

PUBBLICATO ALL'ALBO WEB IN DATA 23.12.2022

USG 1003



UNIVERSITÀ DEGLI STUDI DI GENOVA

**AREA PERSONALE**  
**Servizio Personale Docente**  
**Settore Gestione stato giuridico del Personale Docente e degli Assegnisti di ricerca**

Decree n. 5697

**THE RECTOR**

Having regard to the Italian Law no. 241 dated 7th August 1990 and subsequent amendments, which contains provisions regarding the administrative procedure and the right of access to administrative documents;

Having regard to the Italian Ministerial Decree dated 4th October 2000 regarding the restatement and update of scientific disciplinary sectors and the definition of the relevant declaratory judgements, and subsequent amendments;

Having regard to the Ministerial Decree 3/18/2005 of partial correction of the Ministerial Decree 4/10/2000;

Having regard to the Ministerial Decree 30.10.2015 n. 855 of restatement of the macro-sectors and of the competition sectors;

Having regard to the Italian Presidential Decree no. 445 dated 28th December 2000, which contains the Consolidated Text of legislative and regulatory provisions on administrative documentation, published on the ordinary Supplement to the Official Journal (G.U.) no. 42 dated 20th February 2001 – General Series and subsequent amendments;

Having regard to the Italian Ministerial Decree no. 270 dated 22nd October 2004, regarding the amendments to the regulation which contains provisions on the didactic autonomy of universities, approved with Decree of the Minister for Universities and Scientific and Technological Research no. 509, dated 3rd November 1999;

Having regard to the Italian Law no. 69 dated 18th June 2009, and in particular, art. 32;

Having regard to the Italian Inter-ministerial Decree dated 9th July 2009, on the equalization of university degrees for the participation to public competitions;

Having regard to the Italian Law no. 240 dated 30th December 2010, which contains provisions concerning the organization of universities, academic personnel and recruitment, as well as the delegation to the Government for providing incentives for the quality and efficiency of the university system, and in particular art. 22, which contains provisions on research fellowships;

Having regard to the Italian Ministerial Decree no. 102 dated 9th March 2011 on the minimum annual amount of research fellowships;

Having regard to the notice of the Ministry of Education, University and Research (MIUR) prot. no. 583 dated 8th April 2011;

Having regard to the Italian Law no. 183 dated 12th November 2011 (Law of Stability 2012), and in particular, art. 15, which contains provisions on certifications and self-certifications;

Having regard to the Statute of the University of Genoa, issued with the Rector's Decree no. 1986 dated 5th June 2017.

Having regard to the Rector's Decree no. 497 dated 16th December 2011 issuing the "Code of Ethics of the University of Genoa";

Having regard to the "Employee Code of Conduct of the University of Genoa", issued with Rector's Decree no. 1143 dated 27th February 2015, implementing the Italian Presidential Decree no. 62 dated 16th April 2013, on the "Regulation on the code of conduct for civil servants according to art. 54 of the Italian Legislative Decree no. 165 dated 30th March 2001";

Having regard to the Rector's Decree n. 5389 dated 28 December 2020 issuing the "Regulation for the awarding of research fellowships";

Having regard to the resolution of the Board of Directors dated 22nd July 2015, determining the amounts to be awarded for research fellowships and the timetable of the procedures, according to art. 1 of the abovementioned "Regulation for the awarding of research fellowships";

Having regard to Decree-Law no. 24 of 24.03.2022 converted with amendments into Law no. 52 of 19.5.2022 on: 'Urgent provisions to overcome the measures to combat the spread of the COVID-19 epidemic, as a consequence of the end of the state of emergency and health provisions;

Having regard to the Interministerial Decree of 7.12.2021 adopting the guidelines to promote equal opportunities gender and generational opportunities and the employment inclusion of persons with disabilities in public contracts public contracts financed with PNRR and PNC resources

Considering that the University is committed to compliance with equal opportunities legislation opportunities;

Having regard to MUR Ministerial Note No. 9303 of 8 July 2022, clarifying certain aspects regulated by Article 14 of Decree-Law No. 36 of 30 April 2022, as converted by Law No. 79 of 29 June 2022;

Having regard to the National Programme for Research (PNR) 2021-2027, approved by the Interministerial Committee for Economic Planning by Resolution No. 74 of 15 December 2020

Having regard to the National Recovery and Resilience Plan (NRP), officially submitted to the European Commission on 30 April 2021 pursuant to Article 18 of Regulation (EU) No. 2021/241 and approved by ECOFIN Council Decision of 13 July 2021 and notified to Italy by the General Secretariat of the Council General Secretariat of the Council by note LT161/21, dated 14 July 2021;

Having regard to Decree-Law No. 59 of 6 May 2021, converted, with amendments, by Law No. 101 of 1 July 2021, No. 101, on 'Urgent measures relating to the Supplementary Fund for the National Recovery and resilience and other urgent measures for investments';

Having regard to Decree-Law No. 152 of 6 November 2021, containing 'Urgent provisions for the implementation of the National Recovery and Resilience Plan (PNRR) and for the prevention of infiltration mafia infiltration';

Having regard to Article 17 EU Regulation 2020/852 which defines environmental objectives, including the principle of Do No Significant Harm (DNSH), and the related European Commission Communication C(2021) 1054 final of 12 February 2021, containing 'Technical guidance on the application of the "do no significant harm" principle under the Recovery and Resilience Instrument Regulation'.

Having regard to the Decree of the President of the Council of Ministers of 9 July 2021 on the identification of the central administrations in charge of interventions provided for in the PNRR, pursuant to art. 8, paragraph 1, of Decree-Law No. 77 of 31 May 2021

Having regard to the Decree of the Ministry of Economy and Finance of 6 August 2021, entitled "Allocation of the financial resources provided for the implementation of the interventions of the National Plan of Recovery and Resilience Plan (PNRR) and allocation of targets and objectives for six-monthly reporting deadlines reporting deadlines' and subsequent amendment of 23 November 2021;

Having regard to Circular No. 30 of 11.8.2022 on control and reporting procedures for the PNRR measures;

Given that the MUR has issued the Public Notice for the submission of Proposals for intervention for the creation of "Partnerships extended to universities, research centres, companies for the funding of basic research projects" - as part of the National Recovery and Resilience Plan, Mission 4 Education and Research' - Component 2 'From research to enterprise' - Investment 1.3, funded by the European Union – NextGenerationEU;

Considering that the MUR has issued the Public Notice for the presentation of Proposals for intervention for the strengthening of research structures and the creation of R&S "national champions" on certain Key Enabling Technologies to be financed under the National Recovery and Resilience Plan, Mission 4 Component 2 Investment 1.4 "Strengthening research structures and creating "national champions of R&S" on certain Key Enabling Technologies" financed by the European Union - NextGenerationEU" (hereafter hereinafter "National Centres Notice") (D.D. no. 3138 of 16 December 2021)

Given that the MUR has issued the public notice for the presentation of Proposals for intervention for the creation and strengthening of "ecosystems of innovation", construction of "territorial leaders of R&S" - Ecosystems of Innovation - within the framework of the National Recovery and Resilience Plan, Mission 4 Education and Research - Component 2 From Research to Enterprise - Investment 1.5, funded by the European Union – NextGenerationEU;

Considering that the Board of Directors in its meetings of 28.9.2022 and 22.12.2022 approved special reports by the competent Budget Area of this University, in which, inter alia an increase in the 2022 Single University Budget and the inclusion in the 2023-2025 Forecast Budget of the 2023-2025 budget estimate of the funding allocated by MUR for the implementation of projects under the National Recovery and Resilience Plan (PNRR)

Having regard to Decree-Law no. 36 of 30 April 2022, converted with amendments into Law no. 79 of 29 June 2022, and in particular article 14, paragraph 6-quaterdecies, which establishes transitional rules for research grants. 79, in particular article 14, paragraph 6-quaterdecies, which establishes the transitional rules for research grants in relation to which, for the 180 days following the entry into force of said law, it is still possible for 180 days following the entry into force of said law, procedures for the awarding of research grants pursuant to Article 22 of Law No. 240/2010 in the text in force prior to the date of entry into force of the above-mentioned conversion law;

Having regard to the resolutions received from the structures concerned proposing requests for the activation of research grants

## HEREBY DECREES

### ART. 1

#### Number of research fellowships

1. An announcement is made for no. 55 public selections for the awarding of no. 55 research fellowships in the programs specified in *Annex A*, being an integral part of this announcement.
2. Students with a professional scientific curriculum suited to the performance of research activities are eligible to receive research fellowships.
3. Candidates, wishing to apply for more than one selection procedure, must submit a separate application for each selection, with the relevant documentation. If a single application is submitted for more than one selection procedure, the candidate will only be admitted to the first selection resulting from the same application.
4. As regards the declaratory judgements of the scientific disciplinary sectors, reference shall be made to the Italian Ministerial Decree dated 4<sup>th</sup> October 2000 and subsequent amendments, mentioned above.
5. The Administration ensures equality and equal opportunity between men and women with regard to access to employment and treatment at work.
6. This decree is published by electronic means on the web notice board in the website of the University of Genoa.

### ART. 2

#### Admission requirements and grounds for exclusion

1. In order to be admitted to the selection, the candidates must possess the degree referred to in *Annex A* to this Announcement as regards each research program.
2. No candidate with family or kinship relationship, up to and including the fourth degree, as well as no candidate married, with a Professor belonging to the department or institute, where the research activity is performed, or with the Rector, General Director or a member of the Board of Directors of the University may be admitted to the public selections for the awarding of research fellowships.
3. Admission requirements and grounds for exclusion are referred to the expiration date of the term established for submitting the application.
4. The candidates are admitted with reserve to the selection procedure. This University may arrange, by means of a justified measure, to exclude a candidate from the selection due to lack of the prescribed requirements. Any such measure will be communicated to the candidate concerned by way of e-mail with acknowledgment of receipt indicated by the candidate in the application for admission to the selection.
5. For candidates with a foreign qualification, which has not yet been declared equivalent, the equivalence of the qualification is ascertained, for the sole purpose of admission to the selection procedure, by the commissions referred to in the following art. 6 at the time of examination of the qualifications, on the basis of the appropriate documentation presented during the application phase. These candidates will therefore be admitted to the

preliminary stage with reserve. If the aforementioned candidates are winners, they must send to the University the official translation and the “Dichiarazione di Valore” (Declaration of Worth) of the foreign qualification drawn up by the competent Italian diplomatic or consular offices in the country of origin, according to the regulations in force, within 60 days from the decree of approval of the selection. The forfeiture of the right to stipulation of the contract will be arranged if the documents do not arrive at the University within this period.

### ART. 3

#### Procedure for submission of the application

1. The candidate shall submit his/her application for the admission to the selection by electronic means, filling in the relevant form, within the deadline in the subsequent paragraph. To this purpose, the candidate shall use a specific computer application, which is available at the address <https://concorsi.unige.it>, and necessarily requires the possession of a certified email address, in order to perform a self-registration to the system. The candidate shall enter all the data required for submitting the application and then print the receipt, which will be automatically sent via email. The receipt must be kept and made available in case of any check by the Administration. Upon forwarding, an identification number will be automatically assigned to the application. This number must be specified in any subsequent communication, together with the selection code displayed by the computer application. The date of the electronic filing of the application for the admission to the selection is certified by the information system. Upon the expiration date of the term established for the submission, this system will not allow any candidate to access and send the relevant electronic form. Within the expiration date, the candidate may forward further applications regarding the same selection, in order to amend any error and/or add any integration. For the admission to the selection the application with the most recent submission date will be considered valid. Furthermore, the system requires that the electronic documents referred to in paragraph 8 below are attached to the application as well. **No other way of submission or sending of the applications for the admission to the selection will be accepted.**

2. The electronic process for the filling in and sending of the application must be completed within 12 a.m. of the thirtieth day after the day of publication of this Announcement on the web notice board in the website of the University.

3. If the expiration day falls on a holiday, it will be possible to fill in and send the application within 12 a.m. of the first next working day.

4. Without prejudice to the provisions of art. 5, paragraph 5, all the communications regarding the public selection announced with this Decree will be forwarded to the candidates concerned by e-mail with acknowledgment of receipt indicated by the candidate in the application for admission to the selection.

5. In the application the candidate shall declare his/her full name, date and place of birth, tax code and place of residence, as well as:

- a) the possession of the degree referred to in Annex A as per art. 1, which is required for the research program of interest. The candidates in possession of a degree obtained abroad shall also specify if this degree, according to the regulation in force, has been declared equivalent to the degree required by this Announcement. The candidate shall also specify the name of the University, which awarded such degree, the date of award and the final degree mark;
- b) his/her citizenship;
- c) that he/she has no family or kinship relationship, up to and including the fourth degree, and is not married, with a Professor belonging to the department or institute, where the research activity is performed, or with the Rector, General Director or a member of the Board of Directors of the University;
- d) whether he/she has received a doctoral grant;
- e) whether he/she has already been holder of a research fellowship according to art. 22 of the Italian Law no. 240/2010;
- f) whether he/she has already been holder of a contract according to art. 24 of the Italian Law no. 240/2010 (fixed term researcher position);
- g) being a citizen of a non-EU country, the possession of the residence permit necessary to perform the activity provided for by the contract in art. 7;
- h) that he/she is acquainted with the provisions of art. 13 of the Rector's Decree no. 6144 dated 27<sup>th</sup> July 2015 and subsequent amendments and integrations, regarding the prohibition of plurality of offices and the incompatibility;
- i) the choice of the foreign language in which to be tested, if required according to the subjects of the interview relevant to the research program in Annex A, as per art. 1;
- j) the mandatory indication that the interview must be conducted electronically, by means of videoconferencing via SKYPE for procedures that are conducted electronically, or the indication, where

applicable, that the interview must be conducted electronically, by means of videoconferencing via SKYPE in the case of procedures that require the interview to be conducted in person, as indicated in Annex A, in accordance with the provisions of Article 5, paragraph 8 below;

**Lack of the declarations provided for in letters a), c) will result in exclusion from the selection.**

6. The application must include the e-mail address as well as the address elected by the candidate for the purposes of the selection. Any variation must be promptly notified to the Department to which the application has been addressed.

7. The declarations made in the application must be considered issued according to the Italian Presidential Decree no. 445/2000 and subsequent amendments, by candidates entitled to make use of the simplified administrative certifications permitted by the above decree.

