



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. 9 Experienced grants for conducting research pursuant to art. 22 of law no. 240/2010 at the Departments of University of Bergamo - PICA code 24AR012

THE CHANCELLOR

- GIVEN Law No. 168 of 9 May 1989 laying down rules on the "Establishment of MIUR";
- GIVEN Law No. 240 of 30 December 2010 " *Norms in terms of organization of universities, of academic personnel and their recruitment, as well as mandate to the Government to subsidize quality and efficiency of academic systems* ", in particular art. 22 on research grants;
- GIVEN the Statute of the University of Bergamo enacted with Chancellor's Decree Index No. 570/2023 of 01.08.2023;
- GIVEN the University's current Regulations for awarding grants for conducting research;
- 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 " *Extension of terms provided for by legislative provisions* ", 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;
- GIVEN - the D.L. No. 36/2022, converted, with amendments, into Law no. 79/2022, which in art. 14 paragraph 6-quaterdecies establishes that "for one hundred and eighty days following the entry into force of the decree conversion law, limited to the already programmed resources on the mentioned date, or approved by the respective governing structures within the mentioned term of one hundred and eighty days , universities [...] may call for awarding procedures of research grants pursuant to article 22 of law no. 240, in the current text before the entry into force of this decree conversion law";
- the Legislative Decree n. 198/2022 and art. 6 paragraph 1 establishes that the transitional regulation relating to the possibility of calling for research grants has been extended until 31 December 2023;
- the Legislative Decree n.215/2023 and art. 6 paragraph 4 establishes that the transitional regulation relating to the possibility of calling for research grants has been extended until 31 July 2024;
- 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;
- the University's Patent Regulations enacted with Chancellor's Decree Index No. 390/2016 of 19 July 2016 and amended with Chancellor's Decree Index No. 158/2018 of 26 February 2018 and with Chancellor's Decree Index No 421/2020, of 9.9.2020;
- ACQUIRED the resolutions of the Councils of the Structures involved referred to in Annex A which approved the annual research projects and resolved on the requirements for candidates' admission to the selection;
- GIVEN the resolutions of the Academic Senate and of the Board of Directors reported in Annex A which approved the research grants activation in various Departments;
- ASCERTAINED the financial backing reported in annex A;



DECREES

Article 1

Call for public selection

9 public selections are launched based on qualifications and interview for the awarding of No. 9 grants for conducting research pursuant to Art. 22 of L. No. 240/2010 with a contract under private law as specified in Annex A to this notice which constitutes an integral part thereof.

Each 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 Annex A).**
- **knowledge of one or more foreign languages (see the following Annex A).**

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 (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:

- in the event of qualifications already recognised as valid in the Italian territory, must 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**, must proceed with these indications:

Apply to the University of Bergamo for the equalization of the training course and the release of the final parchment through the instructions published at the following link:

<https://www.unibg.it/ricerca/lavorare-ricerca/dottorati-ricerca/iscriversi-dottorato>

The University of Bergamo can recognize a PhD degree just in case of relevance to the ones already activated at the University of Bergamo. For the other PhD degrees offered by Italian Universities, refer to the link: <https://www.universitaly.it/index.php/public/cercaOffPL>.

After obtaining the equivalence, the candidate must request the "Certificate of Comparability" from the CIMEA (Academic Equivalence Mobility Information Center), by registering on the Center's website via the link that will be provided by the undersigned Administration.

In order to ensure the widest participation in the selection, the candidate with a qualification not yet recognised or with the recognition procedure in progress, **must obligatorily attach to the application, under penalty of exclusion, one or more of the following documents:**

- **a certified copy of the statement of qualification equivalence**, issued by the competent Italian diplomatic and consular authorities abroad;
- **the diploma supplement or transcript of record**, legalized and written in Italian or in English;
- **a copy of the qualification** with a translation into Italian or English.

In the event of qualifications not yet recognized, the candidate is admitted with reserve.

If the candidate turns out to be the winner, he must start the equivalence procedure above indicated, within the terms peremptorily established by the Administration following the approval degree, in order to sign the contract.

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.**

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 cannot 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.

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. 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 the submission procedure must be completed by and no later than **12.00 (Italian time) on the thirtieth day** from the notice publication date on the University website. Should the indicated deadline fall on a non-business day, it shall be postponed no later than 12.00 (Italian time) of the next business day.

