



**UNIVERSITÀ  
DEGLI STUDI  
DI BERGAMO**

Area  
Risorse Umane

Gestione carriere  
e concorsi  
Assegni di ricerca

## CHANCELLOR'S DECREE

Data that can be deduced from the registration in the protocol:

Repertoire Number, Protocol Number, Title,

Class File Attachments and References

**Object: Public selection based on qualifications and interview for the awarding of no. 2 Experienced grants for conducting research pursuant to art. 22 of law no. 240/2010 for A.D. FIS/01 (Experimental physics) and SECS-P/01 (Economics) at the Departments of University of Bergamo - Pica Code 22AR001**

## THE CHANCELLOR

GIVEN Law No. 168 of 9 May 1989;  
 GIVEN Law No. 240 of 30 December 2010, and following amendments and integrations and, in particular, Art. 22 on research grants;  
 GIVEN the Statute of the University of Bergamo enacted with Chancellor's Decree Index No. 92/2012 of 16 February 2012;  
 GIVEN the University's current Regulations for awarding grants for conducting research enacted with Chancellor's Decree Index No. 157/2018 of 26 February 2018, modified by Chancellor's Decree Index No. 376/2020 of 17th of August 2020 in force as of 1st September 2020;  
 GIVEN Ministerial Decree Prot. No. 102 of 09 March 2011, recorded at the Court of Auditors on 13 May 2011, which revalued the minimum gross annual amount of grants for conducting research;  
 GIVEN Decree-Law No. 192 of 31 December 2014, converted, with amendments, by Law No. 11 of 27 February 2015 and, in particular, Art. 6 paragraph 2 bis which extended by two years the total duration of grants established under Art. 22 of Law No. 240/2010, taking it from four to six years;

Referring also to:

- the University's Code of Ethics issued with Chancellor's Decree. Prot. No. 14405/I/003 of 19.7.2011 and amended with Chancellor's Decree. Rep. No. 262/2018, Prot. No. 60030/I/003 of 12.4.2018;
- the University's Regulations on research integrity and ethics, enacted with Chancellor's Decree Index No. 387/2016 of 18 July 2016;

ACQUIRED the resolutions of the Councils of the Departments involved which approved the annual research project and resolved on the requirements for candidates' admission to the selection;

ASCERTAINED the financial backing (tab. 1);

## DECREES

### Article 1 Call for public selection

2 public selections are launched based on qualifications and interview for the awarding of No. 2 grants conducting research pursuant to Art. 22 of L. No. 240/2010 with a contract under private law at the research structures of the University of Bergamo as indicated hereafter:

C O D E	T Y P E	DE- PARTMENT	DURATION	GROSS AND FUNDS	TITLE	A.R.F.	A.D.	TUTOR
1	B	Engineering and applied	12 months	Annual gross € 21.120,00 progetto di ricerca codici 60DISA21,	Commissioning and R&D of Triple-GEM detectors for the CMS	02/A1 Experimental physics of	FIS/01 Experimental physics	Prof.ssa Serena Mattiazzo



		sciences (de- liberation 17.12.2021)		DISASOSTENI22 e DISARESIAPPUB	<i>experiment at CERN</i>	funda- mental in- teractions		
<b>2</b>	B	Economics (debilation 26.01.2022)	33 months	Total gross € 66.594,00 Research project ASSRICBUON18 e STARS2022AZ1S R	<i>Institutions, So- cial Norms and Preferences</i>	13/A1 Econom- ics	SECS- P/01 Eco- nomics	Prof. Paolo Buonanno

The grant is paid to the contract holder in monthly instalments of equal amount.  
The research projects are described in Annex A of this call constituting an integral part hereof.

