Re: Rector's decree for issuing the Announcement of a competition pertaining to the public selection based on qualifications and interview for the granting of no. 2 research fellowships lasting for 12 months at the Department of Engineering and Applied Sciences – Competition sector 09/C2 (Technical Physics and Nuclear Engineering) - S.D.S. ING-IND/10 – Industrial Technical Physics.

Collection no. 582/2015 Decree prot. no. 72097/III/13

THE RECTOR

HAVING REGARD TO the Statute of the University of Bergamo;

HAVING REGARD TO art. 22 of Italian Law no. 240 dated 30th December 2010, which authorizes Universities to grant fellowships for the performance of research activities:

HAVING REGARD TO Law 27.2.2015 no. 11;

HAVING REGARD TO Italian Law no. 104 dated 5th February 1992, which governs the assistance, social integration and rights of the disabled;

HAVING REGARD TO Italian Decree of the President of the Republic no. 487 dated 9th May 1994, amended with Decree of the President of the Republic no. 693 of 30th October 1996;

HAVING REGARD TO Italian Law no. 370 of 19th October 1999, which contains provisions on the subject of universities and scientific and technological research:

HAVING REGARD TO Italian D.P.R. no. 445 of 28th December 2000, Consolidated text of legislative and regulatory provisions on the subject of administrative documentation;

HAVING REGARD TO Italian Legislative Decree no. 196 dated 30th June 2003, Code on the subject of personal data protection;

HAVING REGARD TO the Code of Ethics of the University Rector's Decree prot. n. 14405/I/3 of 19th July 2011;

HAVING REGARD TO the Regulations for the granting of research fellowships issued with Rector's Decree Prot. no. 7599/I/003 dated 8th April 2011 and as last amended with Rector's Decree no. 519/2014 dated 30.09.2014;

HAVING REGARD TO Italian Ministerial Decree, prot. no. 102 dated 9th March 2011, currently being registered with the Court of Auditors, with which the minimum pre-tax amount of research fellowships was recalculated;

HAVING REGARD TO the minutes of the Department of Engineering and applied sciences of 21/10/2015;

HAVING REGARD TO the research programmes lasting for 12 months presented by Prof. Marco Marengo to the Board of the of Department of Engineering and applied sciences;

HAVING ASCERTAINED the financial coverage on:

- <u>Code 1</u>: "Simulation of cavitation and erosion in fuel injection systems of medium/heavy duty Diesel engines at injection pressures reaching 3000bar – Acronym: FuelSystem3000"fondo MAREIAPP12 - CUP F51J12000050006;
- <u>Code 2</u>: "DOLFIN II "Sperimentazione in microgravità di un sistema innovativo di controllo termico bifase per la stazione spaziale internazionale"- fondo MAREDOLF13, - CUP F98C13000060005;

HEREBY DECREES

Art. 1

An announcement is approved for a public selection based on qualifications and interview for the granting of no. 2 research fellowships at the Department of Engineering and applied sciences – Competition sector 09/C2 (Technical Physics and Nuclear Engineering) - S.D.S. ING-IND/10 – Industrial Technical Physics.

Art. 2

The announcement and relevant annexes can be found on the University's website, in the section "Fellowship Announcements" ("Concorsi e selezioni-Concorsi post lauream-Assegni di ricerca"), handled by the Ufficio Selezioni e Gestione Giuridica (Office for selections and legal management).

The deadline for submitting the applications is set for: 27th November 2015

Art. 3

This decree is published on the University's website, in the section "University Notice Board" ("Albo di Ateneo").

Bergamo, 27th October 2015

THE RECTOR
(Prof. Remo Morzenti Pellegrini)
Signed by Prof. Remo Morzenti Pellegrini

PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE GRANTING OF NO. 2 RESEARCH FELLOWSHIPS LASTING FOR 12 MONTHS AT THE DEPARTMENT OF ENGINEERING AND APPLIED SCIENCES – COMPETITION SECTOR 09/C2 (TECHNICAL PHYSICS AND NUCLEAR ENGINEERING) - S.D.S. ING-IND/10 – INDUSTRIAL TECHNICAL PHYSICS

Art. 1 Public selection

An announcement is made for public selection based on qualifications and interview for the granting of no. 2 research fellowships at the Department of Engineering and applied sciences with contract drawn up in accordance with private law and set to last for 12 months.

