme, 5 points;**

- **participation in research activities that are relevant to the research programme, 5 points;**

- interview aimed at assessing the applicant's aptitude for research, 50 points

   During the interview the Committee will also value

   - Strong interest in interdisciplinary scientific work.
   - Ability to work independently and as part of a team.
   - Strong motivation to pursue a PhD degree.
   - Excellent command of English, together with good academic writing and presentation skills.
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   The interview is passed with a minimum score of 35 points (corresponding to 7/10 of the interview score).

In the case of equal scores, the younger applicant will prevail.

Article 10
Selection interview

The **interview,** aiming at assessing the applicant's aptitude for research, will be held **on 20/12/2017 at 10.00 a.m. in the Department of Mathematics of the Politecnico di Milano, Via E. Bonardi, 9 – Ed. 14 – 20133 Milano**

To be admitted to the interview, applicants must have a valid identification document, i.e. an identity card, passport or driving licence.

Failure to attend the interview at the established time and venue or arrive late (regardless of the cause and even in case of force majeure) will be considered as a withdrawal from the participation in the selection.

This call for applications is notice of convocation for applicants.

Applicants who live or are resident outside Italy or who live or are resident more than 600 km from the selection venue, **will be interviewed on 20/12/2017 at 10.00 using long-distance audio and video systems**, *on condition that their identity can be checked, and afterwards confirmed at the time the contract is entered. Applicants who wish to be interviewed that way must state so when submitting their application.*

Failure to connect for the long-distance interview at the established time or in case of late connection (regardless of the reason and even in case of force majeure) will be considered as a withdrawal from the participation in the selection.

This call for applications is notice of convocation for applicants.

Article 11
Approval of the procedure and ranking list of winners and eligible candidates

The decree of procedure approval and the ranking list of winners and eligible candidates, will be published on the Official Noticeboard of Politecnico di Milano and on the Politecnico's internet web site.

Article 12
Conditions for entering the contract and beginning activities

Applicants who successfully complete the selection and who obtained abroad the academic qualification(s) listed in article 3, should those qualification(s) have not been already declared equivalent pursuant to the laws in force, must provide the Competitions Management Service with the documents listed below, before entering the contract or they will lose the right to it (non-EU applicants who do not yet have a permit of stay in Italy, before starting of the activities):

- the original or authenticated copy of the academic qualification, legalised and accompanied by a certified or sworn translation into Italian or English [10];

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[10] **Please, note that in the countries that signed The Hague Convention on 5th October 1961 regarding the abolition of the legalization of public documents obtained abroad, the need to legalize documents issued by foreign institutes is replaced by another formality: the application of the "apostille" by a Competent Authority generally designated by the State on whose territory the public document has been executed.**

- the <u>diploma supplement</u>, or the <u>declaration of value</u> ("dichiarazione di valore"), or the <u>academic transcripts</u> of the Master of Science.

Before the stipulation of the contract or before the starting date of the activities, the Administration will verify that the winners of the selection:

- have not been awarded a doctoral degree and that they are in the first four years (full-time equivalent research experience) of their research career. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the MSc (or equivalent qualification) which would formally entitle him/her to embark on a doctorate in Italy;
- have not 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 time of the recruitment.

Non-EU applicants, who at the time they submit the application do not yet have a permit to stay in Italy, and who obtained in Italy the qualification(s) listed in article 3, if they are declared winners of the selection, must provide the Competitions Management Service with such qualification(s) in original or authenticated by an Italian authority, before the activity can begin.

Non-EU applicants who, at the time they submit the application have a permit of stay in Italy (or the receipt of the request for the permit), if they are declared winners of the selection, must show the Visiting Professor Welcome Office, no later than the deadline for entering the contract, the original copy of the permit of stay (or the receipt of the request for the permit). Failure to provide the document means applicants loose the right to enter the contract.