## Article 2 Requirements for admission to the selection

The selection procedure is open to **scholars in possession of a professional scientific curriculum suitable for conducting the scientific research provided for by this call, as well as of the following requirements:**

### **3rd cycle degree: PhD (see the following table).**

The qualifications obtained abroad must be recognised as valid in the Italian territory.  
As regards qualifications obtained abroad that have not already been recognised in Italy with formal procedure pursuant to the applicable laws, the Commission is competent to assess the equivalence – as to the nature, level and subject correspondence (degree cycle or CUN Area for PhD qualifications) – to the qualifications required by this call, for the sole purposes of admission to the present selection.  
As regards qualifications obtained abroad, required by the call for the purpose of admission to this selection, the applicant is required as follows:

- in the event of qualifications already recognised as valid in the Italian territory, to indicate in the application the details of the provision attesting the occurred recognition pursuant to the applicable laws;
- in the event of qualifications not yet recognised, **to annex to the application a certified copy of the statement of qualification equivalence**, issued by the competent Italian diplomatic and consular authorities abroad, and the certificate of the exams taken or the supplement degree.

In order to ensure the widest participation in the selection, the applicant who is not in possession of the above documentation can annex a copy of the qualification with a translation into Italian or English; the candidate will have to submit the above documents within the terms peremptorily established by the Office **under penalty of exclusion**.

In the event of qualifications not yet recognized, the candidate is admitted if selected and, if winner, prior to signing the contract, must submit the documents requested by the office within the terms peremptorily established.

- **knowledge of one or more foreign languages (see the following table); the knowledge of the Italian language shall be evaluated for foreign candidates.**

Moreover, the applicant is also required:

- **to be at least 18 years old;**
- **to be in possession of civil and political rights;**
- **to have no criminal convictions or ongoing criminal proceedings that would prevent, in accordance with the regulations in force, the establishment of an employment relationship.**

For admission to the selections referred to in art. 1 the following specific requirements are also required:



CODE	SPECIFIC REQUIREMENTS	LANGUAGE
1	PhD Area Cun 02 - Physics	English
2	PhD in CUN Area 13 – Economics and Statistics	English

The selective procedure does not allow admittance to:

- those who have a degree of kinship or affinity, up to and including the fourth degree, with a professor from the relevant structure, or with the Chancellor, the General Manager or a member of the University's Board of Directors;
- those who have been holders, including any renewals, of research grants awarded pursuant to Art. 22 of Law No. 240/2010 for a period which, added to the duration of the contract provided for by this call, exceeds a total of six years, except for the period in which the grant was used in coincidence with the PhD within the maximum legal duration of the relevant course;
- those who were contracted as research fellow or fixed-term researcher as per ss. 22 and 24 of Law 240/2010 at the University of Bergamo or other Italian public, private or online Athenaeums, as well as any other Body indicated in para 1 of s. 22 of Law 240/2010 for a length of time which, if summed to the duration of the contract in this announcement, exceeds 12 years in total, albeit not consecutive; periods of time spent on maternity or sick leaves do not count to the purpose of the duration of the aforementioned relationships, in accordance with current Laws;

The applicant enrolled in a Diploma di Laurea (DL), Diploma di Laurea Specialistica (LS), Laurea Magistrale (LM), PhD with study grant or medical specialisation in Italy or abroad can participate in the selection object hereof; should the applicant be the winner, the research grant will be awarded subject to withdrawal from studies or PhD study grant.

Pursuant to art. 22 paragraph 2 of Law 240/2010 can not be recipient of the grants the regular personnel at universities, institutions and public entities of research and experimentation, the Italian National Agency for new technologies, energy and sustainable economic development (ENEA) and the Italian Space Agency (ASI) and institutions whose scientific specialization diploma was recognised equivalent to a PhD pursuant to the fourth paragraph under article 74 of Presidential Decree of 11 July 1980, No. 382.

The holder of the grant can attend PhD courses whose subjects are related to the research activities connected with the grant, upon prior evaluation of the Structure of reference. However, the research grant is incompatible with the enjoyment of the PhD study grant.

The applicant not in possession of Italian citizenship and admitted to the competition in accordance with what indicated above must also meet the following requirements:

- a) possess civil and political rights also in the Countries of belonging or of provenance;
- b) be in possession, except for holding Italian citizenship, of all the other requirements laid down for the Italian citizens;
- c) have appropriate knowledge of Italian.