8. Candidates shall enclose to their application:

a) a non-certified photocopy of an identification document in electronic format (.pdf, .jpg, .gif, etc.) via scanning or digital photography of the same;

b) a scientific-professional *curriculum* and a self-certification relevant to the truthfulness of the information contained therein, drawn up on form *B* attached herewith;

c) if he/she is a foreign citizen, a photocopy of the residence permit, if possessed, in electronic format (.pdf, .jpg, .gif, etc.) via scanning or digital photography of the same;

d) publications, which are deemed useful for the purposes of the selection. The above documents shall be attached to the application in .pdf format and declared compliant with the original copies through a proper self-executed affidavit, drawn up on form *C* attached herewith. This declaration shall contain also a numbered and detailed list of the files transmitted by electronic means, together with the application, as specified in paragraph 1.

**9. According to art. 15, paragraph 1, of the Italian Law no. 183 dated 12<sup>th</sup> November 2011, the candidates shall demonstrate the possession of the qualifications only by means of the declarations established by the abovementioned Italian Presidential Decree no. 445/2000 and subsequent amendments.**

10. The same procedures as those established in the previous paragraphs for Italian citizens apply to the citizens of the European Union. Citizens of countries not belonging to the European Union can use self-certifications as established in art. 4

11. Candidates may not make reference to qualifications or publications submitted to this Administration or other Administrations or qualifications attached to other applications for participation to other competitions.

12. The works legally registered as established by the Italian Legislative Decree of the King's Lieutenant no. 660/1945, as integrated and amended by the Italian Law no. 106/2004 and the Italian Presidential Decree no. 252/2006 may be evaluated for the purposes of the public selections referred to in this Announcement.

13. This Administration shall perform suitable checks, even sample checks, in any case of well-founded doubts as to the truthfulness of the self-certifications. If the above check reveals that the content of the declaration is not true, the declarant will forfeit any benefits resulting from the provision issued on the basis of the untruthful declaration, without prejudice to the provisions of the criminal code and relevant special laws.

14. This University does not take any responsibility for failure to receive applications due to technical problems related to the Internet service and email operation and/or configuration made available by the provider of the candidate.

15. This University does not take any responsibility for failure to receive communications, because a wrong electronic address was provided by the candidate or due to a missed or late notification of change of the e-mail address specified in the application, nor for any errors in any case attributable to third parties, chance or force majeure.

#### **ART. 4**

##### **Citizens of countries not belonging to the European Union – self-certifications**

1. Citizens of countries not belonging to the European Union regularly residing in Italy can use the self-certifications established by the Italian Presidential Decree 445/2000 referred to above only in respect to the status, personal qualities and facts that can be certified or attested by Italian public bodies, without prejudice to the special provisions contained in the laws and regulations concerning immigration and the status of foreigner.

2. Outside the cases provided for in the preceding paragraph, citizens of countries not belonging to the European Union authorised to reside in the territory of the Country can use the aforementioned self-certifications, if the same are produced under international agreements between Italy and the country of origin of the declarant.

## ART. 5 Qualification assessment and interview

1. The Selection Committee operates collegially with the participation of all its members, also with the use of telematic and digital tools. It predetermines the general criteria for the assessment of qualifications and for the interview and announces them by publication on the Department's website or by posting them at the examination venue.

2. The examinations shall take place in attendance or by videoconference, where indicated in Annex A) and aim to ascertain the candidate's preparation, experience and aptitude for research.

They shall consist of:

- assessment of the qualifications submitted;

- an interview, on the subjects specified by the Announcement and listed, for each research program, in Annex A to the same Announcement.

3. Works drawn up in cooperation may be considered as usable qualifications only if it is possible to separate and identify the contribution of each single author, so as to assess the candidate in the part concerning him/her.

4. An overall score of 40 is assigned to the candidate's scientific-professional *curriculum* as well as to documents certifying the qualifications and publications. If the research doctorate or the specialization diploma in the medical area represents a mandatory admission requirement for the selection, the following scoring rule will be applied to assessable qualifications and publications:

- qualifications and scientific professional curriculum	up to 15 points;
- publications	up to 25 points

In the other cases, the following scoring rule will be applied to assessable qualifications and publications:

- qualifications and scientific professional curriculum	up to 10 points;
- preferential qualifications (research doctorate or specialization diploma in the medical area)	up to 15 points;
- publications	up to 15 points.

Candidates are admitted to the interview only if the assessment results in a score equal to or greater than 10 points.

5. The test timetable is contained, where provided for, in Annex A to this Announcement. **Such a notice is equivalent to notification to all intents and purposes.**

6. In the absence of the notice in paragraph 5 above, the test timetable, with the indication of the relevant place of examination, will be notified to all the candidates concerned by e-mail with acknowledgement of receipt at least fifteen days before the day of the examination.

7. The interview is conducted in telematic mode (videoconferencing via SKYPE or similar), regardless of the distance from the usual residence or domicile for the tests indicated in Annex A, which are conducted in telematic mode.

8. For the tests referred to in Annex A, which involve taking place in attendance, the interview shall take place in a room open to the public.

The programme chosen by the candidate, listed in Attachment A, may provide that the interview may also take place in telematic mode (videoconference by means of SKYPE or similar), in which case candidates who are resident or domiciled outside the Italian territory or who reside or have their usual domicile more than 300 km away from the selection venue, must indicate that they wish to do so in their application for admission to the selection process

9. A score of 60 points is attributed to the interview. Candidates are deemed to have passed the interview if they reach a minimum score of 42/60.

10. The selection committee predetermines the general criteria for the assessment of qualifications and for the interview and announces them by publication on the Department's website or by posting them at the examination venue.

11. In order to be admitted to the interview, the candidates shall submit a valid identification document. In order to be admitted, the candidates who submit expired identification documents must declare at the bottom of the photocopy of the same that the data contained therein have not changed since the date of issue.

**ART. 6**  
**Selection Committee**  
**Formation and approval of the classifications**

1. The Selection Committee is composed of three university professors, also from other Universities. One of them at least must be a first or second level tenured professor. They are appointed by the Rector on a proposal from the concerned institute.

2. Once the tests have been carried out, the Committee will draw up the relevant classification through the sum of the score assigned to the qualifications and the score achieved by each candidate during the interview. Winners will be named on the basis of the number of fellowships announced.

3. The classification of merit is approved and the winner of the public selection declared by Rector's Decree.

4. If the holder of the fellowship is unable to carry out his/her task for any reason whatsoever, the classification of merit can be used.

5. The classification of merit is published on the web notice board in the website of the University of Genoa. Objections may be raised starting from the date of the above publication.

**ART. 7**  
**Awarding of the research fellowship**  
**Research fellowships to non-EU citizens**

1. The awarding of the research fellowship is formalized through the stipulation of a contract of private law between the University of Genoa and the winning candidates resulting from the classification of merit as per art. 6, paragraph 3 above, for the duration specified in *AnnexA* to this Announcement as regards each research program, subject to ascertainment of the prescribed requirements.

2. The overall duration of the relations established following announcements issued according to the Italian Law no. 240 dated 30<sup>th</sup> December 2010, including any renewals, may not in any case exceed six years, excluding the period during which the fellowship was enjoyed together with the research doctorate, within the maximum limit of the legal duration of the relevant course.

3. The overall duration of the relations established with the holders of fellowships implemented following announcements issued according to the Italian Law no. 240 dated 30<sup>th</sup> December 2010, and of the contracts referred to in art. 24 of the same law, stipulated also with different state, non-state or telematic universities, as well as with the institutes referred to in art. 8, paragraph 1, with the same subject, may not in any case exceed twelve years, including non-continuous periods.

4. For the purpose of calculating the duration of the aforementioned relations, periods of leave due to maternity or health reasons will not be taken into account according to the regulations in force.

5. Upon contract stipulation, the winner shall sign the following declarations:

- that none of the impedimental conditions referred to in art. 11 applies to him/her;
- that he/she has no family or kinship relationship, up to and including the fourth degree, and is not married, with a Professor belonging to the department or institute, where the research activity is performed, or with the Rector, General Director or a member of the Board of Directors of the University;
- being an employee of public administrations different from those referred to in art. 8, paragraph 1, that he/she has been placed on unpaid leave;
- whether he/she has received a doctoral grant;
- whether he/she has already been holder of a research fellowship according to art. 22 of the Italian Law no. 240/2010;
- whether he/she has already been holder of a contract according to art. 24 of the Italian Law no.

240/2010.

6. Candidates who are citizens of non-EU countries may be awarded a research fellowship only if they are in possession of a residence permit for scientific research as per art. 27 *ter* of the Italian Legislative Decree no. 286/1998 and subsequent amendments. In such cases, the institute, which has required the fellowship, implements, by mutual consent with the competent offices of this Administration, the procedures aimed at achieving the above residence permit

7. The research fellowship is awarded to a non-EU citizen only upon conclusion of the procedure described in paragraph 6 above.

## **ART. 8**

### **Personal requirements**

1. The following are not eligible for research fellowships: employees of the universities, public research and experimentation institutes and bodies, the National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) and the Italian Space Agency (ASI), as well as of the institutions whose scientific specialization diploma has been recognized equivalent to the doctoral degree, according to art. 74, paragraph 4, of the Italian Presidential Decree no. 382 dated 11<sup>th</sup> July 1980.

2. The research fellowship does not give rise to rights with respect to access to permanent employment at the university and in no way constitutes a subordinate working relationship.

3. An employee working for public administrations different from those referred to in paragraph 1 is placed on unpaid leave.

## **ART. 9**

### **Economic and regulatory treatment**

1. Taking into account the resolutions of the Board of Directors at the meetings of 28.9.2022 and 22.12.2022 cited in the introduction, the financial burdens arising from these selections shall be borne by the funding allocated by the MUR for the implementation of projects under the National Recovery and Resilience Plan (PNRR)

The research programme no. 32 is partly from PNRR funds and partly from departmental funds

2. The amounts of research fellowships are determined by the Board of Directors according to art. 1 of the Regulation for the awarding of research fellowships, taking into account the provisions of the regulations in force. The contract referred to in art. 7 contains the annual pre-tax amount of the research fellowship. This amount is paid according to monthly deferred instalments.

3. With respect to taxation, fellowships are subject to the provisions of art. 4 of the Italian Law no. 476, dated 13<sup>th</sup> August 1984, and with respect to social security, to those of art. 2, paragraph 26 and following, of the Italian Law no. 335 dated 8<sup>th</sup> August 1995, and subsequent amendments.

4. Variations in social security (INPS) rates restate year by year the cost established for the fellowship.

5. The University provides insurance cover according to the regulations in force.

## **ART. 10**

### **Research fellowship holders' rights and duties**

1. Fellowship holders perform their activity within research projects and in close connection with the realization of the same, under the direction of the scientific coordinator, autonomously and without set working times.

2. The fellowship holder is required to submit each year to the Board of the concerned institute a detailed report on the activity performed.

3. The fellowship holder may perform part of his/her research activity abroad:

a) if he/she is the beneficiary of a study grant, awarded by national or foreign institutions, in order to integrate the research activity with stays abroad;

b) if the research activity abroad is consistent with the research program to which he/she is contributing, upon authorization by the institute, on a grounded proposal from the scientific coordinator. In this case, a possible grant as partial reimbursement of travel expenses and stays abroad may be defined and paid by the reference institute.

4. The fellowship holder may take part in comparative assessment procedures for awarding contracts regarding the performance of didactic activities, both regular and integrative, provided that such activity is performed outside his/her commitment as fellowship holder, is compatible with the research activity and approved by the reference institute, as provided for in the relevant regulation of this University.



5. The fellowship holder may contribute articles, participate as speaker in seminars, meetings and conferences, perform guidance and tutoring activities and take part in Examining Boards in his/her capacity as a teaching assistant.

6. The fellowship holder may perform activities within a university spin-off, upon authorization by the scientific coordinator, as provided for in the relevant regulation of this University.

7. The fellowship holder may be introduced into clinical research teams, without any direct function regarding the patients' care and treatment, under the direct control of the scientific coordinator.

#### **ART. 11**

##### **Prohibition of plurality of offices - Incompatibility**

1. The research fellowship may not be accumulated with other study grants awarded for any reason, without prejudice to the provisions of art. 10, paragraph 3, lett. a).

2. The legal ownership of the research fellowship is not compatible with attendance of any university courses, specialist or second level degrees, research doctorates with grants, medical specialization, in Italy or abroad, and university master's degrees.

3. The legal ownership of the research fellowship is not compatible with employment relations, without prejudice to art. 8 paragraph 3, other collaboration contracts or income arising from freelance-professional activities continuously performed, unless this is a limited autonomous work activity to be performed upon authorization by the scientific coordinator, and provided that such activity does not interfere with the performance of the research activity nor lead to a conflict of interests with the University.

#### **ART. 12**

##### **Absence from work**

1. The following shall apply to research fellowships: provisions regarding the mandatory maternity leave, the provisions referred to in the Decree of the Italian Minister of Labour and Social Security dated 12<sup>th</sup> July 2007, published on the *Official Journal* (G.U.) no. 247 dated 23<sup>th</sup> October 2007, and, as regards sick leave, art. 1, paragraph 788, of the Italian Law no. 296 dated 27<sup>th</sup> December 2006, and subsequent amendments. During the mandatory maternity leave, the indemnity paid by the Italian National Institute of Social Security (INPS) according to art. 5 of the above Decree dated 12<sup>th</sup> July 2007 will be supplemented by the University up to the full amount of the research fellowship.

2. The financing of the research fellowship is suspended during the period of mandatory or optional maternity leave, or in cases of inability due to holder's illness for a period exceeding two months per year. In these cases, the duration of the contract will be extended for a period equal to that of the suspension. In all other cases of inability for periods exceeding two months per year, this University reserves the right to terminate the contract or suspend the relevant payment.

#### **ART. 13**

##### **Document submission**

1. In order to ascertain the prescribed requirements and taking into account the declarations, valid for an unlimited period, already resulting from the application for the admission to the selection, the winning candidate, being an Italian or EU citizen, will be required to submit to this University, within thirty days from the date when the contract was stipulated, the following documents:

- a) self-certification regarding the holding of citizenship, if more than six months have passed since the date of submission of the application;
- b) self-certification relevant to the positions in art. 7, paragraph 5.

2. Citizens of countries not belonging to the European Union regularly residing or authorized to reside in Italy shall submit, within thirty days as above, the self-certification referred to in paragraph 1, lett. a), if more than six months have passed since the submission of the application and the conditions in art. 4 have been met. The same citizens shall demonstrate to meet the requirements not covered by the abovementioned declaration through the submission of a proper certification.

3. Except for the cases referred to in the preceding paragraph, non-EU citizens shall submit within thirty days as above:

- a) a citizenship certification;
- b) a certification or attestation relevant to the positions referred to in art. 7, paragraph 5.

4. These documents are considered submitted in due time, even if they are sent by registered letter with acknowledgment of receipt within the abovementioned deadline. To this purpose, the postmark of the accepting postal office will serve as proof.

5. The fellowship holder will be required to rectify within 30 days from the date of receipt of the request any incomplete documents or documents containing retrievable errors, under penalty of termination of the contract.