Non-EU applicants who, at the time they submit the application do not yet have a permit to stay in Italy, if they are declared winners of the selection, must wait for the authorisation of the Prefecture, which is necessary to apply for a visa. Activities can only start after the above mentioned visa has been supplied to the Visiting Professor Welcome Office. Failure to provide the document means activities cannot begin.

On the other hand, it is not mandatory to legalize qualifications or put the Hague Apostille if the qualification has been issued by one of the countries that ratified the Brussels Convention on 25th May 1987, or if the qualification has been issued by a German institution (Italian-German convention on the exemption of public documents from legalization).

For information regarding how to get the requested documents, it's recommended to contact Italian embassies/consulates in the country of the university which issued the qualification.

Useful links: Ministero degli Affari Esteri e della Cooperazione Internazionale's website http://www.esteri.it/MAE/IT/Italiani_nel_Mondo/ServiziConsolari/TraduzioneLegalizzazioneDocumenti.htm?LANG=IT;

CIMEA's website http://www.cimea.it/;

Hague conference Apostille section, https://www.hcch.net/en/instruments/conventions/specialised-sections/apostille

Art. 13
Contract

The temporary research fellowship is governed by a specific individual contract.

The contract governs the collaboration according to these criteria: flexibility in relation with the needs of the activity, continuity, time allocation (not sporadic), coordination with the overall activities of the University, close connection with the realization of a research program, autonomous collaboration activity within the scope of the program, absence of pre-determined working hours.

In particular, the research fellow will be subject to the following conditions:
- Carry out the research activity full-time, with no pre-established working hours, unless the Research Executive Agency (REA) provides authorization for personal or family reasons;
- Perform his/her research activity exclusively for the research program of this call;
- For activities carried out in the frame of the action, he/she cannot receive other incomes than those indicated in this call;
- He/she will engage in signing arrangements related to the intellectual property rights;
- He/she has the obligation to maintain confidentiality according to the regulation of the European Project.

On signing the contract, research fellows commit to taking the online safety course (available on the "online services" at "safety course") as required by the university and to provide the certificate of successful course completion to the Department/Campus in which they will carry out the research activity, no later than 30 days after the start of such activity.

The research fellowship awarded as a result of this call for applications is included in the category of short-term contracts.

With regard to taxation, the provisions that apply are those set forth in article 4 of Italian Law no. 476 issued on 13 August 1984. With regard to welfare purposes, the applicable provisions are those in article 2, paragraphs 26 and on, of Italian Law no. 335 issued on 8 August 1995, and subsequent amendments. With regard to mandatory maternity leave, the applicable provisions are those in the decree of the Minister for work and social welfare issued on 12 July 2007, published in the Official Gazette issue no. 247 of 23 October 2007. In the case of sick leave, the applicable law is Law no. 296, article 1, paragraph 788, issued on 27 December 2006, and subsequent amendments if compatible. During the period of compulsory maternity leave, the amount paid by INPS (Istituto Nazionale Previdenza Sociale) under article 5 of the aforementioned Decree of 12 July 2007 is integrated by Politecnico di Milano up to the full amount of the research grant.

EU citizens who will not be able to produce the S1 Health Form in their country, shall ask directly the National Health Service offices (ASL) for instructions regarding the subscription upon payment to the National Health Service.

Article 14
Value awarded for the research fellowship

The value of the research fellowship, referred to the entire duration of the contract (please read article 1 of this call for applications), which will be paid in arrears in monthly instalments, is **Euro 114.855,00**, including € **97.264,30** for "living allowance" and € **17.590,70** for "mobility allowance", gross of fees charged to the contractor.

Moreover, should the candidate have family, a "family allowance" might be paid to applicants who have a family at the time of the recruitment.
With reference to the above subject, "family" is defined as persons linked to the applicant by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the Italian legislation or of the nationality of the candidate; or (iii) dependent children who are actually being maintained by the applicant.
The family status of the applicant will be determined at the time of the recruitment in the project and will not evolve during the project lifetime. In case this contribution is provided, it will be subject to deductions.

Article 15
Incompatibility

Employees from public and private companies, including those with short-term or part-time contracts, cannot be the recipients of a temporary research fellowship.