The research fellowship will be carried out within the scope of the Competition sector 09/C2 (Technical Physics and Nuclear Engineering) - S.D.S. ING-IND/10 - Industrial Technical Physics for the research project:

- <u>Code 1</u>: "Modeling of flow boiling phenomena in microchannels" (See annex C); The annual pre-tax amount is € 23.100,00 and paid to the research fellow in equal monthly instalments;
- <u>Code 2</u>: "Wetting dependent models of liquid slug-vapour plug regimes in pulsating heat pipes" (See annex C); The annual pre-tax amount is € 20.628,00 and paid to the research fellow in equal monthly instalments.

The last instalment will be paid only upon delivery of the final report.

Art. 2 Duration, renewal and extension

The fellowship in question may last between one and three years, and it is renewable. The overall duration of the established relationships, including any renewal, may not exceed the maximum duration established by law, excluding the period during which the fellowship was enjoyed together with the research doctorate, within the maximum duration of the relevant course.

For renewal purposes, the provisions of the Regulations in force shall be applied.

Where applicable, prior to the expiration date of the fellowship, the Department's Board, at the request of the scientific tutor, may suggest an extension due to a delay in completing the research project by allocating suitable funds.

Art. 3 Regulating the relationship and incompatibility

The fellowship cannot be accumulated with other scholarships or grants obtained for any reason, other than the ones granted by national or foreign institutions which can be used to supplement the research activity of the fellowship holders with stays abroad.

The legal ownership of the research fellowship is not compatible with attendance in any university courses, research doctorate with grant or medical specialization, in Italy or abroad, and it entails being placed on an unpaid leave of absence for fellowship holders employed by public administrations.

The fellowship is individual. Its beneficiaries cannot accumulate it with income from professional activities or jobs carried out on a continuous basis. For the entire duration of the fellowship, the holder is prohibited from performing free-lance/professional activities or from entering into continuous employment relationships.

The total duration of the fellowship contracts referred to in this announcement and of the fixed-term researcher contracts referred to in art. 24 of Italian Law 240/2010, including those established with different state, private or telematic universities, as well as with the organizations referred to in paragraph 1 of this article, with the same subject, cannot exceed 12 years (including non-continuous periods). For the purpose of calculating the duration of the aforementioned periods, maternity or sick leaves taken in accordance with regulations in force will not be considered.

Art. 4 Admission requirements

The following individuals are not eligible to receive the research fellowships: tenured personnel of Universities, of public research and experimentation bodies and institutions, of the Italian National Agency for New Technologies, Energy and Economic Development (ENEA) and the Italian Space Agency (ASI), as well as of institutions whose scientific specialization degree has been recognized to be equivalent to the PhD title pursuant to article 74, paragraph four, of Italian Decree of the President of the Republic no. 382 dated 11th July 1980.

In order to be eligible for the selection referred to in art. 1, applicants must possess the following requirements:

- Master's degree in Mechanical Engineering or in Nuclear Engineering or in Aerospace Engineering or in Chemical Engineering;
- 2. PhD in Engineering (as alternative to the Master's degree);
- 3. No family or kinship relationship, up to and including the fourth degree, with a Professor belonging to the relevant department or with the Rector, with the General Director or a member of the University's Board of Directors;
- 4. No attendance in any university courses, research doctorate with grant or for medical specialization, in Italy or abroad;
- 5. Professional scientific curriculum suited to the performance of scientific research activities:
- 6. Knowledge of the English language;
- 7. Physical fitness for employment. The administration is entitled to require winners of the selection trial to undergo a medical check-up, according to the regulations in force;
- 8. Not having been barred from the active political electorate;
- Not having been removed from the job at a public administration or not having been dismissed from a state job, pursuant to art. 127, letter d), of Italian D.P.R. no. 3 of 10th

January 1957, for having been hired after producing false documentation or documentation vitiated by irremediable invalidity.

The applicants must possess the aforementioned requirements as of the expiration date of the term established in the selection announcement for submitting the application.

Applicants are admitted with reserve to the selection process.