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

- **no digital signature:** in this case the candidate has 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 Annex A, indicating the 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 Annex A;
- to possess other qualifications useful for the assessment;
- to know the foreign language required by this call;
- 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).

For the abroad qualification, required for the purposes of selection admission, it's also necessary:

- 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 attach to the application **one or more of the following documents**: a certified copy of the statement of qualification equivalence, issued by the competent Italian diplomatic and consular authorities abroad; the diploma supplement or transcript of record, legalized and written in Italian or in English; a copy of the qualification with a translation into Italian or English.

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 Personale TA e collaboratori).

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.

The Commission is authorized to carry out the online procedure, in the understanding that such method can be adopted until the conclusion of the relevant works, guaranteeing the security and traceability of communications.

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.

The Commission will evaluate, in particular, what is indicated in Annex A

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

The Commission reserves the right to carry out the interview via videoconference, through the use of IT and digital tools, guaranteeing the adoption of technical solutions that ensure the publicity of the same, the identification of the participants, as well as the security of communications. and their traceability. 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.

The interview program is indicated in Annex A

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.



The Commission reserves the right to verify the knowledge of the Italian language for foreign candidates; in this case, Italian language knowledge will be ascertained under ineligibility penalty and will not compete for the final score, unless otherwise established by the Commission

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.

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 case of conditional admission for the achievement of an abroad qualification not recognized as valid in Italy, the winner, before signing the contract, must produce the required documentation 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.

The research fellow may participate in activities performed on behalf of third parties pursuant to art. 66 of Presidential Decree 382/80, in the context of issues related to its project, and the distribution of related proceeds, in accordance with the current University Regulations on the subject.

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.

The data, not subject to profiling, will be processed by the appointed personnel through the acquisition of documents in paper and electronic form and through archiving procedures, including computerized ones, which will guarantee their confidentiality; the data processing will be carried out with related organization and processing logics and high security standards will be adopted. Candidates who have provided their data will be able to access them and exercise the rights provided for by the art. 16 to 22 from the EU GDPR 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), at e-mail 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 Isabella Arfiero of Personale TA e Collaboratori, Viale Papa Giovanni XXIII, 106 - 24121 Bergamo, phone (+39) 035 2052 594 - 583 - 878, e-mail address: 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), 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 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

"Evidence Based Medicine, professional expertise and the development of a "dissident" community of practice during the COVID-19 pandemic: the case of Hydroxychloroquin in Italy"

Research structure: Department of Management

Department resolution: 16.10.2023

Resolution of the Academic Senate: 23.10.2023

Resolution of the Board of Directors: 25.10.2023

Gross annual amount: € 24.216,00

Financial coverage:

STARS2123AZ1SR - CUP: F59C20000390001

Duration of the grant: 24 months

Scientific area: 14 - Political and Social Sciences

Competition sector: 14/C1 - General Sociology

Scientific disciplinary sector: SPS/07 - General Sociology

Scientific director: Prof. Stefano Tomelleri

Entry requirement:

Dottorato di ricerca Area CUN 14 - Scienze Politiche e Sociali

Knowledge of the language: Italian, English

Additional qualifications evaluated by the Commission:

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Interview schedule:

The interview will verify the candidate's knowledge about the sociology of health and medicine, the narrative approach on the study of organizations, and the main theoretical categories developed by the Science and Technology Studies (STS) applied to medicine. In particular, the ability of the candidate to combine the interpretation of socio-technical situated practices with the broader organization of socio-health systems and with the prevailing epistemological paradigms will be assessed.

In-depth knowledge of qualitative methods of social research and, in particular of the ethnographic method, will also be verified.

Description of the research project:

The COVID-19 pandemic challenges the epistemological model of Evidence Based Medicine which supposes the clinical decision-making process based on objective evidence gained through validation by epistemic communities and international scientific agencies. The spread of this new form of the SARS virus, about which there was no specific previous knowledge, forced the world's leading experts and health professionals to face the new pathology metaphorically "with bare hands", without consolidated and accredited repertoire of biomedical data and clinical protocols. In this scenario, dominated by extensive debates and tensions between scientific communities and policy making agencies, practices of reconfiguring diagnostic-therapeutic processes emerged inside and outside hospital institutions, redefining scientific and clinical boundaries, and professional relationships and repertoires. In Italy, the most emblematic cases is represented by the development and accreditation



of the protocol of early home treatment, an approach to the pathology around which a community of family and hospital doctors supported by clinical efficacy has been consolidating from March 2020.