#### **ART. 14 Termination**

1. The contract will terminate automatically at the end of the specified period.

2. The contract will terminate, as well, due to the following conditions:

- a) annulment of the public selection procedure;
- b) supervening impossibility of continuing the collaboration in research activity, without prejudice to the provisions of art. 12, paragraph 2;
- c) infringement of the rules of conduct provided for in art. 2, paragraph 3, of the Employee Code of Conduct of the University of Genoa, issued with Rector's Decree no. 1143 dated 27<sup>th</sup> February 2015, and implementing the Italian Presidential Decree no. 62 dated 16<sup>th</sup> April 2013.

3. The procedure to terminate the contract may be started, as requested by the scientific coordinator, also as a result of a serious breach by the fellowship holder.

4. The Administration will proceed to the termination of the contract following the relevant resolution by the Board of the reference institute of the fellowship holder. The Administration shall also take into account any grounded negative report, drawn up by the scientific coordinator of the research project, as regards the activity performed by the fellowship holder.

#### **ART. 15 Processing of personal data**

1. The personal data supplied by candidates will be collected by the University of Genoa, "Area Personale (Staff Area) – Servizio Personale Docente (Teaching Staff Department) Settore Gestione Stato Giuridico del Personale Docente e degli Assegnisti di ricerca (Management Legal Status Teaching Staff and Research Grants Sector)" and used for selection procedures as per Regolamento UE 2016/679 (GDPR – General Data Protection Regulation) and D.Lgs. n. 196 of 30/6/2003 (Personal Data Protection Code), as amended by the D.Lgs. No 101 of 10/8/2018.

#### **ART. 16 Reference concerning the execution of the selection procedure**

1. Any matters not provided for by this Announcement shall be governed by the provisions of the regulations referred to in the foreword and, in particular, those provided for by the "Regulation for the awarding of research fellowships" of the Rector's Decree no. 6144 dated 27<sup>th</sup> July 2015, and subsequent modifications and integrations approved with the Rector's Decree no. 2495 dated 6<sup>th</sup> June 2018; as well as those provided for by the Consolidated Text of legislative and regulatory provisions on administrative documentation of the Italian Presidential Decree no. 445/2000.

Genoa, 23.12.2022

THE RECTOR  
Signed Prof. Federico Delfino

Responsible of the procedure: *Sandra Turbino*

**RESEARCH PROGRAM NO. 1**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 07.02.2023 at 09:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 07.02.2023 at 12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 13:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Annalisa Barla at the address e-mail: annalisa.barla@unige.it, phone number: +39 010 3536602.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Annalisa BARLA

**NO. 1 research fellowship - Duration year 1 – Annual pre-tax amount: € 27.133,00**

**Funding: PNRR - Ecosistema dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Study and identification of Ethical-AI methods and best practices for structured, temporal, and multimodal data.

**Description:** The pervasive and disruptive nature of artificial intelligence presents an unprecedented opportunity to change the narrative of humanity's future. Consequently, governments, private companies, the corporate sector, and citizens must collectively promote, perpetuate, and implement an ethical AI culture for the benefit of the global community. With this in mind, we will work on four main objectives to study and define applicable guidelines to be used within the scope of activities implemented in the spokes to ensure AI pipelines that are ethical and fully compliant with current regulations. In this context, the research fellow will work on a definition of business-friendly applicative solutions in the context of the analysis of structured, temporal and multimodal data of various types (textual, categorical, image). In particular, the activity will focus on state-of-the-art deep learning and geometric deep learning methods and their specificities

**Scientific disciplinary sector:** INF/01 INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-40 Matematica, LM-21 Ingegneria Biomedica, LM-27 Ingegneria delle telecomunicazioni, LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica.

**Subjects of the interview:** Machine learning methods for structured, time-dependent and multimodal data; Deep Learning and Geometric deep learning methods; NLP; model selection; robustness; Network analytics.

The candidate will need to prove his/her knowledge of the English language.

## RESEARCH PROGRAM NO. 2

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 07.02.2023 at 14:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 08.02.2023 at 14:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 08.02.2023 starting from 15:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Barbara Catania at the address e-mail: [barbara.catania@unige.it](mailto:barbara.catania@unige.it), phone number: +39 010 3536728.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Barbara CATANIA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" - SPOKE 3**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Data processing and analysis for environmental care.

**Description:** The creation of "value" through the use of analytical tasks over large quantities of raw data is made effective and efficient thanks to a complex data life cycle that foresees, in the initial phases, data acquisition and wrangling (i.e., cleaning, transformation, and integration). The proposed activity aims at designing specific data wrangling pipelines for data acquisition, filtering, integration, and cleaning, for environmental data, possibly stored as heterogeneous datasets on large scale distributed data platforms, of interest for the RAISE project, SPOKE 3: *Sustainable environmental caring and protection technologies.*

**Scientific disciplinary sector:** INF/01 INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea V.O. in Informatica, Ingegneria Informatica; Laurea Specialistica delle classi: 23/S Informatica, 35/S Ingegneria Informatica; Laurea Magistrale delle classi: LM-18 Informatica, LM-32 Ingegneria Informatica.

**Subjects of the interview:** Transactional and analytical processing; large-scale data processing; main issues and approaches to data integration

The candidate will need to prove his/her knowledge of the English language.

### RESEARCH PROGRAM NO. 3

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview** on **08.02.2023** at **14:30** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview:** on **09.02.2023** at **14:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview:** on **09.02.2023** starting from **15:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Giovanna Guerrini at the address e-mail: [giovanna.guerrini@unige.it](mailto:giovanna.guerrini@unige.it) phone number: +39 010 3536701.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Giovanna GUERRINI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" - SPOKE 1**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Data processing and analysis in inclusive urban technologies.

**Description:** The creation of "value" by analytical tasks over large quantities of raw data is made effective and efficient thanks to a complex data life cycle that foresees, in the initial phases, data acquisition and wrangling (i.e., cleaning, transformation, and integration). The proposed activity aims at designing specific data wrangling pipelines for data acquisition, filtering, integration, and cleaning, with reference to data coming from heterogeneous sources and possibly stored on large scale distributed data platforms, of interest for the RAISE project, SPOKE 1: *Urban technologies for inclusive engagement*.

**Scientific disciplinary sector:** INF/01 INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea V.O. in Informatica, Ingegneria Informatica; Laurea Specialistica delle classi: 23/S Informatica, 35/S Ingegneria Informatica; Laurea Magistrale delle classi: LM-18 Informatica, LM-32 Ingegneria Informatica.

**Subjects of the interview:** Transactional and analytical processing; large-scale data processing; main issues and approaches to data integration.

The candidate will need to prove his/her knowledge of the English language.

## **RESEARCH PROGRAM NO. 4**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 15:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 09.02.2023 at 12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 09.02.2023 at 14:30** at Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Valletta Puggia, Via Dodecaneso n. 35, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof.ssa Nicoletta NOCETI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" SPOKE 2**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Computer vision methods for the analysis of biomedical images.

**Description:** The aim of the project is the development and implementation of artificial intelligence and machine learning methods for applications to the domain of biomedical images. Image types considered in the study include low-field magnetic resonance and ultrasound image sequences. The developed algorithms will address classification and segmentation problems.

**Scientific disciplinary sector:** INF/01 INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea Magistrale delle classi LM-18 Informatica, LM-21 Ingegneria Biomedica LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica.

**Subjects of the interview:** Methods of computer vision, machine learning, deep learning, programming tools

The candidate will need to prove his/her knowledge of the English language.

**RESEARCH PROGRAM NO. 5**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023 at 15:00** at Dipartimento di Fisica (DIFI), Aula 700, Via Dodecaneso n. 33, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **08.02.2023 at 15:00** at Dipartimento di Fisica (DIFI), Aula 700, Via Dodecaneso n. 33, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **10.02.2023 at 10:00** at Dipartimento di Fisica (DIFI), Aula 700, Via Dodecaneso n. 33, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Davide BOCHICCHIO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2**  
**"Scenari Energetici del Futuro"**

**D.D. n. 1561 del 11.10.2022**

**CUP D33C22001330002**

**Title:** Advanced computational modeling for the development of energy-related materials.

**Description:** We will employ computational models at different resolutions (density functional theory, all-atom and coarse-grained force fields) and computational methods (molecular dynamics, Monte Carlo, advanced sampling) to describe energy-related materials (e.g., bimetallic and oxide nanoclusters) and optimize their stability and safety in realistic operating conditions.

**Scientific disciplinary sector:** FIS/03 FISICA DELLA MATERIA

**Place:** Dipartimento di Fisica (DIFI)

**Required degree:** Laurea V.O. in Fisica; Laurea Specialistica della classe 20/S Fisica; Laurea Magistrale della classe LM-17 Fisica.

**Subjects of the interview:** The candidate should briefly present his research experience in the field of condensed matter. The rest of the interview will aim to verify 1) the candidate's motivations to work on this specific project, 2) the candidate's familiarity with the computational techniques that will be used, such as Molecular Dynamics, Monte Carlo and Advanced Sampling, 3) the candidate's knowledge of interaction models at different resolutions (from DFT to atomistic and coarse-grained force fields), and finally 4) the previous experience of the candidate in the field of modeling of complex materials.

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 6

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 19:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 08.02.2023 at 19:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 09.02.2023 starting from 14:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Maria Caterina Giordano at the address e-mail: giordano@fisica.unige.it , phone number: +39 010 3536208.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Maria Caterina GIORDANO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - PE2-NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2 "Scenari Energetici del Futuro"**  
**D.D. n. 1561 del 11.10.2022**  
**CUP D33C22001330002**

**Title:** Enhanced Photoconversion and Light harvesting in large area 2D-TMD heterostructures.

**Description:** The project will develop techniques for the large area growth of TMDC-based low-dimensional semiconductors (MoS<sub>2</sub>, WS<sub>2</sub>) and related heterostructures. Both lithographic and self-organized nanofabrication processes (cm<sup>2</sup> scale) will be developed to induce nanophotonic functionalities and photon harvesting in the flat-optics regime. The modification of the optical and transport properties of nanostructured two-dimensional semiconductors will be studied using optical spectroscopy, transport measurements and vibrational spectroscopy. The photoconversion efficiency will be evaluated also by photocatalytic dissociation reactions.

**Scientific disciplinary sector:** FIS/03 FISICA DELLA MATERIA

**Place:** Dipartimento di Fisica (DIFI)

**Required degree:** Dottorato di ricerca in Fisica, Dottorato di ricerca in Scienza e Tecnologie dei Materiali, Dottorato di ricerca riconducibile alle seguenti discipline: Fisica, Nanoscienze, Scienze dei Materiali.

**Subjects of the interview:** Physical properties of low-dimensional semiconductors based on TMDCs. Physical principles of lithographic and self-organized nanofabrication of nanostructures. Optical and Raman spectroscopic characterization of two-dimensional semiconductors. Physical principles of the amplification of light collection in nanostructures. Physical techniques for the growth and characterization of TMDCs semiconductors

The candidate will need to prove his/her knowledge of the english language.



**RESEARCH PROGRAM NO. 7**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 06.02.2023 at 15:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 08.02.2023 starting from 09:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Davide Peddis at the address e-mail: [davide.peddis@unige.it](mailto:davide.peddis@unige.it), phone number: +39 347 7728174.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Davide PEDDIS

**NO. 1 research fellowship - Duration years 2 – Annual pre-tax amount: € 19.367,00**

**Funding:** PNRR - PE2-NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2 "Scenari Energetici del Futuro"

**D.D. n. 1561 del 11.10.2022**

**CUP D33C22001330002**

**Title:** Synthesis and characterization of sustainable materials for energy applications.

**Description:** This activity will focus on: a) the developing of cost-effective materials for the next generation of critical element-free permanent magnets with a maximum energy product (BH)<sub>max</sub> lying in the gap between hexaferrites (HFs) and rare-earth permanent magnets (RE-PM) which will relieve the demand for strategic raw materials while further boosting the progress of green technologies; b) the development of the scientific and technical base, from which a circular economy of RE based PMs can be built. In particular the goal of the activity is to reshape the End of Life (EoL) Permanent Magnets (PMs), broken or overheated, into newly working PMs by reusing the RE-containing magnetic alloy powder the PMs are made from; c) Synthesis and characterization of Persistent luminescence materials (PeLMs) combined with photocatalyst (PhCat). PeLMs can temporarily store the excitation energy, i.e. solar light, in metastable traps and release it after several hours or even days as photons, or can directly inject holes and electrons into the photocatalyst. The candidate will perform synthesis and characterization of materials

**Scientific disciplinary sector:** CHIM/02 CHIMICA FISICA

**Place:** Dipartimento di Chimica e Chimica Industriale (DCCI)

**Required degree:** Laurea Magistrale delle classi LM-17 Fisica, LM-53 Scienza e Ingegneria dei materiali, LM-54 Scienze chimiche, LM-71 Scienze e tecnologie della Chimica industriale.

**Subjects of the interview:** Magnetism; Nanomagnetism; morphostructurale and magnetic characterization techniques.

The candidate will need to prove his/her knowledge of the English language.

## RESEARCH PROGRAM NO. 8

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 06.02.2023 at 12:30** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 06.02.2023 starting from 15:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Antonio Comite at the address e-mail: antonio.comite@unige.it, phone number: +39 333 7007199.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Antonio COMITE

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - PE2-NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2 "Scenari Energetici del Futuro"**  
**D.D. n. 1561 del 11.10.2022**  
**CUP D33C22001330002**

**Title:** Synthesis and characterization of nanocatalysts for energy efficient processes.

**Description:** New nanocomposite catalysts will be synthesized with different preparative techniques (e.g. sol gel, homogeneous precipitation, hydrothermal synthesis) for key reactions in chemical and energy processes (e.g. partial oxidation and reforming reactions). The synthesized nanocatalysts and those eventually received under the NEST project and which may contain magnetically active phases will be characterized by different techniques such as physisorption with Kr, N<sub>2</sub> and CO<sub>2</sub> and electron microscopy techniques. Catalyst activity will be tested on energy-industrial reactions.

**Scientific disciplinary sector:** CHIM/04 CHIMICA INDUSTRIALE

**Place:** Dipartimento di Chimica e Chimica Industriale (DCCI)

**Required degree:** Laurea magistrale delle classi LM-22 Ingegneria Chimica, LM-53 Scienze e ingegneria dei Materiali, LM-54 Scienze chimiche, LM-71 Scienza e tecnologia della chimica industriale

**Subjects of the interview:** Principles of chemistry and technology of catalysis, fundamentals of industrial chemistry

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 9

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 06.02.2023 at 12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 12:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Davide Comoretto at the address e-mail: [davide.comoretto@unige.it](mailto:davide.comoretto@unige.it), phone number: +39 335 8046559 (skype: comoge).