This temporary research fellowship cannot be awarded to people enrolled in a laurea (equivalent of Bachelor of Science), laurea specialistica or magistrale (equivalent to Master of Science), PhD students with a scholarship, or students enrolled in medical specialisation curses, in Italy or abroad. The award of the research grant requires placement on unpaid leave for employees in service in public administrations other than those mentioned in paragraph 5 of this article.

Exclusion from participation in the selection applies in the case of marriage, kinship or affinity up to and including the fourth degree, or same-sex registered partnership (as per art. 1 of Law No. 76 of 20.05.2016), or cohabiting couple (as per art. 1, paragraphs 37 et seq. of Law No. 76 of 20.05.2016) with:
  - a Full professor or Associate professor in the Department/Campus[11] that issued this call for applications;
  - the Rector;

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[11] Are considered as professors of the Campus, the Full professors or the Associate professors who are members of the Campus' Board.

– the Director General;
– a member of the Board of Governors.

Graduates who have already been awarded temporary research fellowships pursuant to art. 22 of Law 240/2010, for 6 years (not including the period in which the fellowship overlapped enrolment in a PhD course without scholarship, for no longer than the legal duration of the course), cannot take part in the selection. Graduates who cannot carry out the research activity for the entire period stated in article 1 of the call for applications because the temporal limits set forth in art. 22, third paragraph or ninth paragraph of Italian law 240/2010, as completed by art. 6, paragraph 2*bis* of Italian Legislative Decree 192/2014, are exceeded, cannot take part in the selection.

Temporary research fellowships cannot be awarded to university long-term employees, employees of public bodies and institutes for research and experimentation, of the Italian National Agency for New technologies, energy and sustainable economic development (ENEA), of the Italian Space Agency (ASI) and of the institutes whose scientific specialisation diploma has been considered equivalent to a PhD pursuant to art.74, fourth paragraph of Italian D.P.R. no. 382, issued on 11 July 1980.

Research fellows can perform professional activities and enter contracts that can be included in the self-employment category, on condition that these activities do not interfere with the successful execution of the research activities subject of this contract. The written authorisation of the Head of the Department/Campus (who must consult the Scientific Supervisor) is required. These activities are incompatible with a temporary research fellowship if the above mentioned authorisation is not given.

A temporary research fellow cannot carry out activities that can lead to a conflict of interest with the activities of the Politecnico di Milano.

The temporary research fellowship is not compatible with other research fellowships and with other scholarships, except for those awarded by national or foreign institutions for the purpose of integrating the research activities with stays abroad.

Research fellows can attend doctoral programmes, including courses as extra and without doctoral grant, on condition that the admission exam is passed.

Art. 16
Submission of qualifications and publications/scientific products
The documentation submitted by the candidates, will remain in the records of the Administration and will not be returned.

Art. 17
Processing of personal data

Pursuant to Italian Lgs.D. no. 196/2003 and subsequent modifications, the personal data supplied by the applicants are processed only for purposes related to this call for applications. The data are collected by the Human Resources and Organisation Area of the Politecnico di Milano - Piazza Leonardo Da Vinci, 32 - Milano. Data controller is the Politecnico di Milano, Directorate General - Piazza Leonardo Da Vinci, 32 – Milano. Data processor is the Manager of Human Resources and Organization Area – Competitions Management Service.

The same personal data provided by the candidate may be communicated only to public administrations directly interested in the economic/legal position of winner candidates. The communication of such data by the candidates is compulsory in order to evaluate participation requirements; failure to do so they will be excluded from the selection procedure.

Applicants can exercise their rights under art. 7 of the above mentioned law, including the right to access data that regard them and additional rights such as the right to obtain updating, correction, completion or deletion of data that are incorrect, incomplete or collected in violation of the law.