The research will investigate both the social and communicative interactions, and the professional and organizational practices through which the informal health care network has self-organized and developed, becoming a sort of "dissident" community of practice, despite systemic and institutional resistance. The theoretical aspects that will be investigated lie on the border between the sociology of medicine and the social studies of science and technology. The research questions are the following:

1. Analyze the role of digital communication technologies in building and consolidating the community of practice during the pandemic crisis.
2. Analyze the organizational implications deriving from the self-organization process of an informal professional group.
3. Analyze the tension between the universalistic component of EBM and the experiential knowledge of clinical activity during a systemic crisis.

To investigate these dynamics, ethnographic method will be adopted, which envisages the presence of the researcher as a participating observer in the social contexts through which the community of practice has developed. Other data gathering tools will be the semi-structured interview and the collection of documentary material.

Description of expected results: originality and impact on the advancement of knowledge

On the scientific plan, it is expected to identify factors facilitating and hindering the creation of communities of practice in the medical field during a global emergency and how this informal network fits into the organizational configuration of social-health services. As far as public engagement is concerned, the results of the study will be able to increase professional and systemic resilience, increasing the coping skills of healthcare professionals and facilitating the diffusion in the scientific debate and in public opinion of alternative perspectives and divergent visions, from which unexpected or poorly explored resources while falling within the confines of scientific knowledge (<https://time.com/5816874/italy-coronavirus-patients-treating-home/>). Finally, in terms of strategic synergies, the study consolidates the collaboration with the Nuffield Department of Primary Care Health Sciences of the University of Oxford, with which we already had opportunities for scientific exchange and joint research in the past on issues of social knowledge of medicine and professional practices in the medical-health field. We expect that thanks to this project this partnership will be structural and lasting, thus allowing to start further projects in the medium and long term.



RESEARCH PROJECT - CODE 2

"InnoVative chemistry as a driver for New wearable Sensors"

Research structure: Department of Engineering and Applied Sciences

Department resolution: 10.11.2023

Resolution of the Academic Senate: 20.11.2023

Resolution of the Board of Directors: 23.11.2023

Gross annual amount: € 28.200,00

Financial coverage:

STARS2123AZ1SRDIP – CUP F59C20000390001

Duration of the grant: 24 months

Scientific area: 03 - Chemistry

Competition sector: 03/B1 - Principles of Chemistry and Inorganic Systems

Scientific disciplinary sector: CHIM/03 - General and Inorganic Chemistry

Scientific director: Prof. Giuseppe Rosace

Entry requirement:

Dottorato di ricerca Area CUN 09 - Ingegneria industriale e dell'informazione

Knowledge of the language: English

Additional qualifications evaluated by the Commission:

Skills in the research field: synthesis of nanoparticles and related functionalization techniques; spectroscopic characterization; functionalization (coating or grafting) of macromolecules of natural origin for textile use. Furthermore, experience in the implementation of standards, especially in the textile sector, will be appreciated.

Interview schedule:

The Commission will carry out the comparative assessment of candidates by an interview to ascertaining the specific competencies required on the following topics: synthesis and functionalization of nanoparticles; chemical fundamentals of technologies for materials. Chemistry of materials for textile use. Optoelectronic characterization techniques.

Description of the research project:

Recently, alongside the growing number of users who daily access the Internet, intended as an infrastructure for sharing information globally, the spread of "intelligent" objects is also witnessing. They are also called "smart objects" and can communicate using various existing technologies, protocols and standards. It is foreseeable that, in the next future, an ever-increasing amount of content and services will be available in real-time through the use of "smart" devices, paving the way for new applications and a new way of living and working.

To reply to the increasing demand for real-time monitoring, in recent decades, the attention of research has focused on creating smart textiles. These are textile substrates developed as sensing devices that are intended to be worn by their intrinsic nature. Particular attention is focused on studying the "stimuli-responsive" properties of these materials, investigating the in-situ reading capability of surfaces made sensitive to specific analytes.