These requirements must be met on the date of expiry of the deadline for submitting the application for the admission to this selection.

This Administration guarantees equality and equal opportunities between men and women as to access to employment and treatment at work.

### **Article 3 Exclusion from the procedure**

The following reasons are causes of exclusion:

- lack of signature on the application form;
- lack of admission requirements as provided for by Art. 2;



- failure to meet the procedures for submitting the application as mentioned under the following Art. 4.

The applicant is admitted if selected; should additional investigations be necessary, the applicant must regularize his/her application within the time peremptorily established.

The Administration may decide to exclude the applicant from the selection launched with this call, at any time, by reasoned Chancellor's Decree.

#### Article 4

##### Terms and conditions for submitting application

**Under penalty of exclusion applications for participation in the competition, along with the relevant qualifications held and the relevant scientific publications, shall be submitted online** through the following online application procedure:

<https://pica.cineca.it/unibg/>

The candidate will be able to register and access the platform using the Public Digital Identity System (SPID - security level 2). In case the candidate does not have one, he or she can request it according to the procedure indicated on the website [www.spid.gov.it](http://www.spid.gov.it). Alternatively, the candidate can register and log in using the credentials released directly by the PICA platform.

It is of utmost importance to provide a valid email address in order to enable the registration process on the electronic procedure.

Applicants shall upload all personal and professional data as requested by the application procedure; all documents must be uploaded in PDF format (.pdf). Each applicant can produce a maximum of no. 40 publications and a maximum of no. 40 other titles and qualifications.

**Failure to comply with the online application procedure will result in exclusion of the applicant.**

Prior to final submission, and within the given deadline for applications submission, the online application procedure allows to modify and save the inserted information in a draft copy.

Confirmation of final submission date will be certified by an automatic notification email.

Submissions after the given deadlines will not be accepted by the system, as the online application procedure won't be accessible.

Each application will be given a registration number. For all further communications, the registration number shall be quoted along with the code of the research grant competition.

The online application and submission procedure shall be completed **by 11.03.2022 until 12:00 (Italian time)**.

The submission of the online application must be completed and finalized:

- **no digital signature:** in this case the candidate have to download the pdf file of the application by the system; the PDF file shall not be modified in any way, it is to be printed, signed in original, scanned in a pdf file and uploaded again on the website;
- **sign the application on the server using ConFirma service:** in order to sign digitally the application it is necessary to have a hardware ( e.g. smart card or USB with digital signature certificate issued by an approved certification body) compatible with ConFirma service; after signing, applicants can download the signed pdf application;
- **sign the application digitally on your PC:** In order to sign digitally the application it is necessary to have a hardware ( e.g. smart card or USB with digital signature certificate issued by an approved certification body) and a software for digital signatures in order to create a pdf.p7m file from the pdf file downloaded from this site. The pdf.p7m file must be uploaded in the website again;
- **in case of submission of the application through SPID,** it will not be necessary to sign the application form as it is automatically acquired by the procedure.

**The application must contain all the required data by the system and must be signed and accompanied by a valid identification document of the candidate, under penalty of exclusion.**

For any technical problems, contact support through the link available in the footer <https://pica.cineca.it/unibg>.



## Article 5 Admission application

The applicant, filling the application, must declare, under his/her own responsibility, pursuant to what provided for by Presidential Decree 445/2000 and following amendments and integrations, as follows:

- his/her citizenship;
- to possess the qualifications mentioned in the previous Art. 2, indicating the degree cycle/CUN Area of PhD, the date on which it was obtained, the Institute that issued it and the final vote/assessment achieved; the applicant with qualification(s) obtained abroad must declare to have obtained the relevant recognition indicating in the application the details of the provision or must annex the required documentation according to what specified hereby;
- to possess any other requirements as mentioned in Art. 2;
- to possess other qualifications useful for the assessment;
- to know the foreign language required by this call; the applicant with citizenship other than Italian must also declare to have an adequate knowledge of Italian;
- in case of Italian citizenship: to be enrolled in the electoral lists, specifying the Municipality of belonging and possibly specifying the reasons for non-inclusion or cancellation from the same lists; in case of foreign citizenship: to possess civil and political rights in the Country of belonging or provenance, or the reasons for non-possession of the same;
- not to be excluded from the active political electorate;
- to have no criminal convictions, or declare possible convictions undergone, indicating the details of related sentences, and any pending criminal proceedings;
- to be/not to be a state employee, specifying to be/not to be a regular employee at Universities and other bodies as mentioned in Art. 22 of L. No. 240/2010;
- to have no degree of kinship or affinity, up to and including the fourth degree, with a professor from the relevant structure or with the Chancellor, the General Manager or a member of the University's Board of Directors;
- if enrolled in a Diploma di Laurea (DL), Diploma di Laurea Specialistica (LS), Laurea Magistrale (LM), PhD with study grant or medical specialisation, in Italy or abroad, to be aware that, in the event
- of awarding of the grant, attendance at such courses and the use of the PhD study grant are incompatible with the holding of the contract;
- to hold research grants awarded pursuant to Art. 22 of Law No. 240/2010;
- to hold contracts as fixed-term researcher pursuant to Art. 24 of Law No. 240/2010;
- to have attended a PhD indicating the period, University, date on which the qualification was obtained, cycle, exact title of the course and CUN Area;
- period of enjoyment of any PhD study grant;
- address to which communications concerning this competition are to be sent; it is mandatory to indicate a personal e-mail address as well;
- possible request to conduct the interview via videoconference indicating the phone number and motivation.

In the application for participating in the competition, the applicant, pursuant to Law No. 104 of 5 February 1992, must specify any aid necessary in relation to his/her needs, as well as any need for additional time for the interview.

When submitting the application for participating in the selection, the applicant must annex the following documents:

1. a photocopy of the applicant's identity document in course of validity;
2. *curriculum vitae* in European format, dated and signed;



3. a list, signed by the applicant, of the publications and other research products, and other titles considered appropriate for the purposes of the selection such as specialisation degrees, certificates of attendance to postgraduate courses, obtained in Italy or abroad, contracts, study grant or research assignments both in Italy and abroad (cf. Annex B);
4. any publications, other research products or other titles that the candidate wishes to assert to the purpose of the procedure, numbered in progressive order matching the relating numbered list;
5. in the event of foreign applicant, it is necessary to annex: a copy of the residence permit (if the applicant is already in its possession).

As regards qualifications obtained abroad, for admission to the selection, the applicant is required as follows:

- if recognised as valid in the Italian territory, the applicant must indicate in the application the details of comparability/equivalence of the qualifications obtained abroad;
- if not recognised as valid in the Italian territory, the applicant must annex copy of the qualification obtained abroad (obligatory annex) with a declaration translated in Italian or in English language and a certified copy of the declaration of equivalent qualification (obligatory annex), issued by the competent Italian diplomatic and consular authorities abroad, with the certificate of the exams taken or the diploma supplement.

As regards all other qualifications obtained abroad which the applicant intends to provide for the selection as required by the call, it is necessary to annex to the application a copy of the qualifications. Each annex must be in PDF format and must not be larger than 30 MB.

Pursuant to Law No. 183/2011, the Administration cannot accept or request certificates, but only declarations in lieu of certifications or affidavits submitted in substitution of the actual certificates signed by the applicant and submitted together with an unauthenticated photocopy of the applicant's valid identify document. The Administration has the right to carry out suitable controls on the truthfulness of the contents of the declarations in lieu pursuant to what provided for by Presidential Decree No. 445/2000.

The requirements and the qualifications must be owned on the date of the expiry of the call.

It is mandatory to indicate a personal e-mail address to which the communications concerning this selection will be sent. Any variation of said address must be promptly communicated to the Selections Office and Legal Management (Sevizio Assegni di ricerca).

### **Article 6 Examining Commission**

The Examining Commission is appointed with Chancellor's decree, upon proposal of the Structure's Council, at the expiry of the deadline for submitting the application.