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Davide COMORETTO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - MUR – M4C2 – Investimento 1.5 - Avviso “Ecosistemi dell’Innovazione” - Ecosistema dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”, ambito di intervento “4. Digital, Industry, Aerospace”.**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Label-free polymer photonic sensors.

**Description:** The activity focuses on developing polymer and hybrid polymer-inorganic photonic structures (with virgin, recycled and bioderived/biodegradable materials) for the detection of chemical pollutants in water and air. The sensors are planar photonic crystals that can be fabricated also on the square meter area with technologies used in packaging. Detection of pollutants is based on non-specific physical-chemical interactions between the sensor components suitably engineered and the pollutants allowing for the detection of several families of compounds (VOC, emerging pollutants, persistent pollutants, heavy metals etc.) with a single colorimetric device without employing any specific chemical target (label-free). Simple spectroscopic analysis (UV-Vis with portable apparatus) allows to determine the quality and the quantity of the analytes with lower detection limit down to the part per million. The validation of data acquired using these approaches will be achieved with instrumental analyses carried out on environmental samples obtained by classical and innovative sampling.

**Scientific disciplinary sector:** CHIM/04 CHIMICA INDUSTRIALE

**Place:** Dipartimento di Chimica e Chimica Industriale (DCCI)

**Required degree:** Laurea Magistrale delle classi: LM-22 Ingegneria Chimica, LM-53 Scienza e Ingegneria dei Materiali, LM-54 Scienze Chimiche, LM-71 Scienze e tecnologia della chimica industriale

**Subjects of the interview:** CV discussion; photonic crystals; sensors; analytical chemistry; materials, in particular polymers.

The candidate will need to prove his/her knowledge of the English language.

## RESEARCH PROGRAM NO. 10

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 10.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 10.02.2023 at 13:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 10.02.2023 starting from 16:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa M. Paola Carpanese at the address e-mail: carpanese@unige.it, phone number: +39 339 2142580.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa M. Paola CARPANESE

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - PROMETH2eus – PROduzione di H2 verde da acqua di mare tramite elettrolizzatore innovativo operante ad alta temperatura con integrazione in processo power-to-METHanol, finanziato dal MiTE nell'ambito del PNRR, missione 2 "Rivoluzione verde e transizione ecologica", componente 2 "Energia rinnovabile, idrogeno, rete e mobilità sostenibile", investimento 3.5 "Ricerca e sviluppo sull'idrogeno", finanziato dall'Unione Europea – Next Generation EU.**  
**D.D n. 126 del 27.06.2022**  
**CUP F37G22000080006**

**Title:** Manufacture and characterization of ceramic cells with innovative structure for seawater electrolysis.

**Description:** The main objective of the research is the construction of an innovative monolithic solid oxide cell for the direct electrolysis of seawater. In particular, the study will be aimed at optimizing the hierarchical porosity of the electrolyte, produced through the tape casting technique, as well as the deposition of high-performance electrocatalysts capable of maximizing an adequate amount of gas produced over time over the life of the stack. The electrochemical and morphological characterization of the cell will also be investigated

**Scientific disciplinary sector:** CHIM/07 FONDAMENTI CHIMICI DELLE TECNOLOGIE

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea magistrale delle classi LM-22 Ingegneria Chimica, LM-53 Scienza e Ingegneria dei Materiali.

**Subjects of the interview:** High-temperature electrolysis, solid-state conductivity and electrochemical characterisation, ceramic powders treatment and shaping.

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 11

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **9:00** at Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), primo piano, Via Opera Pia n. 15, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **12:00** at Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), primo piano, Via Opera Pia n. 15, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **06.02.2023** at **15:00** at Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), primo piano, Via Opera Pia n. 15, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (SKYPE video conference call) promptly contacting Prof. Attilio Converti via the email address: [converti@unige.it](mailto:converti@unige.it), phone number: +39 329 2104448.*

**Scientific coordinator:** Prof. Attilio CONVERTI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - CN Tecnologie dell'Agricoltura (Agritech) (Spoke 6, Management models to promote sustainability and resilience of agricultural production systems, WP 6.2, Task 6.2.2.)**

**D.D. n. 1032 del 17.06.2022 registrato dalla Corte dei Conti il 08.07.2022 n. 1826**

**CUP D33C22000950007**

**Title:** Design of circular systems combining different farm types and food companies with waste transformation plants

**Description:** Within the Task 6.2.2 the researcher will identify the most suitable industrial realities and will select the appropriate case studies. In particular, wastes selected in Task 6.2.1 will be considered. These wastes, after the recovery of high added value compounds (Task 6.2.1), will be characterized and used for the production of new biomasses and for the recovery of energy by anaerobic digestion coupled with microalgae production for thermal- and bio-conversion. Moreover, the wastewaters related to these processes will be treated using microalgae. The biogas upgrade will also be studied and pilot scale plants will be developed. The researcher will cooperate with other members of the UNIGE team to perform a LCA of the integrated system selected - from waste to finished product - calculating CO<sub>2</sub> reductions and absorptions and assessing the environmental impacts along the life cycle of the system.

**Scientific disciplinary sector:** CHIM/11 CHIMICA E BIOTECNOLOGIA DELLE FERMENTAZIONI

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea magistrale delle classi LM-6 Biologia, LM-8 Biotecnologie Industriali, LM-9 Biotecnologie Mediche Veterinarie e Farmaceutiche, LM-13 Farmacia e farmacia industriale, LM-22 Ingegneria Chimica, LM-54 Scienze Chimiche.

**Subjects of the interview:** Biological treatment of wastewaters, and solid and gaseous wastes, anaerobic digestion, growth and development of microalgal cultures under heterotrophic and autotrophic conditions.

The candidate will need to prove his/her knowledge of the english language.

**RESEARCH PROGRAM NO. 12**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **9:30** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), stanza II-21, Corso Europa n. 26, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **12:45** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), stanza II-21, Corso Europa n. 26, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **15:30** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), stanza II-21, Corso Europa n. 26, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Marco FERRARI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR- Ecosistema dell'innovazione: RAISE (Robotics and AI for Socio-economic Empowerment), Spoke 3: "Sustainable environmental caring and protection technologies".  
WP2 "SMART TECHNOLOGIES FOR ENVIRONMENTAL MONITORING AND TERRITORY MANAGEMENT.**

**D.D. N. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Development of an early storm warning system

**Description:** The coastal areas are frequently hit by extreme storm events. These phenomena are often related to wave heights that damage the coast. Most urban towns are close to this area and are often exposed to extreme events. During the winter, floods can cause damage to infrastructures such as roads, railway lines and tourist facilities. Furthermore, the sea level rise related to Climate Change could increase beach impact equilibrium and coastal areas' flooding. The purpose of this project is to development of an early storm warning system using machine learning tools. The system will consist of a database containing the main parameters (Hs, Tp, Dir, wave run-up etc.) of the most frequent events in the investigated area and it will implement through a real-time wave forecast dataset.

**Scientific disciplinary sector:** GEO/04 GEOGRAFIA FISICA E GEOMORFOLOGIA

**Place:** Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV)

**Required degree:** Laurea Magistrale delle classi LM-60 Scienze della natura, LM-74 Scienze e tecnologie geologiche, LM-75 Scienze e tecnologie per l'ambiente e il territorio.

**Subjects of the interview:** Analysis and assessment of coastal vulnerability using different approaches; Coastal morphodynamics and coastal hydrodynamics related to both short-term and long-term physical vulnerability; GIS tools and coastal modelling in the study of described phenomena.

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 13

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **10:00** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), Viale Benedetto XV n. 5, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **13:00** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), Viale Benedetto XV n. 5, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **06.02.2023** at **14:30** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), al secondo piano della Palazzina delle Scienze, presso il Laboratorio di Sismologia, Viale Benedetto XV n. 5, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof. Simone Barani via the email address: [simone.barani@unige.it](mailto:simone.barani@unige.it), phone number: +39 010 353 8097.*

**Scientific coordinator:** Prof. Simone BARANI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - Ecosistema dell'innovazione: RAISE (Robotics and AI for Socio-economic Empowerment), Spoke 3: "Sustainable environmental caring and protection technologies", WP2 "Smart technologies for environmental monitoring and territory management".**

**D.D. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Development and implementation of automatic procedures for the evaluation of earthquake ground-shaking scenarios in real time or near real time.

**Description:** The scope of the activity is the development and implementation of automatic procedures for the evaluation of earthquake ground-shaking scenarios (in terms of acceleration, macroseismic intensity, or other ground-shaking parameters) in real time or near real time. All procedures should be developed in order to work in conjunction with standard procedures for earthquake location and warning used by major seismological centers. The activity will include the implementation of updated ground-motion attenuation models as well as kinematic models and soil classification maps.

**Scientific disciplinary sector:** GEO/10 GEOFISICA DELLA TERRA SOLIDA

**Place:** Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV)

**Required degree:** Laurea Magistrale delle classi: LM-17 Fisica, LM-23 Ingegneria Civile, LM-26 Ingegneria della sicurezza (Engineering for Natural Risk Management), LM-35 Ingegneria per l'Ambiente e il Territorio, LM-40 Matematica, LM-60 Scienze della Natura, LM-74 Scienze e tecnologie geologiche, LM-75 Scienze e Tecnologie per l'Ambiente e il Territorio, LM-79 Scienze Geofisiche.

**Subjects of the interview:** Basics of seismology (e.g., propagation of seismic waves, earthquake location, magnitude scales, ground-motion attenuation equations), ground-shaking parameters and scenarios, seismic amplification effects, seismic hazard analysis, earthquake warning systems.

The candidate will need to prove his/her knowledge of the English language.

**RESEARCH PROGRAM NO. 14**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 9:30** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 06.02.2023 at 15:30** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 9:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Giorgio Bavestrello at the address e-mail: giorgio.bavestrello@gmail.com, phone number: +39 010 353 8031

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Giorgio BAVESTRELLO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding:** PNRR – Avviso “Centri Nazionali”, con il quale è ammesso a finanziamento il Centro Nazionale “National Biodiversity Future Center” - Proposte di intervento per la creazione e il rafforzamento di "ecosistemi dell'innovazione", costruzione di "leader territoriali di R&S" – Ecosistemi dell’Innovazione – nell’ambito del Piano Nazionale di Ripresa e Resilienza, Missione 4 Istruzione e ricerca – Componente 2 Dalla ricerca all’impresa – Investimento 1.5, finanziato dall’Unione europea – NextGenerationEU  
**D.D. n. 1034 del 17.06.2022 registrato dalla Corte dei Conti il 14.07.2022 n.1881**  
**CUP D33C22000960007**

**Title:** Sampling, analysis and characterization of the vagile macrofauna of the Ligurian coasts.

**Description:** The research grant aims to characterize, according to the most advanced research methodologies, the vagile component of the macrofauna of the Ligurian coasts. Sampling will take place by applying specific sampling techniques (qualitative and quantitative), which involves scuba diving and will be carried out by the candidate who will be embedded in a working team. The obtained samples will be processed and divided according to precise operating standards, such as those required by scientific institutions and museums operating internationally, for which in-depth specific knowledge is required. The data will then be entered into relational databases and processed for DNA barcoding analysis, operations that will have to be handled autonomously by the candidate.

**Scientific disciplinary sector:** BIO/05 ZOOLOGIA

**Place:** Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV)

**Required degree:** Laurea magistrale della classe LM-75 Scienze e tecnologie per l’ambiente e il territorio (Scienze del mare).

**Subjects of the interview:** During the interview, the knowledge of the following topics will be verified: knowledge of main vagile organisms of coastal areas and their determination; characteristics and functioning of the main relational databases concerning distributional and taxonomic data of marine species; management of samples taken in the context of scientific expeditions; molecular characterization techniques of the samples.

The candidate will need to prove his/her knowledge of the english language.



## **RESEARCH PROGRAM NO. 15**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023 at 09:30** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), Viale Benedetto XV n. 3, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023 at 12:30** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), Viale Benedetto XV n. 3, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site (piano terra del Palazzo della Presidenza di SMFN, Edificio 9 (ex-chimica), publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **06.02.2023 at 14:00** at Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV), primo piano del Palazzo della Presidenza di SMFN, Edificio 9 (ex-chimica), presso il Laboratorio di Ecologia del Benthos, Viale Benedetto XV n. 3, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof.ssa Mariachiara Chiantore via the email address: mariachiara.chiantore@unige.it, phone number: +39 010 353 8384.*

**Scientific coordinator:** Prof.ssa Mariachiara CHIANTORE

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR- National Recovery and Resilience Plan (NRRP), Mission 4 Component 2 Investment 1.4 funded from the European Union – NextGenerationEU – CN00000033 Centro Nazionale Biodiversità.**

**D.D. n. 1034 del 17.06.2022, registrato dalla Corte dei Conti il 14.07.2022 n. 1881**

**CUP D33C22000960007**

**Title:** Valorisation of marine resources through Integrated Multitrophic Aquaculture Systems (IMTA).

**Description:** In order to promote sustainable enhancement of marine resources it is essential to promote the diversification and growth of aquaculture as part of an integrated strategy for the marine bioeconomy and blue biotechnology, and to advance innovation to reduce the impact of aquaculture on marine ecosystems and biodiversity. In the context of the National Biodiversity Future Center (specifically in the framework of the Activity 3 of Spoke 2, Task 3.2: Marine multitrophic aquaculture - IMTA), funded through PNRR funds, the candidate will be involved in activities aimed at fostering sustainable utilization of marine biomass through a circular approach. Various bio-remediating organisms will be used to complement traditional fish farms, including commercially important mollusks, echinoderms and macroalgae. The use of non-edible biomass will also be evaluated. The fellow will monitor the growth performance of cultured organisms to assess the total biomass produced at each production cycle. He/she will also monitor the reduced impact of aquaculture on the marine ecosystem and biodiversity.

**Scientific disciplinary sector:** BIO/07 ECOLOGIA

**Place:** Dipartimento di Scienze della Terra, Dell'Ambiente e della Vita (DISTAV)

**Required degree:** Dottorato di Ricerca in Scienze e tecnologie del mare, Dottorato di ricerca in ambito ecologico.

**Subjects of the interview:** Maintenance and reproduction techniques of marine organisms in a confined environment and outdoor (tanks, aquaria, cages), with special reference to marine invertebrates and macroalgae. Knowledge about IMTA and RAS. The candidate should demonstrate a good knowledge of the most recent results published in the international scientific literature in the field.

The candidate will need to prove his/her knowledge of the English language.