The project aims to integrate selected molecules, characterized by specific sensing properties, with polymer textiles through surface functionalization without affecting the main and advantageous properties of the treated fabric. The goal is to realize wearable transducers for various application



fields, from sports to medical health, to the environmental sector, allowing the monitoring of specific parameters.

By integrating the known potential of textile materials with innovative sensing technology, the engineered transducers will be designed, developed and characterized not only aiming at the technical performance but also evaluating the toxicological aspects, for humans and the environment, during the entire life cycle.

The choice of the molecules sensitive to the selected analytes will be carried out according to the detection environments investigated. In the literature, there are different molecules able of providing a colourimetric variation as a function of pH changes, such as Nitrazine Yellow, Methyl Red, Litmus or Alizarin Red S. Their use will allow investigating changes in the sweat pH, which is an indicator for the dehydration of the organism. Contextually, Alizarin Red S (ARS) will be tested to detect also glucose in sweat, which is an indicator of the blood sugar level. The goal is to study this dye in combination with boronic acids, known in the literature for their use as fluorimetric and colourimetric probes for sugars. Glucose molecules can be complexed by Alizarin Red S / boronic acid used to functionalize textile surfaces, thus releasing the ARS dye that will be responsible for the colourimetric variation of the support.

In the field of monitoring environmental parameters (e.g. humidity and/or temperature), the project proposes an innovative approach thanks to the use of carbon nanotubes and 2D inorganic materials (transition metal dichalcogenides (TMDCs)). With a lamellar structure similar to graphite but with larger interlayer spacing, these semiconductors have interesting thermoelectric properties. They are characterized by the formula MX_2 , where M represents an atom of a transition metal (e.g. Mo or W) and X a chalcogen (S, Se, or Te). Among TMDCs, tungsten diselenide (WSe_2) is characterized by triatomic layers of selenium and tungsten held together by Van der Waals forces that allow the material to be exfoliated in monolayers. By reducing its size to the sub-nanometer scale, monolayers with distinct properties able to provide intense photoluminescence can be obtained. As a semiconductor, WSe_2 is successfully used for various applications such as photodetectors, field-effect transistors (FETs), flexible solar cells and light-emitting devices, lithium-ion battery anodes and also in the treatment of water. They are also used to realize toxic or polluting gas sensors (e.g. NO_2). The polymeric matrix ables of hosting the functional molecules can be made using the sol-gel technique that, compared to other technologies, has numerous advantages in producing wearable transducers. First of all, the organic functional molecules can be immobilized into the inorganic matrix giving rise to a material characterized by high porosity and three-dimensional structure. The coatings developed show optical transparency in a wide range of wavelengths (from UV to IR), chemical and thermal stability. Other properties affecting the performance of the matrix, such as leaching of the dye and response time, flexibility, hydrophobicity (which will allow optimizing the performance of gas sensors), can be optimized by mixing inorganic precursors with organoalkoxysilanes (Ormosils). Since Ormosils are among the most interesting precursors for realizing coatings with "stimuli-responsive" properties, they will be used in this project following the so-called "bottom-up" approach. The latter can allow controlling structure, morphology and composition at the finest level of organic-inorganic molecular units that make up the host matrix.



RESEARCH PROJECT - CODE 3

"Third litigation funding: problems and opportunities for greater access to the protection of rights in the economic crisis induced by the pandemic"

Research structure: Department of Law
Department resolution: 17.10.2023

Resolution of the Academic Senate: 23.10.2023
Resolution of the Board of Directors: 25.10.2023

Gross annual amount: € 24.216,00
Financial coverage:
STARS2022AZ1SR – Budget di Ateneo 2023

Duration of the grant: 16 months

Scientific area: 12 – Law Studies
Competition sector: 12/F1 – Civil Procedural Law
Scientific disciplinary sector: IUS/15 – Civil Procedural Law

Scientific director: Prof.ssa Mariacarla Giorgetti

Entry requirement:
Dottorato di ricerca Area CUN 12 – Scienze Giuridiche

Knowledge of the language: English

Additional qualifications evaluated by the Commission:

A higher score will be awarded by the Commission for the possession of a PhD relating to the subject of Civil procedural law or for periods of research grant in the same subject.