### **Article 7 Selection**

During its first meeting, the Examining Commission will establish the assessment criteria and procedures explicitly, according to what provided for by the call, fixing a minimum score for admission to the interview.

The overall assessment is expressed in hundredths, as indicated hereafter:

- up to a maximum of 60 points for qualifications and scientific-professional curriculum; to that end, the following will be object of assessment:
  - graduation vote;
  - PhD (if not already provided for as requirement for admission);
  - specialisation degrees and certificates of attendance to postgraduate courses, obtained in Italy or abroad;
  - publications and other research products;



- documented research activities – as long as the beginning date and duration of the activities are duly certified – carried out at the premises of public and private subjects with contracts, study grants or assignments, both in Italy and abroad;
- up to 40 points for the interview.

Within the context of its autonomy, the Commission can integrate the above, depending on the research project and on what provided for by this call.

**In particular will be evaluated:**

CODE	
1	Candidates are required to have experience in using gas muon detectors for particle collider experiments, and in commissioning these detectors in high-energy physics experiments.
2	-

The applicants will be informed before the interview on the results of the assessment of the qualifications.

The interview can be carried out via videoconference, if authorised by the Commission, as long as it is possible to recognise with certainty the applicant's identity, to be verified subsequently at the moment of the signing of the contract. To that end, the applicant must indicate in the application the request to carry out the interview via videoconference specifying the reasons. Failed connection at the time established or late connection, unless due to force majeure, will be considered as a renunciation to participate in the selection.

During the interview, the Commission will verify the applicant's ability to cover the topics and themes related to the research project and his/her knowledge of at least one foreign language, according to what provided for by the call.

CODE	PROGRAMME OF THE INTERVIEW
1	The interview will focus on the use of gas detectors for high-energy physics experiments, in particular for high-luminosity applications with high particle rates. The issues associated with the installation and commissioning of Triple-GEM detectors in the CMS experiment at CERN will also be discussed.
2	Presentation of a representative research paper related to the theme of the project with relative discussion.

The assessment of the knowledge of the foreign language (or foreign languages) as provided for by this call will be carried out during the selection according to the modalities established by the Commission. As regards foreign applicants, the knowledge of Italian will be assessed.

**The date and place of the interview will be communicated with at least a 20-day notice through a communication published on the website of University of Bergamo <http://www.unibg.it>, under the section "Concorsi e selezioni-Assegni. Borse e contratti di ricerca-Assegni di ricerca" supervised by the Servizio Assegni di ricerca.**

**This notice is to all intents and purposes an official communication. Any changes related to the date of the interview will be communicated to the admitted applicants with at least a 20-day notice through the publication of a communication on the University's website under the section "Concorsi e selezioni-Assegni. Borse e contratti di ricerca-Assegni di ricerca".**

Failure to show up at the interview will be considered as a renunciation to participate in the competition for all practical purposes.

At the end of the works, the Commission draws up the list of the applicants examined, indicating the votes obtained during the interview.

The Commission will draft the merit list in descending order according to the overall final score, which is obtained by adding the score of the qualifications and the score of the interview. The overall final score identifies the winner or winners, depending on the number of grants established for the competition.

Applicants will be inserted in the merit list if they obtain at least 30 out of the 40 points available for the interview.



In the event of equal score, the PhD or equivalent qualification obtained abroad will constitute a preferential qualification, if not required for admission; in the event of equal merit, the younger applicant will be preferred.

The merit list is approved, under the condition precedent of verifying the requirements provided for by the call, with Chancellor's Decree and published on the website under the section "*Concorsi e selezioni-Assegni. Borse e contratti di ricerca-Assegni di ricerca*". The term for submitting any appeals will run from the date of publication.

Should the winning applicant renounce to or withdrawal from the contract, the grant can be awarded to successful applicants according to the order of the merit list, upon prior resolution of the Research Structure.

### **Article 8**

#### **Signing of the contract and withdrawal**

The winning applicant, in possession of the mentioned requirements, will sign an autonomous work contract under private law with effect, normally, on the first day of the month following the month in which the acts are approved.