## RESEARCH PROGRAM NO. 16

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **10:00** at Dipartimento di Medicina interna e Specialità mediche (DIMI), Sez. Farmacologia, Viale Benedetto XV n. 2, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **16:00** at Dipartimento di Medicina interna e Specialità mediche (DIMI), Sez. Farmacologia, Viale Benedetto XV n. 2, Genova.

The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **09.02.2023** at **14:00** at Dipartimento di Medicina interna e Specialità mediche (DIMI), Sez, Farmacologia, Viale Benedetto XV n. 2, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof.ssa Federica Barbieri via the email address: federica.barbieri@unige.it, phone number: +39 010 3538855.*

**Scientific coordinator:** Prof.ssa Federica BARBIERI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 31.015,00**

**Funding:** PNRR - MUR – M4C2 – Investimento 1.3 - Avviso “Partenariati estesi alle università, ai centri di ricerca, alle aziende per il finanziamento di progetti di ricerca di base” Piano Nazionale di Ripresa e Resilienza, Missione 4 Istruzione e Ricerca – Componente 2 Dalla ricerca all’impresa – Investimento 1.3 - partenariato esteso MNESYS, codice identificativo PE0000006, Programma di Ricerca e Innovazione dal titolo “MNESYS (A multiscale integrated approach to the study of the nervous system in health and disease).

**D.D. n. 1553 del 11.10.2022**

**CUP D33C22001340002**

**Title:** Human glioma stem cells: development of 3d models for the study of novel pharmacological targets

**Description:** Research activity will include: 1) the setup of three dimensional cultures (3D spheroids/organoids) and tumoroids (organoids derived from primary cultures of glioma patients); 2) the analysis of cellular types and their phenotype within organoids/tumoroids to study the tumor microenvironment as well as their modulation through pharmacologic treatment with repositioned drugs.

**Scientific disciplinary sector:** BIO/14 FARMACOLOGIA

**Place:** Dipartimento di Medicina interna e Specialità mediche (DIMI)

**Required degree:** Laurea Magistrale delle classi: LM-6 Biologia, LM-9 Biotecnologie Mediche Veterinarie e Farmaceutiche, LM-13 Farmacia e Farmacia Industriale.

**Subjects of the interview:** The interview will focus on previous research experience and thesis work of the candidate. Expertise and hard skills in the specific field of the research project will be also evaluated.

The candidate will need to prove his/her knowledge of the English language.

**RESEARCH PROGRAM NO. 17**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **08.02.2023** at **9:00** at Dipartimento di scienze chirurgiche e diagnostiche integrate (DISC), 2° piano, Aula Maestrale, Viale Benedetto XV n. 6, Genova . The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **08.02.2023** at **12:00** at Dipartimento di scienze chirurgiche e diagnostiche integrate (DISC), 2° piano, Viale Benedetto XV n. 6, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **08.02.2023** at **14:30** at Dipartimento di scienze chirurgiche e diagnostiche integrate (DISC), 2° piano, Viale Benedetto XV n. 6, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Giovanni SPINELLA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** AI-driven tools for primary aortic diseases and cardiovascular comorbidities.

**Description:** The activity of the CV-Risk project will be based on the automatic analysis of diagnostic images (Computed Tomography, CT) and patients' clinical data for the screening, diagnosis of vascular pathologies. In the implementation phase the results of the research & development activities carried out will be integrated into a software tool.

**Scientific disciplinary sector:** MED/22 CHIRURGIA VASCOLARE

**Place:** Dipartimento di scienze chirurgiche e diagnostiche integrate (DISC)

**Required degree:** Laurea Magistrale delle classi: LM-17 Fisica, LM-21 Ingegneria Biomedica, LM-40 Matematica, LM-44 Modellistica Matematico-Fisica per l'Ingegneria.

**Subjects of the interview:** Research activity related to the object call.

The candidate will need to prove his/her knowledge of the english language.

**RESEARCH PROGRAM NO. 18**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.03.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 07.03.2023 at 9:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.03.2023 starting from 10:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Nicoletta Tambroni at the address e-mail: nicoletta.tambroni@unige.it, phone number: +39 010 3352497.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa TAMBRONI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Formulation of theoretical models for eco-morphodynamic applications.

**Description:** The research project aims to develop theoretical models of morphodynamic processes for the generation of synthetic data, that could be eventually employed for the application of machine learning models to morphodynamic problems. The research may also include the collection of field data from image analysis taken by satellites, aircraft or drones.

**Scientific disciplinary sector:** ICAR/01 IDRAULICA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Dottorato di ricerca in ambito matematico, fisico ed ingegneristico.

**Subjects of the interview:** Discussion of the project and of the research experiences of the candidate.

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 19

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 06.02.2023 at 15:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 10:00** The interview will take place, in any case, electronically (video conference via Skype, or Teams, GoogleMeet, Zoom) by contacting Prof. Giovanni Besio at the address e-mail: giovanni.besio@unige.it.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Giovanni BESIO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding:**PNRR - MUR – M4C2 – Investimento 1.5 - Avviso “Ecosistemi dell’Innovazione” –Ecosistema dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)” Spoke 4.  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25/07/2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Now- and Fore-cast of meteocean conditions through numerical models, observation and machine learning

**Description:**In the framework of the PNRR MUR project - M4C2 - Investment 1.5 - Notice "Ecosystems of Innovation" - RAISE (Robotics and AI for Socio-economic Empowerment) - Spoke 4, the development of Machine Learning algorithms for the very short term (nowcast) and short term (forecast) forecasting of weather and sea conditions in the vicinity of main Ligurian ports (Savona, Genoa, La Spezia) is planned. The research activities thus involve i) the installation and deployment of instrumentation dedicated to the measurement of environmental meteorological quantities such as currents, waves, and wind ii) the post-processing of the measured data iii) the integration of the measures with data from numerical models developed and maintained by DICCA on the AWS platform (<http://www3.dicca.unige.it/meteocean/>) iv) the development of Machine Learning algorithms for the management of time series in order to produce very short and short-term forecasts employing the data reconstructed from the numerical models (hindcast) and the data observed from the instrumentation made available by the project. The activities will be developed and implemented through close collaboration between DICCA and the research center MALGA (Machine Learning Genoa Center - <https://malga.unige.it/>). The grant winner will be involved in research and development activities at both DICCA and MALGA.

**Scientific disciplinary sector:** ICAR/02 COSTRUZIONI IDRAULICHE E MARITTIME E IDROLOGIA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea specialistica delle classi: 20/S Fisica, 23/S Informatica, 28/S Ingegneria Civile, 32/S Ingegneria elettronica, 35/S Ingegneria Informatica,, 37/S Ingegneria navale, 38/S Ingegneria per l’ambiente e il territorio, 45/S Matematica, 50/S Modellistica matematico-fisica per l’ingegneria, 68/S Scienze della natura, 82/S Scienze e tecnologie per l’ambiente e il territorio, 85/S Scienze geofisiche; Laurea Magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-23 Ingegneria civile, LM-29 Ingegneria elettronica, LM-32 Ingegneria informatica, LM-34 Ingegneria navale, LM-35 Ingegneria per l’ambiente e il territorio, LM-40 Matematica, LM-44 Modellistica matematico-fisica per l’ingegneria, LM-60 Scienze della natura, LM-75 Scienze e tecnologie per l'ambiente e il territorio, LM-79 Scienze geofisiche.

**Subjects of the interview:** Basic fluid mechanics; ocean dynamics (current and waves); signal analysis; statistics; machine learning; scripting in python, matlab and bash.

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 20

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **08.02.2023** at **9:30** at Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Laboratorio di Idraulica "E. Marchi", Via Montallegro n. 1, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **08.02.2023** at **13:00** at Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro n. 1, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **08.02.2023** at **14:30** at Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Laboratorio di Idraulica "E. Marchi", Via Montallegro n.1, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof.ssa Ilaria GNECCO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment"**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Identification of hydrological variables to support the trigger evaluation of rainfall-induced landslides in the Ligurian area.

**Description:** The research activity is developed in the framework of the project RAISE "Robotics and AI for Socio-economic Empowerment" financed on PNRR Ecosistema dell'innovazione. The project consists in several activities including the implementation of smart technologies for environmental monitoring and territory management. In particular, the object of the research deals with the analysis and the identification of correlation between different hydrological variables and the trigger of rainfall-induced landslides occurred in the Ligurian territory in order to evaluate the hydrological conditions predisposing the slopes to failure. The final aim of the research is to support the identification of effective indicators (hydrological thresholds) that can be integrated into an operational system for predicting landslide phenomena. The research activity also involved the study of more than 30-year series of recorded rainfall of maximum intensity and short duration in order to identify any variation in the hydrological regime at the catchment scale.

**Scientific disciplinary sector:** ICAR/02 COSTRUZIONI IDRAULICHE E MARITTIME E IDROLOGIA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea magistrale delle classi LM-23 Ingegneria civile, LM-35 Ingegneria per l'ambiente e il territorio.

**Subjects of the interview:** Hydrology in natural systems, inferential statistical analysis mainly focused on hydrological variables, georeferenced data management, rainfall-induced landslides analysis.

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 21

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **11:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Area Trasporti, Villa Cambiaso, Via Montallegro n. 1, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **16:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Area Trasporti, Villa Cambiaso, Via Montallegro n. 1, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **09:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Area Trasporti, Villa Cambiaso, Via Montallegro n. 1, Genova

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof.ssa Davide GIGLIO

**NO. 1 research fellowship - Duration year 1 – possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - MUR – M4C2 – Investimento 1.5 – Avviso “Ecosistemi dell’Innovazione” (D.D. n. 3277/2021) – Ecosistema dell’Innovazione “RAISE (Robotics and AI for Socio-economic Empowerment)” – codice identificativo ECS00000035**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n.1970**  
**CUP D33C22000970006**

**Title:** Tools and simulators of port activities and transport network optimization (for the spoke 4 “Smart and sustainable ports” of RAISE ecosystem)

**Description:** The activity consists in the design and development of simulation models that represent logistic processes carried out in ports or transportation systems that include port areas. The activity will be carried out within the innovation ecosystem "RAISE (Robotics and AI for Socio-economic Empowerment)", in particular in the spoke 4 "Smart and Sustainable Ports". The simulation models will have to be created using specific software and/or standard programming languages and they will be tested on case studies that will be defined within the spoke 4 of the RAISE ecosystem.

**Scientific disciplinary sector:** ICAR/05 TRASPORTI

**Place:** Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME)

**Required degree:** Laurea Magistrale delle classi LM-23 Ingegneria civile, LM-26 Ingegneria della sicurezza.

**Subjects of the interview:** Methods and models for transportation systems and logistics. Simulation

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 22**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 10.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 10.02.2023 at 13:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 10.02.2023 starting from 14:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Bianca Federici at the address e-mail: bianca.federici@unige.it, phone number: +39 010 3352421.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Bianca FEDERICI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding:**PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Procedure for classification and interpretation of seismic damage images and for data management in a GIS environment for near-real time mapping.

**Description:** The research activity aims to implement an automatic procedure for the interpretation of seismic damage images on buildings with the ultimate goal of attributing synthetic damage levels, at the scale of the individual artefact. The images are optical, possibly integrated with laser scanning point clouds, acquired downstream of seismic events at the scale of individual artefacts or urban areas. Their reprocessing intends to make use of automatic segmentation or classification techniques. The engineering interpretation of the acquired data will take place in collaboration with structural engineer engineers involved in the research.

The researcher will have to develop an algorithm for the automatic segmentation or classification of a large set of images for the identification of lesions and different types of damage, starting from what has recently been proposed in the literature, seeking the optimisation of the algorithm in terms of accuracy. In addition, the damages identified will have to be georeferenced and automatically managed in a geographical environment (GIS) for mapping the consequences of seismic shaking in the area hit by the event.

**Scientific disciplinary sector:** ICAR/06 TOPOGRAFIA E CARTOGRAFIA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea magistrale delle classi LM-23 Ingegneria Civile, LM-35 Ingegneria per l'ambiente e il territorio, LM-4 Architettura e Ingegneria Edile-Architettura, LM-18 Informatica, LM-27 Ingegneria delle Telecomunicazioni, LM-29 Ingegneria elettronica, LM-32 Ingegneria informatica, LM-73 Scienze e tecnologie forestali ed ambientali, LM-80 Scienze geografiche - Geografia e Scienze Territoriali, LM-91 Tecniche e metodi per la società dell'informazione

**Subjects of the interview:** Features of optical images and techniques for their processing, principles of photogrammetry, principles of geospatial data management in a GIS environment, reference systems and map projections.

The candidate will need to prove his/her knowledge of the english language.



## **RESEARCH PROGRAM NO. 23**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **9:00** at Dipartimento Architettura e Design (DAD), Stradone S. Agostino n. 37, Genova The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **13:00** at Dipartimento Architettura e Design (DAD), Stradone S. Agostino n. 37, Genova The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **14:30** at Dipartimento Architettura e Design (DAD), Sala Riunioni della Direzione, Stradone S. Agostino n. 37, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Niccolò CASIDDU

**NO. 1 research fellowship - Duration years 2 - Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Co-design activities and research models to promote inclusivity in RAISE project.

**Description:** Research and development of new technological and relational models for the establishment of inclusive urban communities through co-design methodological approaches and actions. Experimental stages will take advantage of co-design methods and suitable facilities (e.g. Living Lab) for understanding users' needs and identifying good practices and inclusive solutions within the RAISE project. Specifically, the objective of the research will be to support the development of inclusive technologies (interface smart indoor/outdoor) to serve citizens capable of supporting the autonomy and independence of frail users.

**Scientific disciplinary sector:** ICAR/13 DISEGNO INDUSTRIALE

**Place:** Dipartimento Architettura e Design (DAD)

**Required degree:** Dottorato di Ricerca in Design.

**Subjects of the interview:** inclusive design, metodologie di design thinking, attività di co-design, Living Labs, user engagement, Ambient Assisted Living

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 24**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **9:00** at Dipartimento Architettura e Design (DAD), Stradone S. Agostino n. 37, Genova The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **13:00** at Dipartimento Architettura e Design (DAD), Stradone S. Agostino n. 37 , Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **14:30** at Dipartimento Architettura e Design (DAD), Aula Vallega, Stradone S. Agostino n. 37, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Manuel GAUSA NAVARRO

**NO. 1 research fellowship - Duration years 2 –Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Data-driven design and mapping for Inclusive Smart Cities and urban regeneration strategies,

**Description:** Today, urban areas face major challenges in terms of public wellbeing, active ageing and environmental quality, combining the models of Active Healthy Cities and Smart Cities. The analysis of urban quality data is defined by multiple indicators that need to be mapped in order to define more responsive urban regeneration strategies. The research grant intends to contribute to the following activities of the NextGen EU project "RAISE": analysis of international Living Lab best practices and co-design; GIS data optimisation and mapping of urban hubs to support community service networks; scenario building and validation of data-driven projects for local demonstrators. Good GIS skills and participation in funded research projects are required

**Scientific disciplinary sector:** ICAR/21 URBANISTICA

**Place:** Dipartimento Architettura e Design (DAD)

**Required degree:** Dottorato di Ricerca in Architettura / Pianificazione Urbana.

**Subjects of the interview:** Urban well-being and contemporary cities; Active public spaces; Living Lab and inclusive design; GIS and mapping skills; Urban regeneration strategies and policy recommendations

The candidate will need to prove his/her knowledge of the english language.