Interview schedule:

Discussion of the publications, of the candidate's cultural profile and his aptitude for research with ascertainment of competence in relation to the subject of Civil procedural law. Assessment of knowledge of the English language.

Description of the research project:

Individual and corporate businesses, VAT numbers and professionals have suffered huge losses due to the lockdown and, above all, increasingly feel the need to renegotiate contracts which, due to the precarious and unpredictable future scenarios, are no longer actually honorable under the original conditions; not to be silent about the delays in the supply of raw materials or semi-finished products which, in cascade, risk generating further non-fulfillment or delays. A dispute is therefore being generated that is a direct consequence of the pandemic, which in turn constitutes a cost that adds to the economic problems induced by the virus. In such a context, even the legal protection necessary to cope with the difficulties that have arisen, represents a primary asset which – in spite of the wording of art. 24 of the Constitution, according to which everyone can take legal action for the protection of their subjective rights and legitimate interests – risks being concretely compromised. This research project aims to investigate the issue of litigation funding, an institution established abroad (in the United States, Canada and Australia but which is developing very rapidly also in Great Britain, Germany and Switzerland) and of which 'he also begins to take an interest in our system, where, however, there is no complete study that examines its compatibility with the various precepts that constitute the fulcrum of our system.



In the L.F. there is an agreement between a third party lender who finances the dispute: the first relieves himself of responsibility by stating that he is investing in a dispute in which he has no interest, taking upon himself, in whole or in part, the costs of the same and the risk, in whole or in part, of losing (including the payment of legal costs to the counterparty). In case of victory, the lender will be entitled to the consideration, calculated as a percentage of what was obtained; in case of unsuccessfulness, since it is an operation that transfers the risk of failure of the dispute to the lender, the funder will not have to be repaid.

As for the articulation of the project, it will study the following areas:

1) The contract of L.F. : classification and problems

The L.F. underlies a way of bypassing the prohibition of the lite quota agreement, which prohibits lawyers from receiving the asset object of the service or a portion thereof as compensation. The ban, however, would not operate against third parties, allowing the intermediation of a third party, as happens with the instrument of litigation financing: but how compatible is this figure with our legal system? Isn't it an abuse of the right, that is, a distorted use of a tool to achieve different and even prohibited purposes?

Furthermore, litigation funding raises several questions with respect to the ban on the transfer of disputed credit pursuant to art. 1261, paragraph 2, of the Italian Civil Code

2) L.F. and civil trial:

In the civil trial. Does the borrower have to declare litigation funding in court? Can the lender be convicted? Can the funded party bind the outcome of the judgment in an unfavorable sense by confession or oath? If so, is he accountable to the lender?

3) L.F. and arbitration

From the point of view of the arbitrator, especially if appointed by the party, how is his necessary impartiality and independence reconciled with this institution? Who actually appoints the arbitrator, the appointed arbitrator must be aware of the fact that there is a third lender, are there any disclosure elements to which the arbitrator is required?

Completion times and Calendar: 16 months

First 6 months: study of the relationship between L.F. and Italian procedural system

Remaining 10 months: transposition of the research results into a monographic work and / or series of articles.



RESEARCH PROJECT - CODE 4

"Integration of Artificial Intelligence and Public Law in Italy: What implications for constitutional fundamental rights, what synergies and what opportunities?"

Research structure: Department of Law

Department resolution: 17.10.2023

Resolution of the Academic Senate: 02.05.2023

Resolution of the Board of Directors: 03.05.2023

Gross annual amount: € 25.000,00

Financial coverage:

ASSEGNO23BIDIGIU – CUP F53C23000190005

Duration of the grant: 24 months

Scientific area: 12 - Law Studies

Competition sector: 12/D1 - Administrative Law

Scientific disciplinary sector: IUS/09 - Public Law

Scientific director: Prof. Angelo Maestroni

Entry requirement: Dottorato di ricerca Area CUN 12 - Scienze Giuridiche

Knowledge of the language: English

Additional qualifications evaluated by the Commission:

Other assessable qualifications: PhD relating to Academic recruitment field: 12/D1 - Administrative Law

Interview schedule:

The interview will be intended to assess the candidate's competence in the general principles of public law and administrative law, knowledge of the topics covered by the research project, and research aptitude. The interview will be held in Italian and English.