As regards foreign applicants needing a residence permit, the date of beginning of the contract will be postponed and subject to the completion of the issuing procedure of said permit.

In the event of admission with reservation for qualifications obtained abroad not recognized as valid in the Italian territory, the winner, prior to signing the contract must submit the documents requested by the office within the terms peremptorily established.

The winner of the selection, convoked by the Administrative Office to sign the contract, will lose the right to the grant for collaboration in research activities if he/she does not state to accept the contract or does not begin the activity within the established term, without prejudice to health reasons or causes of force majeure duly and promptly documented.

Each grant as mentioned under Art. 1 can be renewed, under the terms and conditions provided for by the above mentioned Regulations; in any case, the relationship established pursuant to Art. 22 of Law No. 240/2010, including the possible renewal, cannot last more than six years, including the possible renewal, with the exclusion of the period in which the grant was used in coincidence with the PhD within the maximum limit of the legal duration of the relevant course.

### **Article 9**

#### **Rights and obligations of the grant holder**

The employment relationship is governed by an individual contract, according to what provided for by the applicable laws and by the University's Regulations.

The research activity is flexible, it has a continuous nature, not merely occasional, and is carried out under the leadership of the Scientific Director, with autonomous conditions as to the research programme and its realisation, without any predetermined working hours.

The grant holder must refer to the Research structure that requested the activation of the contract.

The research activity of the grant holder is carried out within the context of the relevant Structure and in other Structures of the University on the basis of the research programme. Any research activities conducted outside of the University must be approved by the Council of the Research structure.

A period of permanence abroad is allowed at one or more qualified universities or research institutes, upon prior authorisation of the Council of the Research structure. During the period spent abroad, the amount of the grant will be increased by fifty percent to be charged to the Structure of reference or to the funds assigned to the Research structure.

The grant holder can participate in all the activities programmed by the Research structure for the promotion of researches and the dissemination of relevant results; he/she can be a member of the profit exams commissions, in quality of expert.

The Research structure must provide the grant holder all necessary support for realising his/her research programme, guaranteeing access to the equipment, the necessary resources and the use of the technical-administrative services.





The grant holder must comply with what provided for by the University's applicable Regulations on research integrity and ethics.

The winner of the selection who is entitled to the grant, at the time of the signature of the individual contract, should be committed, under penalty of forfeiture of the right to the research grant, to confidentiality and preventive transfer to the University of all intellectual property rights relating to the results produced and/or achieved during the research activities carried out at the University and she/he has the right to be recognized as the author of the his/her results achieved and/or products. The University recognizes the application of the same economic conditions that the University Patent Regulation grants to its Professors/Researchers.

#### **Article 10**

##### **Taxes, welfare, insurance and mission**

With reference to taxes, the grants are subject to what provided for under Art. 4 of Law No. 476/1984, while as regards welfare, they are subject to what provided for under Art. 2, paragraph 26 and following, of Law No. 335/1995, and following amendments. With reference to mandatory maternity leave, they are subject to what provided for by the Decree of the Ministry of Labour and Welfare of 12 July 2007, published in the Official Gazette No. 247 of 23 October 2007, and, as regards sickness leave, they are subject to what provided for by Art. 1, paragraph 788, of Law No. 296 of 27 December 2006, and following amendments.

In the period of mandatory maternity leave, the bonus paid by INPS pursuant to Art. 5 of the mentioned Decree of 12 July 2007 is integrated by the University up to the payment of the total amount of the research grant.

The University will cover the grant holder's accident insurance and civil liability toward third parties insurance within the scope of his/her research activity.

The covering of the grant holder's mission expenses is financed through the funds of the Scientific Director in charge or the Research structure, according to the modalities provided for by the University's regulations as to missions.

#### **Article 11**

##### **Processing of personal data**

In accordance with articles 13 and 14 of Regulation (EU) 2016/679 (GDPR), on the protection of personal data, and with D. Lgs. n. 196 /2003 and subsequent amendments, it is made known that data is controlled and managed by the legal representative of the University of Bergamo, via Salvecchio 19, - 24129 Bergamo.