## SCIENTIFIC DISCIPLINARY AREA INDUSTRIAL AND INFORMATION ENGINEERING

### RESEARCH PROGRAM NO. 25

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview** on **06.02.2023** at **10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview:** on **06.02.2023** at **13:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview:** on **06.02.2023** starting from **15:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Silvia Donnarumma at the address e-mail: [silvia.donnarumma@unige.it](mailto:silvia.donnarumma@unige.it) , phone number: +39 010 3352339.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Silvia DONNARUMMA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" SPOKE 4**  
**D.D. N. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Model simulation of autonomous and semi-autonomous navigation of marine robot in narrow waters.

**Description:** The successful candidate will be expected to work within the project "Robotics and AI for Socio-economic Empowerment" RAISE - Spoke 4 Smart and sustainable ports - implementation of monitoring and simulation systems, robotic and AI technologies for logistics and security in the port and marine environment. Specifically, the candidate will be expected to develop models for managing and planning small swarms of marine robots for navigation in restricted waters. Prototyping testing of the developed models will be tested at the labs at DITEN-CompassLab (scale models) and DITEN-ShiLL Lab (Virtual simulation and Digital Twinning).

**Scientific disciplinary sector:** ING-IND/02 COSTRUZIONI E IMPIANTI NAVALI E MARINI

**Place:** Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN)

**Required degree:** Laurea Magistrale delle classi: LM-17 Fisica, LM-18 Informatica, LM-20 Ingegneria aerospaziale e astronautica, LM-25 Ingegneria dell'automazione, LM-26 Ingegneria della sicurezza, LM-27 Ingegneria delle telecomunicazioni, LM-28 Ingegneria elettrica, LM-29 Ingegneria elettronica, LM-32 Ingegneria informatica, LM-33 Ingegneria meccanica, LM-34 Ingegneria navale, LM-40 Matematica, LM-44 Modellistica matematico-fisica per l'ingegneria, LM-66 Sicurezza informatica.

**Subjects of the interview:** Research interests of the candidate specifically related to the candidate's recent work to assess its relevance to the project. Mathematical modeling of physical systems, system identification, control theory

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 26

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **9:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sezione Macchine, Sistemi Energetici e Trasporti, Padiglioni di Villa Cambiaso, Via Montallegro n. 1, Genova  
The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **12:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sezione Macchine, Sistemi Energetici e Trasporti, Padiglioni di Villa Cambiaso, Via Montallegro n. 1, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **14:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sezione Macchine, Sistemi Energetici e Trasporti, Padiglioni di Villa Cambiaso, Via Montallegro n. 1, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof. Giorgio Zamboni via the email address: giorgio.zamboni@unige.it, phone number: +39 010 3352448.*

**Scientific coordinator:** Prof. Giorgio ZAMBONI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding:** PNRR - MUR – M4C2 – Investimento 1.5 – Avviso “Ecosistemi dell’Innovazione” (D.D. n. 3277/2021) - Ecosistema dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Tools for the assessment of energy consumption and emissions in port areas related to ships, heavy duty vehicles and service machinery (activity within the Spoke 4 “Smart and sustainable ports” of RAISE Ecosystem).

**Description:** The research activity deals with the development of methodologies and tools to evaluate energy consumption and emissions in port areas released by or related to ships, heavy duty and service vehicles, referring to different time periods. A Well-to-Wheels/Propeller approach will be considered, calculating upstream and downstream energy and emissions, to achieve a proper comparison of conventional and alternative vehicles, fuels, and energy vectors. Involved aspects are referred to the collection of data on ships and vehicles (number, types, mission profiles, etc.), their processing to evaluate the current situation and the assessment of future scenarios, referring to expected benefits in terms of energy consumption and emissions reduction related to technical and management measures

**Scientific disciplinary sector:** ING-IND/08 MACCHINE A FLUIDO

**Place:** Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME)

**Required degree:** Laurea Magistrale delle classi LM-26 Ingegneria della Sicurezza, LM-30 Ingegneria Energetica e Nucleare, LM-33 Ingegneria Meccanica.

**Subjects of the interview:** The interview will be focused on the different topics outlined in the description of the research activity: propulsion systems for road vehicles and ships and their environmental impact; emissions, devices

and techniques for their control; influence of mission profile/operating conditions on pollutants; alternative fuels and energy vectors (physical and chemical properties, production processes, distribution infrastructure, end use, etc.); comparison of methodologies and tools for the assessment of energy consumption and emissions of transportation means.

The candidate will need to prove his/her knowledge of the English language.

## **RESEARCH PROGRAM NO. 27**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **08.02.2023** at **8:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sez. MASET, Via Montallegro n. 1, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **08.02.2023** at **16:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sez. MASET, Via Montallegro n. 1, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **09.02.2023** at **14:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Via Montallegro n. 1, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof. Massimo Rivarolo via the email address: [massimo.rivarolo@unige.it](mailto:massimo.rivarolo@unige.it) phone number: +39 010 3352460.*

**Scientific coordinator:** Prof. Massimo RIVAROLO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2**  
**"Scenari Energetici del Futuro"**  
**D.D. n. 1561 del 11.10.2022**  
**CUP D33C22001330002**

**Title:** Models for hydrogen storage and final use in fuel cells.

**Description:** In this research grant, the development of models for the simulation of storage and final use of green hydrogen (produced by renewable energy sources) in fuel cells will be investigated, in particular for maritime applications, taking into account the strong evolution towards decarbonization of this sector, according to International Maritime Organization (IMO) targets. In particular, the topic of the research will be the steady-state, time-dependent and dynamic modelling of storage and utilization systems, focusing on low temperature fuel cells and their marinization for different onboard vessel application

**Scientific disciplinary sector:** ING-IND/09 SISTEMI PER L'ENERGIA E L'AMBIENTE

**Place:** Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME)

**Required degree:** Laurea Magistrale delle classi LM-33 Ingegneria meccanica, LM-22 Ingegneria chimica.

**Subjects of the interview:** Innovative energy systems; fuel cells; technologies for hydrogen storage; dynamic of energy systems.

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 28**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **08.02.2023 at 9:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Via Opera Pia n. 15a, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **08.02.2023 at 12:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Via Opera Pia n. 15a, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **08.02.2023 at 14:00** at Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sezione Termoenergetica e Condizionamento Ambientale, Via Opera Pia n. 15a, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof Marco Fossa via the email address marco.fossa@unige.it , phone number: +39 010 3352198.*

**Scientific coordinator:** Prof. Marco FOSSA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" - SPOKE 3 WP3 "Smart Energy Storage and Distribution"**

**D.D. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** New Models for simulating and predicting the performance of solar and geothermal heat pumps systems.

**Description:** The research activity concerns the development models for predicting the performance of heat pumps employing geothermal and solar renewable sources. The activity is in the general area of energy and heat transfer applied to high efficiency buildings with reduced greenhouse gas emissions. Special emphasis in the research will be given to modeling aspects of the behavior of borehole heat exchangers for geothermal applications. Other aspects of the research will involve modeling related to solar energy utilization and techniques for maximizing solar energy yields. Sensible thermal storage systems using water, solid matrix storage or pressurized gas systems will be also considered, as solutions for the building sector with energy networks for heating and cooling on an urban scale.

**Scientific disciplinary sector:** ING-IND/10 FISICA TECNICA INDUSTRIALE

**Place:** Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME)

**Required degree:** Laurea Magistrale delle classi: LM-30 Ingegneria Energetica e Nucleare, LM-33 Ingegneria Meccanica.

**Subjects of the interview:** The interview will focus on models for describing the thermal transient behavior of geothermal heat pump systems, analytical and numerical techniques applied to describe the ground thermal response in geothermal applications, solar capturers of innovative type (solar thermal, solar photovoltaic tracking), single-phase, liquid, solid matrix, gas compression energy storage systems

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 29**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview** on **07.02.2023** at **09:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview:** on **07.02.2023** at **12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview:** on **07.02.2023** starting from **14:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Giovanni Battista Rossi at the address e-mail: [g.b.rossi@unige.it](mailto:g.b.rossi@unige.it) , phone number: +39 329 2104578

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Giovanni Battista ROSSI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding:** PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" - SPOKE 4, Project 6 AI Devices and applications for nowcast and forecast of met-ocean conditions (RL/WP 2)

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Advanced measurement and data processing systems for the monitoring of sea waves.

**Description:** The research topic is related to the development of advanced measurement systems for monitoring the state of the sea, with particular reference to the state of wave motion. Its estimation is, indeed, essential for different applications including navigation, monitoring of the phenomenon of fatigue for offshore structures, etc. A relevant part of the activity will also be the development of signal processing techniques from different types of sensors (cameras, accelerometers, inertial units, etc.) which lead to a reliable estimation of the aforementioned sea state, with specific reference to spectral reconstruction, and considering, if possible, also measurements on board the vessel. In this latter case, filtering of the vessel's dynamics through suitable compensation algorithms will be fundamental for an accurate sea state estimation. The research, therefore, fits into the branch of mechanical measurements and signal analysis, with specific reference to all the relevant techniques, algorithms, and technologies in the marine field.

**Scientific disciplinary sector:** ING-IND/12 MISURE MECCANICHE E TERMICHE

**Place:** Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME)

**Required degree:** Laurea magistrale delle classi LM-20 Ingegneria Aerospaziale e Astronautica, LM-33 Ingegneria Meccanica, LM-34 Ingegneria Navale - Yacht Design.

**Subjects of the interview:** The interview will focus on the following: techniques for measuring dynamic quantities, signal analysis, dynamics of systems, systems for measuring mechanical and thermal quantities

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 30**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 08.02.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 08.02.2023 at 12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 08.02.2023 starting from 15:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Barbara Bosio at the address e-mail: barbara.bosio@unige.it , phone number: +39 340 8844029.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Barbara BOSIO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"**

**D.D. N. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Modelling of a fuel cell module in a multi-source system based on autonomous power supply from renewable energies

**Description:** As part of a collaboration with the CNR within the RAISE project, the model of a fuel cell module integrated into a multi-source system based on autonomous power supply from renewable energy will be developed. Particular attention will be paid to energy management strategies both in terms of production and storage. It will be necessary to define a versatile model in terms of simulation environment in order not to condition the choice of the software necessary for the simulation of the overall system. The results will be validated on the basis of tests conducted on an experimental prototype and the scalability in power towards higher targets will be evaluated, also considering and comparing the use of alternative fuel cell technologies.

**Scientific disciplinary sector:** ING-IND/23 CHIMICA FISICA APPLICATA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea V.O in Ingegneria Chimica; Laurea Specialistica della classe 27/S Ingegneria chimica; Laurea magistrale della classe LM-22 Ingegneria chimica -Ingegneria Chimica e di Processo

**Subjects of the interview:** Fundamentals of electrochemistry. Operation and properties of fuel cells. Experience in simulation and experimentation of electrochemical cells.

The candidate will need to prove his/her knowledge of the english language.



## RESEARCH PROGRAM NO. 31

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 07.02.2023 at 8:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 07.02.2023 at 11:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 12:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Elisabetta Arato at the address e-mail: [elisabetta.arato@unige.it](mailto:elisabetta.arato@unige.it), phone number: +39 346 7439478.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Elisabetta ARATO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2**  
**"Scenari Energetici del Futuro"**  
**D.D. n. 1561 del 11.10.2022**  
**CUP D33C22001330002**

**Title:** Optimization of a pilot plant for the thermochemical production of hydrogen and chemicals from agricultural and textile residues

**Description:** This project involves the optimization of the spouted bed jet reactor currently located at the Filidea Srl headquarters (Magnonevolo, Biella), consisting of eight modules placed on two levels according to a 2x2 configuration and with a thermal capacity of 0.8 MW, in order to maximize the hydrogen yield. The project also includes a technical-economic analysis on the production of this compound from biomass. Despite the great interest in hydrogen, detailed analyzes of its production from biomass are scarce in the scientific literature, especially with regard to this reactor solution. With a view to circular economy and the reduction of greenhouse gas emissions, the possible applications of biochar, in both industrial and agricultural fields, and of carbon dioxide will also be evaluated, so as to make the process carbon negative

**Scientific disciplinary sector:** ING-IND/24 PRINCIPI DI INGEGNERIA CHIMICA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Dottorato di ricerca in ambito ingegneria chimica e materiali con adeguata produzione scientifica su temi di simulazione di processo tramite indagini sperimentali o numeriche.

**Subjects of the interview:** Process analysis and simulation, chemical thermodynamics and kinetics, chemical reactor theory, chemical jet reactors.

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 32**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 07.02.2023 at 13:30** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 07.02.2023 at 16:30** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 17:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Ombretta Paladino at the address e-mail: paladino@unige.it, phone number: +39 329 2104457

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Ombretta PALADINO

**NO. 1 research fellowship - Duration years 2 – Annual pre-tax amount: € 19.367,00**

**Funding: MITE - NEMESI ID RSH2B\_000002 e in parte su finanziamento dipartimentale.  
D.D. n. 127 del 27.06.2022  
CUP F39J22001960004**

**Title:** Hydrogen production by Anion Exchange Membrane Water Electrolysis: experimental campaign on single-cell test bench and scale-up.

**Description:** The objective of the research activity is the study and development of new technologies for the electrochemical production of hydrogen using anion exchange membrane water electrolyzers (AEMWE). The research activity (experimental and modelling) will be oriented to the scale-up of electrochemical reactors through:  
1) the design and construction of a test-bench and the execution of experimental campaigns on single cells, assembled with materials produced in the ECPLab laboratory (Engineering of Chemical Processes - DICCA) of the Savona Campus;

2) data analysis and development of mathematical models of the MEA

The research activity will be included within the NEMESI project, funded by MITE and carried out at Savona Campus.

**Scientific disciplinary sector:** ING-IND/24 PRINCIPI DI INGEGNERIA CHIMICA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea Magistrale delle classi LM-22 Ingegneria chimica, LM-30 Ingegneria energetica e nucleare.

**Subjects of the interview:** Absorption and diffusion phenomena in polyamide materials and their mathematical modeling; thermal and structural FEA analysis of membranes and/or plastic materials; diffusion, dispersion and mixing models in the heterogeneous phase.