Art. 18
Head of the procedure

Pursuant to the provisions set forth in art. 5 of Law no. 241 issued on 7 August 1990 and subsequent amendments, the Head of the Procedure for this research fellowship is Mr Enrico Eftimiadi, Human Resources and Organisation - Teaching Staff Service, phone no. + 39 0223992272 – + 39 0223992240 – + 39 0223992582 - + 39 0223992259 no. + 39 0223992156 fax + 39 0223992287 - E-Mail: assegniricerca@polimi.it.

Art. 19
Final provisions

Everything that is not expressly governed by this call for applications is governed by the provisions in the "*Regulations for the award of temporary research fellowships for research activities in independently funded research programmes*" issued with Rectoral Decree no. 667/AG (28 February 2011), as modified with R.D. no. 3398/AG issued on 29 July 2016, available on this link: http://www.polimi.it/en/university/statute-and-regulations/, and the laws in force governing the matter.

Art. 20
Publication

This call for applications is published on the Official Noticeboard of the Politecnico, on the Politecnico's website and on the Ministry for Education, University and Research website of the EU website.

Signature of the Head of the Department

<div align="right">

Prof.   Giulio Magli
Signed Giulio Magli

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Digitally signed pursuant to Italian Law – Legislative Decree 7.3.2005, No. 82, article 21, paragraph 1.2, as amended (subsequent modifications and integrations)

<u>ANNEX TO THE CALL FOR APPLICATIONS FOR THE AWARD OF TEMPORARY RESEARCH FELLOWSHIPS FOR RESEARCH ACTIVITIES Department of</u> Mathematics Procedure Code 2017/ASSEGNI_DMAT05-deadline 05/12/2017 (issued pursuant to the "Regulations for the award of temporary research fellowships for research activities in independently funded research programmes" issued with Rectoral Decree no. 667/AG (28 February 2011), as modified with R.D. no. 3398/AG 29 July 2016.

<u>TITLE OF THE RESEARCH</u> **Numerical simulations and reduced models of the fluid-structure interaction arising in blood pumps based on wave membranes**.

<u>SCIENTIFIC SUPERVISOR(S) OF THE RESEARCH PROGRAMME</u> Prof. Christian Vergara

<u>PRESUMED DATE FOR STARTING ACTIVITIES</u>   **01/03/2018**

<u>STARTING PROCESS AND EXECUTION OF THE RESEARCH PROGRAMME</u>

In the first period (months I-VI) the research fellow will study the existing literature concerning blood pumps in order to choose the best numerical method to address the problem at hand; moreover, he will learn how to use the Finite Element library LIFEV. During the second period (months VII-XII) the fellow will move to the industrial partner Corwave in order to investigate in detail the pump functioning and to start the implementation of the code in view of the numerical simulations. During the third period (months XIII-XVIII), she/he will come back at Politecnico di Milano to complete the implementation of the code including the modeling contact. Then (months XIX-XXX), the research fellow will return in Corwave in order to apply and optimize the developed code. Finally, in the last period (months XXXI-XXXVI), possible reduced models will be studied and the thesis will be written.

<u>ACTIVITIES THE TEMPORARY RESEARCH FELLOW WILL PERFORM, POSSIBLE OBBLIGATIONS AND TERMS</u>

Months 1-6: Study of the literature and introduction to LIFEV

Months 7-12: At Corwave to study the pump functioning

Months 13-18: Implementation of the selected methods in the code

Months 19-30: At Corwave to apply and optimize the code in view of clinical purposes

Months 31-36: Study of reduced models and writing the thesis

At least 30 days before the end of the contract, the research fellow must present a written report on the research activities carried out and on the results achieved within the scope of the project.

<u>COUNTRIES AND UNITS IN WHICH THE RESEARCH ACTIVITY MAY BE CARRIED OUT</u>

Italy and France at CorWave SA - Clichy

Signature of the Head of the Department of Mathematics of the Politecnico di Milano.

Prof.   Giulio Magli

Signed Giulio Magli

Digitally signed pursuant to Italian Law – Legislative Decree 7.3.2005, No. 82, article 21, paragraph 1.2, as amended (subsequent modifications and integrations)