Data will be collected exclusively for the present bid purposes and will be kept only for the necessary time to complete the relevant procedures. The data treatment controller will be appointed within the managing unit in charge of bidding procedure, who will carry out the treatment with all due respect of propriety, legitimacy, scope, transparency and confidentiality of the treatment; and data will be used exclusively for purposes connected to the selection and further conferment of the role and possible contract drafting, as well as management of the following employment position, in compliance with current regulations. Data will be kept for the necessary time to accomplish the selection purposes, subject to the application of norms on document retention, and will be transferred uniquely to public administration bodies directly concerned with the juridical and economic position of the selected applicant, treated in compliance with current regulations and used for personal, welfare, insurance and fiscal position management. Data will be handled by appointed staff through the acquisition of printed and electronic documents and using, even digitalised, filing procedures, to guarantee confidentiality; data treatment will be carried out through a coordinated organization and processing system, applying elevated safety standards. Furthermore, data will not be used for profiling. Applicants who have provided their personal data will be able to access it and exercise their rights as by art. 16 to 22 of GDPR UE 2016/679. Any safeguard request can be addressed to the University Data Protection Officer, who can be contacted through the university website (Privacy and Personal Data Protection section), e-mail [dpo@unibg.it](mailto:dpo@unibg.it). In addition to the right of complaint which can be presented to the Italian Data Protection Authority, Piazza Venezia 11, 00187 Roma.



By presenting their application, candidates thereby authorise and fully consent to publication on the University institutional website of all information concerning the current bid, their own data and the contents of their CV in accordance with 111-bis of D.Lgs.196/2003 stating that, within the scope limits defined by art. 6, par. 1, letter b), of the Regulation, consent is not due for personal data present in a submitted CV.

#### **Article 12**

##### **Person in charge of the procedure**

The Person in charge of the selection procedure within this call is Dr. Domenico Panetta, manager of Area risorse umane, Via dei Caniana, 2 - 24127 Bergamo, phone (+39) 035 2052 669 - 583 - 878, e-mail address: [assegni.ricerca@unibg.it](mailto:assegni.ricerca@unibg.it).

#### **Article 13**

##### **Publication**

This call is published in the University's Official Registry, on the website of the Conference of the Italian University Chancellors ([www.cru.it](http://www.cru.it)), on the website of the Ministry of Education, Research and University (MIUR) at the link <http://bandi.miur.it>, and on the website of the European Union at the link <http://ec.europa.eu/euraxess> in the form of a notice.

The full competition and related annexed forms are available on the website of the University of Bergamo [www.unibg.it](http://www.unibg.it) under the specially devoted section "*Concorsi e selezioni-Assegni. Borse e contratti di ricerca-Assegni di ricerca*".

The call is also published on "Piattaforma Integrata Concorsi Atenei" (PICA) - link <http://pica.cineca.it/unibg/> from which it is possible to fill the application online for participation at the selection.

#### **Article 14**

##### **Final provisions**

For all matters not provided for by this call, the following will be applied: Law No. 240/2010 and following amendments and integrations, the University's Regulations on the awarding of research grants, the University's Regulations in force, and the Regulations on employment relationships in the public administration.

Bergamo, *as per protocol registration*

THE CHANCELLOR

(Prof. Sergio Cavalieri)

Documento firmato digitalmente ai sensi  
dell'art. 24 del D. Lgs. 82/2005



## ANNEX A

### RESEARCH PROJECT - CODE 1

#### ***"Commissioning and R&D of Triple-GEM detectors for the CMS experiment at CERN"***

**Research structure:** Department of Engineering and applied sciences

**Duration of the grant:** 12 months

**Scientific Area:** 02 - Scienze fisiche

**Academic recruitment field:** 02/A1 - Experimental physics of fundamental interactions

**Academic discipline:** FIS/01 - Experimental physics

**Scientific Director:** Prof.ssa Serena Mattiazzo

The research activity will focus on the development and operation of gaseous particle detectors for applications in high energy physics. The main context of the activity is the program of improvement of the Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC), in particular with regard to the project of upgrading and completing the CMS muon detection system with Triple-GEM (Gas Electron Multiplier) detectors.