The candidate will need to prove his/her knowledge of the English language.

## RESEARCH PROGRAM NO. 33

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **10:00** at Dipartimento di Chimica e Chimica Industriale (DCCI), ufficio 808, Via Dodecaneso n. 31, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **15:00** at Dipartimento di Chimica e Chimica Industriale (DCCI), ufficio 808, Via Dodecaneso n. 31, Genova . The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **08.02.2023** at **10:00** at Dipartimento di Chimica e Chimica Industriale (DCCI), ufficio 808, Via Dodecaneso n. 31, Genova

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof.ssa Paola Costamagna via the email address: [paola.costamagna@unige.it](mailto:paola.costamagna@unige.it) phone number +39 329 2104460.*

**Scientific coordinator:** Prof.ssa Paola COSTAMAGNA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2**  
**"Scenari Energetici del Futuro"**  
**D.D. n. 1561 del 11.10.2022**  
**CUP D33C22001330002**

**Title:** Correlations between crystal structure and electrocatalytic properties in advanced materials for solid oxide cells (SOCs). Simulation of the impact on the SOC performance.

**Description:** The structural, microstructural, morphological, and spectroscopic characterization of advanced materials to be used as electrodes and electrolytes in solid oxide cells (SOCs) will be performed to study the correlations between crystallographic and electrochemical properties. This information will be a fundamental step for the optimization of composition and stoichiometry of the most promising materials to be used in solid oxide cells, such as doped ceria systems and ferrite-based perovskites. The data acquired on the materials will be used as input data in SOC simulation models, to assess the impact on the overall SOC performance.

**Scientific disciplinary sector:** ING-IND/25 IMPIANTI CHIMICI

**Place:** Dipartimento di Chimica e Chimica Industriale (DCCI)

**Required degree:** Laurea magistrale delle classi LM-22 Ingegneria chimica -Ingegneria Chimica e di processo, LM-54 Scienze chimiche, LM-71 Scienze e tecnologie della chimica industriale, LM-53 Scienza e ingegneria dei materiali.

**Subjects of the interview:** Electrochemical technologies for energy conversion

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 34

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **15:00** at Dipartimento di Chimica e Chimica Industriale (DCCI), Aula 3, Via Dodecaneso n. 31, Genova . The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **18:00** at Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso n. 31, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **10:00** at Dipartimento di Chimica e Chimica Industriale (DCCI), Aula 3, Via Dodecaneso n. 31, Genova

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Marco VOCCIANTE

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2**  
**"Scenari Energetici del Futuro"**

**D.D. n. 1561 del 11.10.2022 CUP D33C22001330002**

**Title:** End-use sustainability in energy supply chain and optimal strategies for energy demand reduction and carbon neutrality

**Description:** The Project is aimed at optimizing end uses in the energy supply chain voted to greater sustainability and resilience. Therefore, the activities covered by the research grant will concern:

- Simulation and evaluation of the energy behavior of deployment technologies in urban and industrial environments.
- Exploitation of new clean energy technologies relevant to the urban and industrial environment for flexible, sustainable, and resilient energy management.
- Simulation and evaluation of the sustainability of deployment remediation techniques in urban and industrial environments.
- Exploitation of sustainable remediation techniques as an enabling factor for decontamination strategies in urban/rural/industrial environment.
- Reduction of emissions from the industrial sector through the development of appropriate carbon capture and utilization (CCU) technologies.
- Optimization of energy end-use geared toward sustainable energy consumption, power generation, effective energy distribution, and secure access to energy resources

**Scientific disciplinary sector:** ING-IND/26 TEORIA DELLO SVILUPPO DEI PROCESSI CHIMICI

**Place:** Dipartimento di Chimica e Chimica Industriale (DCCI)

**Required degree:** Laurea Magistrale delle classi LM-22 Ingegneria Chimica, LM-26 Ingegneria della Sicurezza, LM-53 Scienza e Ingegneria dei Materiali, LM-54 Scienze Chimiche, LM-71 Scienze e tecnologie della Chimica Industriale.

**Subjects of the interview:** The interview will aim to verify the candidates' degree of scientific knowledge related to the research activity in question:

- simulation of energy performance of equipment and processes of urban/industrial application;
- assessment of environmental performance of equipment and processes of urban/industrial application;

– simulation and environmental assessment of remediation technologies for urban/industrial environment remediation;

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 35**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 08.02.2023 at 9:30** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 08.02.2023 at 12:30** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 08.02.2023 starting from 14:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Gabriella Garbarino at the address e-mail: gabriella.garbarino@unige.it , phone number: +39 010 3356029.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Gabriella GARBARINO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2 "Scenari Energetici del Futuro"**

**D.D. n. 1561 del 11.10.2022 CUP D33C22001330002**

**Title:** Catalysts and catalytic processes for H<sub>2</sub> production and/or utilization for e-fuel synthesis.

**Description:** The main objectives of the research project are the development and testing of active and selective heterogeneous catalysts in the production of H<sub>2</sub> and its use in the synthesis of energy carriers, also including emerging technologies. The characterization of the materials and the understanding of the reaction mechanisms in complex systems will be investigated, to obtain stable catalytic systems with high performances in terms of yield and selectivity.

**Scientific disciplinary sector:** ING-IND/27 CHIMICA INDUSTRIALE E TECNOLOGICA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Dottorato di ricerca in Ingegneria Chimica, Dottorato di ricerca in Scienza dei Materiali.

**Subjects of the interview:** Catalysis and catalysts, renewable resources and processes for the green industrial chemistry, chemical thermodynamic and kinetic

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 36

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 09.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 09.02.2023 at 13:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 09.02.2023 starting from 16:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Gabriella Garbarino at the address e-mail: gabriella.garbarino@unige.it , phone number: +39 010 3356029.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Gabriella GARBARINO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - PROMETH2eus – PROduzione di H2 verde da acqua di mare tramite elettrolizzatore innovativo operante ad alta temperatura con integrazione in processo power-to-METHanol, finanziato dal MiTE nell'ambito del PNRR, missione 2 "Rivoluzione verde e transizione ecologica", componente 2 "Energia rinnovabile, idrogeno, rete e mobilità sostenibile", investimento 3.5 "Ricerca e sviluppo sull'idrogeno", finanziato dall'Unione Europea – Next Generation EU**  
**D.D. n. 126 del 27.06.2022**  
**CUP F37G22000080006**

**Title:** Evaluation of sea water based streams in Power to methanol catalytic processes,

**Description:** The main objectives of the research project are the understanding and evaluation of the uses of sea water, the purity and obtained concentrated currents and their possible use in electrolyzers. At the same time, the development and testing of active and selective heterogeneous catalysts in the conversion of CO<sub>2</sub> to methanol is planned, evaluating the possible integration with the chosen electrochemical device. The characterization of materials and the understanding of reaction mechanisms in complex systems will also be investigated,

**Scientific disciplinary sector:** ING-IND/27 CHIMICA INDUSTRIALE E TECNOLOGICA

**Place:** Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

**Required degree:** Laurea magistrale delle classi: LM-22 - Laurea Magistrale in Ingegneria Chimica, LM-54 Scienze Chimiche, LM-71 Scienze E Tecnologie della Chimica Industriale.

**Subjects of the interview:** Catalysis and catalysts, renewable resources and processes for the green industrial chemistry, chemical thermodynamic and kinetic

The candidate will need to prove his/her knowledge of the english language.

**RESEARCH PROGRAM NO. 37**

**Scientific coordinator:** Prof. Mario MARCHESONI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - MUR – PE2 -NEST - Network 4 Energy Sustainable Transition - SPOKE 4 (Clean Hydrogen and Final Use)**

**D.D. 1561 del 11.10.2022**

**CUP D33C22001330002**

**Title:** New power converter topologies for the management and interfacing of fuel cells

**Description:** Fuel-cell-based generation systems are increasingly attractive in numerous applications, from the development of sustainable transport systems to the development of smart grids, often coupled with energy storage systems. Due to the variable nature of the voltage produced and its typically low value, step-up DC / DC converters with large voltage gain are required to interface the fuel cells. This project aims to study and develop, also experimentally, multi-port DC / DC step-up converters, minimizing the number of active and passive components, compared to other step-up topologies already present in the literature, maximizing the conversion energy efficiency and minimizing the ripple of the current drawn from the fuel cell.

**Scientific disciplinary sector:** ING-IND/32 CONVERTITORI, MACCHINE E AZIONAMENTI ELETTRICI

**Place:** Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN)

**Required degree:** Laurea Magistrale della classe LM-28 Ingegneria Elettrica.

**Subjects of the interview:** Advanced concepts of static energy conversion

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 38

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **9:00** at Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia n. 11A, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **13:00** at Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia n. 11A, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **14:00** at Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia n. 11A, Genova

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (TEAMS/SKYPE video conference call) promptly contacting Prof. Federico Silvestro via the email address: federico.silvestro@unige.it phone number +39 329 2106167.*

**Scientific coordinator:** Prof. Federico SILVESTRO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - PE2-NEST - Network 4 Energy Sustainable Transition” SPOKE 8**  
**D.D. n. 1561 del 11.10.2022**  
**CUP D33C22001330002**

**Title:** Methodologies and tools for analysis of distribution networks and energy communities

**Description:** The activities will be focused on the sustainable energy optimization in the final use, ensuring sustainable and resilient energy management, energy consumptions, energy generation, energy distribution and uses. The research will take place on the topic of network studies for the integration of storage systems and for the intelligent management of the same by proposing and using analysis and optimization methodologies for tools to support strategic energy planning actions with fine resolution on spatial constraints and time scales. The study requires the knowledge of static network models and modeling of optimum problems in programming environments such as Matlab, GAMS and Python.

**Scientific disciplinary sector:** ING-IND/33 SISTEMI ELETTRICI PER L'ENERGIA

**Place:** Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN)

**Required degree:** Laurea Magistrale delle classi LM-28 Ingegneria Elettrica, LM-31 Ingegneria Gestionale, LM-33 Ingegneria Meccanica, LM-40 Matematica.

**Subjects of the interview:** MILNP optimization techniques. Basic tools for modeling and simulation. Static analysis of electric networks.

The candidate will need to prove his/her knowledge of the english language.



## **RESEARCH PROGRAM NO. 39**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 07.02.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 07.02.2023 at 12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 14:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Sergio Martinoia at the address e-mail: sergio.martinoia@unige.it , phone number: +39 010 3352980.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Sergio MARTINOIA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 27.133,00**

**Funding: MNESYS – D.D. n. 1553 del 11.10.2022**  
**CUP D33C22001340002**

**Title:** Advanced 3D in vitro models of brain tissue

**Description:** The complexity of the human brain poses substantial challenges for the development of models of its functioning and diseases. Traditional in vitro models have been developed by using rodent primary neuronal cells coupled with 2D supports. In recent years, with the advent of human induced pluripotent stem cells and of 3D cultures, different advanced in vitro human based models have been proposed. In this context, advanced interconnected 3D in vitro models of different brain regions will be developed by bioprinting technique to study the electrophysiological activity in physiological and pathophysiological conditions. To this aim, it will be required to develop bioinks with specific characteristics able to recapitulate the main properties of the extracellular matrix of the brain

**Scientific disciplinary sector:** ING-IND/34 BIOINGEGNERIA INDUSTRIALE

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea Magistrale delle classi LM-6 Biologia, LM-8 Biotecnologie Industriali, LM-9 Biotecnologie Mediche Veterinarie e Farmaceutiche, LM-21 Ingegneria Biomedica.

**Subjects of the interview:** Cell culture techniques, in vitro culture characterization techniques; biomaterials.

## **RESEARCH PROGRAM NO. 40**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview** on **10.02.2023** at **9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview:** on **10.02.2023** at **13:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview:** on **10.02.2023** starting from **14:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Fabio Lavagetto at the address e-mail: [fabio.lavagetto@unige.it](mailto:fabio.lavagetto@unige.it), phone number: +39 328 1003220

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Fabio LAVAGETTO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" - Task 2.1 del WP2 dello SPOKE 1 "Urban Technologies for Inclusive Engagement"**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Indoor/outdoor mobile devices localization through heterogeneous radio signal measurements

**Description:** The research activity is developed within the RAISE Ecosystem, specifically, in Task 2.1 of WP2 of Spoke1 "Urban Technologies for Inclusive Engagement". The objectives of the Spoke are the development of technologies to facilitate interaction between people, between people and the city and between people in the city. These technologies will support citizens' services for the communication and the use of social and cultural contents and initiatives in the urban territory. Specifically, the research activity will concern the design and implementation of technologies for the dynamic localization of personal mobile terminals (smartphones) in the indoor and outdoor environment based on the measurement of heterogeneous radio signals (such as wifi, bluetooth and similar). These technologies must be installed and validated in one or more Case Studies defined in the context of the Spoke (e.g., in an indoor residential environment or in outdoor public social/recreational spaces). The measures collected will be used to support the ubiquitous assistance services to citizens subject to development and validation within the Spoke.

**Scientific disciplinary sector:** ING-INF/03 TELECOMUNICAZIONI

**Place:** Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN)

**Required degree:** Laurea V.O. in Ingegneria Elettronica, Ingegneria delle Telecomunicazioni; Laurea Specialistica delle classi 32/S Ingegneria Elettronica, 30/S Ingegneria delle Telecomunicazioni, Laurea Magistrale delle classi LM-29 Ingegneria Elettronica, LM-27 Ingegneria delle Telecomunicazioni.

**Subjects of the interview:** Localization, Digital Signal Processing, Machine Learning, Context Awareness, Internet of Things

The candidate will need to prove his/her knowledge of the english language

## RESEARCH PROGRAM NO. 41

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 07.02.2023 at 8:15** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 07.02.2023 at 14:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 07.02.2023 starting from 16:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Marco Baglietto at the address e-mail: marco.baglietto@unige.it phone number: +39 010 3536548

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Marco BAGLIETTO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment) - SPOKE 3**  
**D.D. N. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Robotic systems for monitoring and safeguarding the environment

**Description:** The research activity will focus on studying and developing robotic systems for monitoring and safeguarding the environment, operating individually and in teams.

In particular, the candidate will explore original solutions for autonomous perception, motion planning, and control of aerial and ground vehicles (e.g., on tracks, wheels, or legs), with or without manipulation capabilities.

In this context, it will be necessary to propose solutions beyond the state of the art to face the challenges posed by a potentially hostile environment (for example, in terms of accessibility of the areas to be explored or adverse weather conditions). The final goal will be to produce a technological advancement in outdoor robotic systems.

The activity will be performed in the context of the RAISE project, spoke 3 "Sustainable environmental caring and protection technologies": <https://unige.it/en/news/16143-raise-selected-for-pnrr>

**Scientific disciplinary sector:** ING-INF/04 AUTOMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea Magistrale delle classi: LM-18 Informatica, LM-25 Ingegneria dell'Automazione, LM-27 Ingegneria delle Telecomunicazioni, LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica, LM-35 Ingegneria per l'Ambiente e il Territorio.