The Administration may arrange, at any time, by means of a justified decree by the Rector, to exclude an applicant from the selection due to lack of the prescribed requirements.

Any application submitted without a signature or sent after the deadline indicated in this announcement shall be excluded from the selection.

Art. 5 Applications and deadline for presentation

The application forms, drawn up on unstamped paper according to the forms enclosed with this announcement (Annex A for Italian citizens – Annex B for foreign citizens), must be addressed to the Rector of the Università di Bergamo before the final deadline, under penalty of exclusion, of thirty days from the date on which the announcement is published in the Official Notice Board of the Università di Bergamo. Should the indicated deadline fall on a non-business day, it shall be postponed to the next business day; The application forms must be submitted according to one of the following methods:

- a) Directly by hand on the following days and at the following times: from Monday to Friday from 9.30 a.m. to 12.00 p.m.;
- b) By way of registered letter with return receipt to the Università degli Studi di Bergamo *Ufficio Selezioni e Gestione giuridica* (Office for Competition and Selection Procedures), at the address of Via Dei Caniana, 2, 24127 Bergamo. Date as postmark;
- c) delivery by means of certified electronic mail (PEC) to the address protocollo@unibg.legalmail.it, sending -in Pdf format- the application and all related attachments along with an identification document. The application must originate from another PEC address, exclusively. It should be noted that the transmission of the certified electronic mail message is documented by the receipt of acceptance and the receipt of occurred delivery coming from the mail provider, as provided by s. 6 of D.P.R. 11.02.2005, no. 68 (the system allows the exchange of messages having a total maximum size of 50 MB; it is possible to send or receive messages with attachments up to 37 MG in size);
- d) By fax to the number 035/2052862;

Applications sent within the set deadlines and received prior to the installation of the Selection Committee shall be accepted.

The applicant shall enclose a copy of a valid identification document, signed in original or scanned, a CV signed on all pages or scanned, a signed or scanned list of documents and publications which are deemed useful for purposes of the selection, such

as specialization diplomas, certificates of attendance in post-graduate completion courses, obtained in Italy or abroad; bursaries or research assignments, in Italy or abroad.

Handicapped applicants shall submit a specific request with regards to their handicap, pursuant to Italian Law no. 104 of 5th February 1992 concerning the necessary help or the need, if any, of additional time for carrying out the test itself.

The Administration ensures equality and equal opportunity between men and women with regards to access to employment and treatment on the job.

Applicants who are European Union citizens or citizens of non EU-countries regularly living in Italy may submit their qualifications in their original language, in a copy declared to be a true copy by means of a self-certification in lieu of affidavit, pursuant to art. 47 of Italian D.P.R. no. 445 dated 28th December 2000, proving that they possess such qualifications by resorting to the simplified form of administrative certifications as allowed by Italian D.P.R. No. 445 dated 28th December 2000.

Applicants who are non-EU nationals and reside in Italy according to the vital records regulations of the resident population approved with Italian D.P.R. no. 223 of 30th May 1989 may use the substitute declarations in question only as far as they are used to attest their personal status, events and qualities that can certified or confirmed by Italian public or private entities pursuant to art. 3, paragraph 2 of Italian D.PR. 445/2000, without prejudice to the special provisions contained in laws and regulations concerning immigration and the condition of foreign nationals.

The Administration reserves itself the right to proceed with suitable checks on the truthfulness of the contents of substitute declarations in accordance with Director's Decree Prot. No. 2731/B dated 19th July 2000. Random checks shall be carried out based on a decreasing order of receipt of the applications to participate in the selection, as identified by the protocol number, in the order of 10% per selection, for self-certifications concerning requirements submitted by the winning applicants, and in the order of 20% per selection, for self-certifications concerning requirements submitted by applicants found to be suitable.

Non-EU nationals not residing in Italy according to the vital records regulations of the resident population approved with Italian D.P.R. no. 223/1989 may submit original qualifications as well as authenticated copies or true copies of such qualifications.

Certificates issued by the pertinent authorities of the nation of which the foreigner is a citizen shall comply with the provisions in force in that very same nation, and must also be authenticated by the pertinent Italian Consular authorities.