Although the performance achieved by the LHC during the early stages of data taking allowed the CMS experiment to collect sufficient statistics for the observation of the Higgs boson and for the study of many other phenomena, for the next few years changes are planned to the accelerator itself, to reach a luminosity 5-7 times higher than that for which CMS was designed. The main purpose of this upgrade is to complete the study of the properties of the Higgs boson and continue the search for new phenomena not predicted by the standard model, such as the existence of dark matter. As a result of the improvements expected from LHC, the performance of the various detectors will be put to the test, in particular there will be an intensification of the flux of background particles (mainly neutrons and photons), especially in the regions closer to the beamline, together with an increase in the pileup, that is the number of overlapping interactions produced during collisions. The Triple-GEM technology was therefore selected for installation in the CMS muon system because it is capable of withstanding and detecting high fluxes of incident particles, and also has an excellent 100  $\mu\text{m}$  spatial resolution and high radiation resistance. The upgrade program foresees the installation of a total of three detector stations equipped with Triple-GEM: the first one, called GE1/1, has already been installed in 2019-2020 and is currently in the commissioning phase, while the other two, called GE2/1 and ME0, will be installed in the coming years.

The research project will involve intensive participation and coordination of the commissioning activities of the GE1/1 station, with the aim of preparing the detectors for the next period of data taking expected to start in summer 2022. In particular, it will be necessary to proceed with the verification of the performance of the installed detectors, such as their efficiency in particle detection, and compare it with the results obtained in the R&D phases. In addition, it will be necessary to complete the integration of the GE1/1 station in the CMS system in terms of remote control of the detectors and data acquisition system, so that it will be able to operate together with the rest of the experiment and acquire data useful for physics purposes. Once data taking starts in summer 2022, the activity will include the analysis of the collected data, with the aim on the one hand to confirm the performance of the Triple-GEM detectors and on the other hand to verify their contribution to the CMS data taking. In parallel, the research project will also include participation in the activities related to the preparation of the other two GEM stations, GE2/1 and ME0. With regard to GE2/1, it will be possible to take part in the construction and qualification of the 72 detectors planned in the station. For ME0 instead, the present R&D activities are mainly focused on the measurement of the rate capability of the detectors, the maximum rate of particles that they can support, and the probability that they develop a discharge potentially harmful to their operation.



## RESEARCH PROJECT - CODE 2

### *“Institutions, Social Norms and Preferences”*

**Research structure:** Department of Economics

**Duration of the grant:** 33 months

**Scientific Area:** 13 – Economics and Statistics

**Academic recruitment field:** 13/A1 – Economics

**Academic discipline:** SECS-P/01 – Economics

**Scientific Director:** Prof. Paolo Buonanno

The proper functioning of societies and economic and social activities is based on the existence of cooperation, trust, coordination between individuals and, more generally, on the existence of “social preferences”. Trying to explain the differences in economic growth and development rates, or why some nations are richer than others, a growing body of the economic literature points to differences in individual behavior in social interactions. Why we see so many significant differences between countries and differences even within the same country or city is still an open question. A possible answer to this question is the existence of prosocial norms and cultural traits which may or may not favor the success of cooperation and trust.

Similarly to the spirit in which STEM sciences draw on the data to verify their theories, economic experiments allow us to obtain the necessary behavioral principles to understand such observed data patterns in economics data. In contrast to other sciences, however, the experimental approach has not progressed to the point of being a cornerstone of the scientific method in economics. Moreover, while many experimental studies focus on social preferences per se, surprisingly little has been done to link laboratory data with real data on social institutions.

This project aims to broaden the understanding of the relationship between social preferences and the establishment of social and cultural norms in a group of individuals. By combining multiple-laboratories and lab-in-the-field experiments with non-experimental data (e.g. administrative, historical), this project aims to assess the influence of current and historical factors contributing to the quality of institutions to have a sharper inference on the prosocial behavior observed in the lab and, in turn, draw deeper policy-relevant conclusions.