Description of the research project:

The research project aims to contribute to the understanding of how the perception, classification, and prediction activities of Artificial Intelligence - based on data that "present themselves as they are and not as we would like them to be" and on a statistical model - can be integrated into the Italian legal system in a manner consistent with fundamental principles and constitutional rights.

An additional, but not secondary, goal is to verify the prerequisites for implementing collaboration between the various disciplinary sectors in the field of AI, and this in order to identify models that will guarantee that the applications and technologies that derive from them are in accordance with the founding values of our democracy, with particular reference to the reliability and completeness of data relating to legal and judicial issues.

The hoped-for conclusions could contribute both to the formation of shared guidelines that are useful to both the legislator and the academy, and to the regulation of this sector, which is clearly expanding. Finally, practical guidance on how to implement AI in a responsible and inclusive manner would be provided to judges, notaries, lawyers, employment consultants, business lawyers, accountants, tax professionals, and their professional associations, as well as to students and teachers who are interested in expanding their capabilities thanks to this powerful tool.



RESEARCH PROJECT - CODE 5

"MISAI - Software Engineering Methodologies of Intelligent Autonomous Systems"

Research structure: Department of Management, Information and Production Engineering

Department resolution: 21.02.2024

Resolution of the Academic Senate: 11.03.2024

Resolution of the Board of Directors: 13.03.2024

Gross annual amount: € 25.000,00.

Financial coverage:

ASSEGNI2324EXP, CUP F53C23000190005 iscritto nel budget economico 2023 assegnato all'Area Ricerca e Terza Missione.

Duration of the grant: 24 months

Scientific area: 09 - Industrial and Information Engineering

Competition sector: 09/H1 - Information Processing Systems

Scientific disciplinary sector: ING-INF/05 - Information Processing Systems

Scientific director: Prof. Angelo Gargantini

Entry requirement:

Dottorato nell'area CUN Area 01 - Scienze matematiche e informatiche o nell'area 09 - Ingegneria industriale e dell'informazione.

Knowledge of the language: English

Additional qualifications evaluated by the Commission:

Scientific publications, including doctoral thesis and experience in research relating to the topics of software engineering, testing of complex systems, validation of algorithms and artificial intelligence programs.

Interview schedule:

The interview will focus on these topics:

- Software engineering, principles, and methodologies with particular reference to AI-based software
- Use of AI to create complex software systems.
- Use of AI to support the design and validation of complex software systems.

Description of the research project:

Intelligent autonomous systems engineering is an interdisciplinary field that combines principles of software engineering, computer science, and artificial intelligence to design, develop, and validate systems that possess machine learning capabilities, adaptability, and decision-making autonomy.

The main objective of intelligent systems engineering is to establish the best processes for creating and developing systems that can internally employ artificial intelligence components. This discipline involves a series of activities ranging from the definition of system requirements and specifications to the choice of algorithms and artificial intelligence techniques to be used, up to the realization and practical implementation of the system and its validation. The project will explore innovative solutions in different fields, focusing on a rigorous approach with strong methodological and formal foundations. In conclusion, intelligent systems engineering is a discipline that aims to create methodologies and techniques for the realization of autonomous, adaptive, and intelligent systems. This rapidly growing field offers ample opportunity for innovation and the application of advanced technologies.



RESEARCH PROJECT - CODE 6

"Computational tools to support personalized medicine."

Research structure: Department of Social and Human Sciences

Department resolution: 28.02.2024

Resolution of the Academic Senate: 11.03.2024

Resolution of the Board of Directors: 13.03.2024

Gross annual amount: € 24.216,00

Financial coverage:

STARS2022AZ1SR, CUP F54I19000980001

Duration of the grant: 12 months

Scientific area: 01 - Mathematics and Informatics

Competition sector: 01/B1 - Informatics

Scientific disciplinary sector: INF/01 - Informatics

Scientific director: Prof. Paolo Cazzaniga

Entry requirement: Dottorato di ricerca Area CUN 01 - Scienze matematiche e informatiche.

Knowledge of the language: English

In particular, the following competencies will be assessed:

Algorithms for bioinformatics applications, supervised and unsupervised machine learning models.