A translation into the Italian language shall be enclosed for deeds and documents written in a foreign language, said translation to be certified as conforming to the original text in the foreign language, and prepared by the pertinent Italian diplomatic or consular representatives or by an official translator.

A sample application form is enclosed with this decree (Annex B), to be submitted in the Italian language and to which applicants can refer.

Art. 6 Selection Committee The selections referred to in art. 1 shall be made for the disciplinary scientific competition sector 09/C2 (Technical Physics and Nuclear Engineering) - S.D.S. ING-IND/10 - Industrial Technical Physics by a Selection Committee appointed by Rector's Decree and consisting of three professors or researchers recommended by the Council of the structure afferent.

Art. 7 Qualifications to be evaluated and examinations

During its first meeting, the Committee expressly defines the evaluation criteria and methods for the qualifications and for the interview, if necessary setting a minimum score that must be obtained in order to be admitted to the interview. Immediately prior to the start of each interview, the Committee defines the questions to be asked of the individual applicants. These questions are drawn by each applicant.

At the end of every interview section, the Selection Committee shall prepare a list of the interviewed applicants, indicating the marks obtained by each one. Such list will then be posted where the examination takes place.

The Committee puts together the merit classification in decreasing order, adding up the score related to the qualifications and the interview score. Scores being equal, the younger applicant shall be selected.

The evaluation criteria of the individual Committees are established, for purposes of the overall evaluation, expressed in hundredths, as illustrated below:

- a) 60 points, distributed as follows
- 1) 10 points for the research doctorate; in relationship to the grade of affinity in comparison to the project of search;
- 2) up to 5 points for the degree mark (Old University System Degree and New University System Specialist/Five-year degree):
- 3) up to 25 points for publications and aptitude for scientific research;
- up to 10 points for specialization degrees; certificates of attendance in post-graduate degree courses;
- up to 10 points for other qualifications associated with services rendered as a result of contracts, bursaries or positions in domestic, foreign or international research bodies, duly certified, provided the start date and duration of the activity carried out is indicated;
 - b) 40 points for the interview.

In the exercise of its own autonomy, the Committee can integrate the aforesaid declaratory without prejudice to the maximum limit of anticipated assignable score altogether staying and for single category.

- <u>Interview agenda and Subject-matters to which the applicants' qualifications shall refer **for both codes**: heat exchange, boiling phenomena, numerical simulation of two-phase systems</u>
- preferential requirements for code 1: excellent knowledge of English, thesis work related to the heat exchange experience in the field of advanced boiling studies;

preferential requirements for code 2: excellent knowledge of English, thesis work related to the heat exchange experience.

The outcome of the qualification assessment procedure must be made known to the interested persons before the interview, by posting them on the notice board of the relevant department.

The opinion rendered by the Selection Committee is unchallengeable.

Fellowships are granted, up to the number of available fellowships, to those applicants who obtained at least 30 of the 40 points allocated to the interview, included in the classification, according to the order of the same classification.

The official approval of the acts of the Commission for the selection process referred to in this announcement will be published on the University website at the following link: http://www.unibg.it/ateneo/concorsi-e-selezioni/concorsi-post-lauream/assegni-di-ricerca.

Shall run from the date of publication of the terms of appeal with extraordinary appeal to the Head of State or the courts pursuant to the CPA.

In case the winners decide not to accept the fellowship or in case of cancellation due to failure to accept the fellowship within the established terms, the fellowships may be granted to applicants who proved to be fit according to the order of the respective classifications.

The dates and places of the interview will be communicated by means of a notice published on the website of the Università degli Studi di Bergamo http://www.unibg.it, in the section "Research fellowship" ("Bandi assegni di ricerca") by the Ufficio Selezioni e Gestione Giuridica (Office for selections and legal management), at least 20 days in advance.

Art. 8 Establishment of the employment relationship

The winning applicant, possessing the prescribed requirements, shall enter into an autonomous work contract in accordance with private law with the Rector to last for 12 months usually starting on the first day of the first month of the fellowship.

Without prejudice to the complete fulfilment of their obligations, research fellows may undertake university teaching assignments, official or integrative, granted by means of contract, pursuant to the University Regulations governing Professors under contract at the University of Bergamo for a maximum of 6 UFC (University Formative Credits) subject to authorization of the pertinent Department's Board.