Interview schedule:

Discussion of publications, profile of the candidate, and aptitude for research with assessment of competence in the field of bioinformatics and machine learning.

Description of the research project:

This project focuses on the definition and implementation of computational tools to support medical diagnosis and interventions of personalized medicine.

The summary of the project is the following:

1. literature review concerning single-cell data collection techniques, computational methods to analyze such data, and modelling and simulation approaches of complex systems.
2. Definition and implementation of innovative methods to define mathematical models for the analysis of complex cellular processes.
3. Validation of the computational tools exploiting both synthetic and publicly available data.
4. Dissemination of the results in international conferences and journals; improvement and extension of the computational tools developed during the project.



RESEARCH PROJECT - CODE 7

“Big Data Integration, Management and Modelling to study the impact of Innovation, Sustainability and Green Revolution.”

Research structure: Department of Economics

Department resolution: 28.02.2024

Resolution of the Academic Senate: 11.03.2024

Resolution of the Board of Directors: 13.03.2024

Gross annual amount: € 25.000,00

Financial coverage:

ASSEGNO24BIDSE – CUP. F53C24000110005

Duration of the grant: 24 months

Scientific area: 13 – Economics and Statistics

Competition sector: 13/D2 – Economic Statistics

Scientific disciplinary sector: SECS-S/03 – Economic Statistics

Scientific director: Prof. Daniele Toninelli

Entry requirement:

Dottorato di ricerca Area CUN 13 – Scienze economiche e statistiche

Knowledge of the language: English

In particular, the following competencies will be assessed:

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Interview schedule:

Discussion of candidate's publications and profiles and about past and planned research topics.

Description of the research project:

This research is aimed at studying the impact of the adoption of innovation approaches (such as based on and integrating Artificial Intelligence tools), green technologies and sustainability best practices on the performances of private firms and institutions. With this aim, we will rely on the integration and management of big data coming from a vast range of available sources: both traditional (administrative records, business balance sheets, survey data collected for this specific purpose, data on patent applications and publications, and so forth) and new type of data sources (for example social media data, web scraping data, network data) will be integrated and used in order to assess the potential and actual effects of modern technologies (e.g., the adoption of the AI in the firm's production or administrative framework), green policies and sustainable practices on firms and institutions performances. The integration of such types of data will allow to integrate and apply a vast group of statistical techniques, including time-series models, multilevel models, machine learning algorithms and text mining methods. This would allow on the one hand to identify key variables able to enhance the firms/institutions performances, on the other hand to use these factors to predict future performances and to plan future strategies of sustainable development. The main expected outcome of this project is the publication of a series of academic papers in top international research journals.



RESEARCH PROJECT - CODE 8

"Technological innovation and criminal justice: new perspectives for the precautionary control of the suspect with digital tools in proceedings for crimes with a high risk of violent escalation."

Research structure: Department of Law

Department resolution: 26.03.2024

Resolution of the Academic Senate: 08.04.2024

Resolution of the Board of Directors: 10.04.2024

Gross annual amount: € 25.000,00

Financial coverage:

ASSEGNI2324EXP - CUP: F53C23000190005

Duration of the grant: 24 months

Scientific area: 12 - Law Studies

Competition sector: 12/G2 - Criminal Procedure

Scientific disciplinary sector: IUS/16 - Criminal Procedure

Scientific director: Prof. Francesco Bartolo Morelli

Entry requirement:

Dottorato di ricerca Area CUN 12 - Scienze giuridiche

Knowledge of the language: English

In particular, the following competencies will be assessed:

PhD relating to the subject of Academic discipline: IUS/16 - Criminal Procedure

Interview schedule:

The interview will be aimed to ascertain the candidate's competence with regard to the general principles of criminal procedural law and to the knowledge of the topics covered by the research project, especially the discipline of precautionary measures, and the candidate's aptitude for research. The interview will be held in Italian and English.

Description of the research project:

The project starts from the investigation on the digital monitoring of the defendant under precautionary measure of the house arrest. The Code of Criminal Procedure provides that the judge, while applying the measure just mentioned, may prescribe the use of "electronic or other technical means" (so-called electronic bracelet, art. 275 bis Code of Criminal Procedure). Such an opportunity of control could be more functional if untied from other measures and made an independent precautionary instrument. It is precisely this issue that the project intends to investigate: it is necessary and urgent to verify the wide spaces for the use of electronic control also outside the prospect of replacing the custodial measure, i.e. the most restrictive one, with house arrest accompanied by electronic control. The field of application to which the project refers is represented by proceedings for offences of family violence, which often see repeated conducts having a twofold characteristic: firstly, this conduct sometimes expresses an objective seriousness that does not allow the certainly suitable measure, prison, or even any measure at all; secondly, this conduct, although not intrinsically serious from the perspective of criminal law, is often highly predictive of very rapid and uncontrollable escalation, which can result in offences that offend physical integrity or life. The aim of the project is to exploit the predictive potential of such conducts for the protection of the victim



in the pre-trial context, without twisting the system of restrictive measures to such an extent as to entail undue compressions of the defendant's freedom.

The project will be divided into five stages:

- 1) examination of the milestones reached so far about the electronic precautionary monitoring of movements.
- 2) digital configuration of the instrument.
- 3) examination of the rights involved by the continuous monitoring.
- 4) configuration of the specific dangers that the measure is intended to avert.
- 5) structuring of an independent precautionary case in order to protect the victims of 'predicate' offences. The research will have to start from the knowledge acquired on precautionary issues and on the real right drawn from the electronic instrument in order to configure the extension of control also outside the application of a different precautionary measure. The method to achieve these objectives will be to shape the proposal around the rights drawn with the measure, so as to ensure an intervention that can be placed within the limits imposed by the constitutional and ECHR rights referred to the suspect, so that the electronic control can become functional, compatible with the Constitution and, therefore, longlasting. First of all, it will be necessary to sound out the actual technical functioning of the medium, and then to derive the construction of a control measure that is independent of other measures, that can emancipate itself from the consent of the defendant and that can guarantee the imminent notification of the violation not only to the authority but also to the victim, who can thus have time to save him/herself. It will be necessary to define the prerequisites of the specific measure of electronic monitoring, and to verify that the precautionary system allows the use of presumptions on danger that may make the measure applicable also in cases of proceedings for offences of low objective gravity, but predictive of escalation. It will then be necessary to configure a case to regulate the management of geolocation data (storage and deletion), to prevent their dissemination and ensure that they are kept in confidential files, and to establish the regime for their use in the cognitive process. Finally, limits to monitoring must be guaranteed, since a total compression of the right to private privacy is not allowed, but this right must survive in its hard core.



RESEARCH PROJECT - CODE 9

"Methods and tools for engineering self-reconfigurable Service Robots"

Research structure: Department of Management, Information and Production Engineering
Department resolution: 10.10.2023

Resolution of the Academic Senate: 02.05.2023
Resolution of the Board of Directors: 03.05.2023

Gross annual amount: € 25.000,00
Financial coverage:
project ASSEGN023BIDIGIP, CUP F53C23000190005

Duration of the grant: 24 months

Scientific area: 09 - Industrial and Information Engineering
Competition sector: 09/H1 - Information Processing Systems
Scientific disciplinary sector: ING-INF/05 - Information Processing Systems

Scientific director: Prof. Davide Brugali

Entry requirement:
Area CUN del dottorato 09 - Ingegneria industriale e dell'informazione.

Knowledge of the language: English

In particular, the following competencies will be assessed:
PhD Thesis and publications in the field of software engineering and robotics.

Interview schedule:
Discussion about previous research activities in the field of software engineering and robotics.

Description of the research project:

Service Robots are autonomous mobile robots that are increasingly used in a number of new fields (e.g. warehouse logistics, agriculture, civil protection). In order to be deployed in a variety of different scenarios, their control systems must be flexible enough to easily accommodate frequently changing requirements.

In this context, we want to explore new approaches for enabling self reconfiguration and self adaptation of the robot control system at runtime. This concerns the architectural reconfiguration of the software control system during its execution without service disruption.

In particular, we want to face the following research challenges:

- How to model software and hardware variability of a robotic system.
- How to model the user-perceived quality of service (QoS) of robotic tasks and behaviours (e.g. performance, robustness, accuracy, safety).
- How to exploit these software models to reconfigure a robotic system at runtime in order to guarantee the required QoS when the operational conditions change (e.g. poor ambient lighting, dynamic environment, faulty devices).