Without prejudice to full performance of their duties, research fellows may ask, as an exception, to perform external assignments, subject to authorization of the Department's Board, provided that the assignment:

- 1. is occasional and short-lasting;
- 2. does not lead to a conflict of interest with the specific research activity carried out by the research fellow:



3. does not cause any damage to the image or the interests of the University.

Research fellows who wish to carry out, or continue to perform, a work activity consisting of services provided free of charge to volunteering associations or co-ops of a socio-assistance nature and not for profit, may do so provided that they fully perform their research duties.

The fellowships do not entitle their holders to access positions in Universities, in public research and experimentation bodies and institutions, in the Italian National Agency for New Technologies, Energy and Economic Development (ENEA) and in the Italian Space Agency (ASI), as well as in institutions whose scientific specialization degree has been recognized to be equivalent to the PhD title pursuant to article 74, paragraph four, of Italian Decree of the President of the Republic no. 382 dated 11th July 1980.

Provided it is consistent with the research activities assigned to them and subject to authorization of the Department's Board, research fellows may take part in the performance of research and consulting activities on behalf of third parties commissioned by the University in accordance with art. 66 of Italian D.P.R. 382/80 and to the distribution of the relevant proceeds according to the methods established by the regulatory provisions in force.

Pursuant to Italian Ministerial Decree of 12th July, 2007, the collaboration is mandatorily suspended in case of pregnancy and puerperium according to the terms specified in articles 16, 17 and 20 of Italian Legislative Decree 151/2001. The employment relationship is consequently extended for 180 days, due to the effects of the statutory leave referred to above.

The research activity and the fellowship may be suspended for sick leaves lasting longer than 30 days over the course of one year, without prejudice to the fact that the duration of the fellowship cannot be reduced due to the aforementioned suspension. A period of justified absence of less than 30 days in one year does not represent a suspension and, consequently, does not have to be made up.

As from 2011, the following shall apply to the research fellowships: for taxation purposes, the provisions referred to in art. 4 of Italian Law no. 476 of 13th August 1984, as well as for social security purposes, the provisions referred to in art. 2, paragraphs 26 and following of Italian Law no. 335 of 8th August 1995, as subsequently amended and supplemented, on the subject of mandatory maternity leave, the provisions referred to in the Decree issued by the Italian Ministry of Labour and Social Security of 12th July 2007, published in no. 247 of 23rd October 2007 of the Italian Official Gazette, and, on the subject of sick leave, art. 1, paragraph 788, of Italian Law no. 296 of 27th December 2006 and subsequently amended. During the mandatory maternity leave, the indemnity paid by INPS (National Institute of Social Insurance) pursuant to article 5 of the aforementioned Decree of 12th July 2007 will be supplemented by the University up to the full amount of the fellowship.

The University shall arrange for accident and third-party liability insurance coverage in favour of the research fellows within the scope of performing their research.

At the end of the contract, the research fellow shall submit a report on all the activities carried out to the Department's Board.

In case of failure in delivering such report, the last instalment of the fellowship will not be paid.



Art. 9 Processing of personal data

The personal information collected will be processed according to the provisions of art. 18 of Italian Legislative Decree no. 196 of 30th June 2003, as subsequently amended and supplemented, in compliance with the criteria of fairness and transparency, and exclusively for the purposes for which such information was collected with the aid of paper, computer and electronic instruments, adopting all suitable measures in order to guarantee its security.

The same information shall only be disclosed to the public administration directly interested in the legal-economic position of the winning applicants.

Art. 10

Person in charge of the selection procedure

The person in charge of this selection procedure is William Del Re - Head of Servizi Amministrativi Generali - Via Dei Caniana, 2 - 24127 Bergamo, fax 035/2052862, e-mail: selezionipersonale@unibg.it, tel: 035/2052876.

Art. 11 Publication fulfilments

In addition to being posted to the University's Electronic Notice Board, the selection announcement shall also be published in section "Fellowship announcements" ("Bandi assegni di ricerca") of the website of the Università degli Studi di Bergamo www.unibg.it, on the website of the Conference of Italian University Rectors www.crui.it, on the MIUR and Research) website found at the (Ministry of Education, University link http://bandi.miur.it, Union and on the European website the link http://ec.europa.eu/euraxess.

Art. 12 Manager of the prevention of corruption

Please note that at the University of Bergamo has been approved the three-year plan of prevention of corruption 2015 – 2017 under law No. 190 of 6.11.2012 and was awarded the Manager of the prevention of corruption to the Director-General Dr. Giuseppe Giovanelli.

To e-mail address <u>prevenzione.corruzione@unibg.it</u> can be carried out any reports of irregularities in the proceedings.

Annex A

To the RECTOR

of the Università degli Studi di Bergamo

Certified e-mail address: protocollo@unibg.legalmail.it

Certified e-mail address. <u>protocollo@dribg.legalmail.it</u>
I, the undersigned
To that regard, aware of criminal penalties in the case of false statements, referred to in art. 76 of Italian D.P.R. 445/2000, I hereby declare:
 that I was born in
3. that I am enrolled in the electoral lists of the Township of;
4. that I have no criminal convictions nor criminal proceedings underway;5. that I posses a degree in obtained from
5. that i posses a degree in;
6. that I speak English;
7. that I am/am not a public employee;8. that I have not been dismissed from a job with a public administration;
9. that I have (or have not) worked for public administrations, specifying the causes for the termination of previous public jobs;
10. that I have no family or kinship relationship, up to and including the fourth degree, with a Professor belonging to the relevant department or with the Rector, with the General
Director or a member of the University's Board of Directors;
11. that I am not enrolled in any university courses, research doctorate with grant or for medical specialization, in Italy or abroad, and to undertake, in case I am granted the fellowship, to waive enrolment in the aforementioned courses;
12. that I am in the following position with regards to military duty:
13. that I have elected my domicile in the Township of at the address of post codetelE-mail:
14. I, the undersigned, hereby declare that I have been/I have not been granted the following fellowships (pursuant to art. 22, paragraph 3 of Italian Law 240/2010): from
15. I, the undersigned, hereby declare being/having been a PhD student in
period from
and to have obtained the qualification of

	16. I, the undersaforemention	•	•				•		•		
	17. I, the unders with fixed-term 240/2010):	•	•					•	•		
	from				to						at
	18. I, the under	ersigned, fo	or purpose the	es of ev	_	j my q llowing	ualificati	ons, he	•	clare fication	
	19. I, the undersigned, enclose my curriculum vitae herein. 20. I, the undersigned, also enclose the following documentation:										
follov	I the undersigwing motivation							matics	formality	for	the
	I, the undersig Italian Legislati edure.	•	•		•	•				•	
	(Place)			(date)			Signature				



Application form for applicants of foreign nationality (on plain paper)

Annex	B
To the RECTOR of the Università degli Studi di Bergamo Certified e-mail address: protocollo@unibg.legalmail.it	
I, the undersigned	to 2 ed cal ed
To that regard, aware of criminal penalties in the case of false statements, referred to in a 76 of Italian D.P.R. 445/2000, I hereby declare: 1. that I am a citizen of	
 5. I have adequate knowledge of the Italian and English languages; 6. that I am/am not a public employee of an Italian public administration; 7. that I have no family or kinship relationship, up to and including the fourth degree, with Professor belonging to the relevant department or with the Rector, with the general director a member of the University's Board of Directors; 8. that I am not enrolled in any university courses, research doctorate with grant or for medic specialization, in Italy or abroad, and to undertake, in case I am granted the fellowship, 	or cal
waive enrolment in the aforementioned courses; 9. that I have elected my domicile in the Township of	he
	at in
during the period from	he at he
qualification of	d a

		gned, hereby declare ntract (pursuant to a						
	possess the followannouncement); 14. I, the undersign	signed, for purpose ving qualifications gned, enclose my cu gned, also enclose th	rriculum	vitae herein.		•		
I the undersigned I asks to be able to effect the interview in telematics formality for the following motivation indicating his/her own skype address I, the undersigned, hereby consent to the processing of my personal data in compli with Italian Legislative Decree no. 196/2003, for fulfilments associated with this sele procedure.								
	(place)	,	(date)		Signature			

¹ Please indicate any criminal charges