**Subjects of the interview:** Robotics, control of robots: manipulators/mobile robots/drones, C++ programming, ROS, ROS2

The candidate will need to prove his/her knowledge of the english language

## **RESEARCH PROGRAM NO. 42**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 10.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 10.02.2023 at 14:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 10.02.2023 starting from 16:00** The interview will take place, in any case, electronically (video conference via Teams) by contacting Prof. Giovanni Indiveri at the address e-mail: [giovanni.indiveri@unige.it](mailto:giovanni.indiveri@unige.it), phone number: +39 338 1418742

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Giovanni INDIVERI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" SPOKE 3**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Navigation, guidance and control for marine robots in environmental monitoring applications

**Description:** The research activity aims to develop a cooperative navigation, guidance and control (NGC) activity for a team composed of surface marine robots (ASVs - Autonomous Surface Vehicles) and underwater robots (AUVs - Autonomous Underwater Vehicles) for monitoring, protection and enhancement of the marine environment

**Scientific disciplinary sector:** ING-INF/04 AUTOMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** LM-17 Fisica, LM-18 Informatica, LM-21 Ingegneria biomedica, LM-25 Ingegneria dell'automazione, LM-29 Ingegneria elettronica, LM-32 Ingegneria informatica, LM-33 Ingegneria meccanica, LM-34 Ingegneria navale, LM-44 Modellistica matematico-fisica per l'ingegneria, LM-72 Scienze e tecnologie della navigazione.

**Subjects of the interview:** Autonomous marine robotics and associated navigation, guidance and control systems. Programming, coding and design of robotic environmental monitoring missions

The candidate will need to prove his/her knowledge of the english language.

## RESEARCH PROGRAM NO. 43

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 08.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 08.02.2023 at 17:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 09.02.2023 starting from 10:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Michela Robba at the address e-mail: [michela.robba@unige.it](mailto:michela.robba@unige.it) , phone number: +39 380 5105692.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Michela ROBBA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)" - SPOKE 3 WP**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Development of models for the optimization and control of energy communities and sustainable energy districts

**Description:** The research activity concerns the development of methods and models for the planning and management of energy communities and sustainable districts. In particular, two main issues will be addressed: the planning / design of energy communities within a territory and the operational management of interconnected networks in sustainable districts. In the first case, it is a question of optimally defining the size and location of plants and storage systems for an energy community and defining the optimal grouping of users to establish multiple energy communities within the same territory. To this end it will be necessary to obtain data from real cases, model the system as a whole and quantify costs and benefits, and then proceed to a mathematical formulation of the various optimization problems. In the second case, it is a question, first of all, of modeling the typical networks of a sustainable district and analyzing the different interconnections between the various networks (electricity, transport, water, etc.). Subsequently, it will be necessary to define the optimization problems and the related solving techniques. The models developed will be applied to real cases, and, therefore, part of the activity will concern the collection and processing of data.

**Scientific disciplinary sector:** ING-INF/04 AUTOMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea Magistrale delle classi LM-28 Ingegneria Elettrica, LM-30 Ingegneria energetica e nucleare, LM-31 Ingegneria Gestionale, LM-32 Ingegneria informatica, LM-33 Ingegneria Meccanica.

**Subjects of the interview:** The interview will focus on methods and models for the optimization of energy systems with particular reference to different methods (stochastic optimization, discrete events, predictive control, distributed optimization) and different application areas (smart grids, microgrids, electric vehicles, energy communities, systems storage, renewables, energy market).

The candidate will need to prove his/her knowledge of the english language

## **RESEARCH PROGRAM NO. 44**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 06.02.2023 at 10:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 06.02.2023 at 14:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 06.02.2023 starting from 16:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Roberto Sacile at the address e-mail: roberto.sacile@unige.it, phone number +39 010 3532153 , +39 328 1003228.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Roberto SACILE

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 19.367,00**

**Funding: PNRR - CN Tecnologie dell'Agricoltura (Agritech)**  
**D.D n. 1032 del 17.06.2022 registrato dalla Corte dei Conti il 08.07.2022 n.1826**  
**CUP D33C22000950007**

**Title:** Designing and validation of innovative indicators for defining new decision support and control systems adapted to greenhouse crops

**Description:** The control and decision support systems (DSS) studied will be of two types. The first type will be oriented to the economic and technological evaluation of different technologies to be used in the construction of a greenhouse for the crop in the specific area, to enhance energy efficiency. The second one is an "operational" DSS model developed to support the crop in real time. The control variables will affect the different physical and biological components of the crop system. Innovative indicators will be used, which can be evaluated in real time and forecast.

**Scientific disciplinary sector:** ING-INF/04 AUTOMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea Magistrale delle classi LM-4 Architettura e ingegneria edile-architettura, LM-17 Fisica, LM-18 Informatica, LM-22 Ingegneria chimica; LM-23 Ingegneria Civile; LM-25 Ingegneria dell'automazione, LM-26 Ingegneria della sicurezza, LM-27 Ingegneria delle Telecomunicazioni, LM-28 Ingegneria elettrica, LM-30 Ingegneria energetica e nucleare, LM-31 Ingegneria gestionale, LM-32 Ingegneria informatica, LM-33 Ingegneria Meccanica, LM-40 Matematica, LM-44 Modellistica matematico-fisica per l'ingegneria, LM-82 scienze statistiche.

**Subjects of the interview:** Modeling of continuous and discrete time systems. Knowledge of system control techniques. Technological knowledge of sensors (eg IoT) for real-time monitoring of chemical, physical and environmental variables

The candidate will need to prove his/her knowledge of the english language

## **RESEARCH PROGRAM NO. 45**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **9:00** at Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia n. 11 A, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **12:00** at Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia n. 11 A, Genova.

The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **06.02.2023** at **14:00** at Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Laboratorio IPI, III piano, Via Opera Pia 11 A, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Massimo MARESCA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 31.015,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Design, development and experimentation of a platform for data communication, messaging and tracking for leisure boats

**Description:** The activity is focused on distributed software platforms based on innovative technologies and includes the study and development of: an onboard HW/SW platform able to support data communication, message exchange, tracking and environment data interchange between leisure boats, between leisure boats and the Coast Guard, between leisure boats and commercial ships. The platform will be composed of a server platform for communication support and of a distributed application platform for text and audio messaging with multilingual support.

**Scientific disciplinary sector:** ING-INF/05 SISTEMI DI ELABORAZIONE DELLE INFORMAZIONI

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea V.O. in Ingegneria Elettronica, Ingegneria delle Telecomunicazioni, Ingegneria Informatica; Laurea specialistica delle classi 29/S Ingegneria dell'automazione, 32/S Ingegneria elettronica, 30/S Ingegneria delle telecomunicazioni, 35/S Ingegneria informatica; Laurea Magistrale delle classi LM-25 Ingegneria dell'automazione, LM-29 Ingegneria elettronica, LM-27 Ingegneria delle telecomunicazioni, LM-32 Ingegneria informatica.

**Subjects of the interview:** Design and development of distributed software applications. Design and development of communication devices for fixed and mobile networks. IP Communication protocols for maritime and terrestrial network, configuration and management of HW/SW systems for IP networks. Configuration and management of Linux/Unix systems and of virtualization SW frameworks.

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 46**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 10.02.2023 at 9:30** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 10.02.2023 at 12:30** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 10.02.2023 starting from 13:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof.ssa Michela Chiappalone at the address e-mail: michela.chiappalone@unige.it , phone number: +39 010 3352991.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof.ssa Michela CHIAPPALONE

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 27.133,00**

**Funding: PNRR - MNESYS – D.D. n. 1553 del 11.10.2022**  
**CUP D33C22001340002**

**Title:** Development of innovative personalized neurostimulation protocols for the treatment of central nervous system dysfunctions

**Description:** The personalization of a therapy is essential in order to facilitate recovery due to cerebral dysfunctions caused by e.g. lesions (such as in stroke). This project aims to develop new personalized therapies based on electrical stimulation (both invasive and possibly non-invasive) to be tested on experimental models (in vitro, in vivo), with a view to targeting applications on humans. The efficacy of the therapy will be evaluated through electrophysiological investigations (MEA in vitro, intracortical acquisitions in vivo) and functional (in vitro and in vivo) and/or behavioral (only in vivo) changes. To this end, it is necessary to develop specific methods for the customization of stimulation patterns and to develop new techniques for analyzing data from those experimental models. Data management skills are also required to make data open access.

**Scientific disciplinary sector:** ING-INF/06 BIOINGEGNERIA ELETTRONICA E INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea Magistrale delle classi: LM-18 Informatica, LM-21 Ingegneria biomedica, LM-32 Ingegneria informatica.

**Subjects of the interview:** Experimental procedures for the treatment of in vitro and in vivo models; ethical protocols for animal experimentation; multichannel electrophysiological signal acquisition systems from animal model/tissue; intracortical microstimulation techniques; algorithms for the analysis of multichannel electrophysiological signals.

The candidate will need to prove his/her knowledge of the english language



## RESEARCH PROGRAM NO. 47

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview on 08.02.2023 at 9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview: on 08.02.2023 at 12:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview: on 08.02.2023 starting from 12:30** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Paolo Massobrio at the address e-mail: paolo.massobrio@unige.it, phone number: +39 0103352761.

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Paolo MASSOBRIO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 27.133,00**

**Funding: PNRR - MNESYS – D.D. n.1553 del 11.10.2022**  
**CUP D33C22001340002**

**Title:** Neuronal dynamics and functional connectivity in large-scale neuronal networks coupled to high-density Micro-Electrode Arrays

**Description:** The interaction of networks of neurons is able to originate complex patterns of electrophysiological activity characterized by spikes, bursts, and oscillations. In particular, an alteration of the balance between the excitatory and inhibitory components of these networks is capable of changing the dynamic states of the network itself. Through the use of stem cells in which it is possible to control the inhibitory and excitatory ratio, in this project it will be required to design neuronal networks coupled to high-density micro-electrode arrays to correlate the spontaneous electrophysiological activity with the network functional connectivity, trying to find possible relationships between connectivity, dynamic states and excitation/inhibition ratio.

**Scientific disciplinary sector:** ING-INF/06 BIOINGEGNERIA ELETTRONICA E INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Dottorato di ricerca in Bioingegneria, Fisica, Scienze matematiche, Informatica.

**Subjects of the interview:** Multi-channel data acquisition systems; data management and analysis software techniques; techniques for the compartmentalization of microelectrode arrays; in vitro experimental models of excitable cells; neuronal dynamics modeling; functional connectivity methods

The candidate will need to prove his/her knowledge of the english language

## **RESEARCH PROGRAM NO. 48**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview** on **08.02.2023** at **9:00** The Commission in charge announces the criteria for assessing qualifications and the interview by publishing them on the Department's website.

**Publication of the results of the qualification assessment as well as indication of the names of the candidates admitted to the interview:** on **08.02.2023** at **13:00** The Commission in charge discloses the criteria for the evaluation of qualifications and the indication of the names of the candidates admitted to the interview by publication on the Department's website and contextual email communication to each of the candidates.

**The interview:** on **08.02.2023** starting from **15:00** The interview will take place, in any case, electronically (video conference via Skype) by contacting Prof. Silvio P. Sabatini at the address e-mail [silvio.sabatini@unige.it](mailto:silvio.sabatini@unige.it) , phone number: +39 010 3352092

**Such a notice is equivalent to notification to all intents and purposes.**

**Scientific coordinator:** Prof. Silvio SABATINI

**NO. 1 research fellowship - Duration years 2 – Annual pre-tax amount: € 23.250,00**

**Funding:** PNRR - Ecosistema dell’Innovazione ECS0000035 “RAISE (Robotics and AI for Socio-economic Empowerment)” - SPOKE 1

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Methods and technologies for multimodal interaction and communication

**Description:** Definition and validation of methodologies to enrich interaction and communication between individuals and environment, by focusing on cross-modal translations of sensory information and relying upon specific enabling technologies (e.g., Virtual Reality, Augmented Video and Audio Reality, sonification and 3D audio spatialization, tangible interfaces).

**Scientific disciplinary sector:** ING-INF/06 BIOINGEGNERIA ELETTRONICA E INFORMATICA

**Place:** Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)

**Required degree:** Laurea specialistica delle classi 23/S Informatica ,26/S Ingegneria biomedica, 32/S Ingegneria Elettronica, 35/S Ingegneria Informatica, 58/S Psicologia; Laurea magistrale delle classi LM-18 Informatica, LM-21 Ingegneria Biomedica, LM-29 Ingegneria Elettronica, LM-32 ingegneria informatica (Robotics Engineering), LM-51 Psicologia.

**Subjects of the interview:** VR/AR/XR systems, perceptual systems, cross-modal integration: psychophysical experiments and models. Unity programming

The candidate will need to prove his/her knowledge of the english language.

**SCIENTIFIC DISCIPLINARY AREA HISTORY, PHILOSOPHY, PEDAGOGY AND PSYCHOLOGY**  
**RESEARCH PROGRAM NO. 49**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **15:00** at Dipartimento di Scienze della Formazione (DISFOR), Corso Andrea Podestà n. 2, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **08.02.2023** at **18:00** at Dipartimento di Scienze della Formazione (DISFOR), Corso Andrea Podestà n. 2, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **10.02.2023** at **9:00** at Dipartimento di Scienze della Formazione (DISFOR), Corso Andrea Podestà n. 2, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof.ssa Mirella Zanobini via the email address: [mirella.zanobini@unige.it](mailto:mirella.zanobini@unige.it) phone number: +39 347 9902582.*

**Scientific coordinator:** Prof.ssa Mirella ZANOBINI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell'Innovazione ECS0000035 "RAISE (Robotics and AI for Socio-economic Empowerment)"**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Promoting school inclusion: the use of technology starting from the analysis of users' needs.

**Description:** The project is developed within the Raise – SPOKE 1 Urban Technologies for Inclusive Engagement program, more precisely in the Work package 1: From User Communities to the Design of Inclusiveness

The aims of the research grant are:

- Analyze teachers' perceptions on the use of technologies to improve the inclusion of students with different types of impairments/difficulties and possible related obstacles.
- Assess students' needs in accessing information and the school environment, and in participating and communicating within the school community
- Evaluate the impact of the use of inclusive technology on psychological variables, such as well-being, behaviors, and student learning

**Scientific disciplinary sector:** M-PSI/04 PSICOLOGIA DELLO SVILUPPO E PSICOLOGIA DELL'EDUCAZIONE

**Place:** Dipartimento di Scienze della Formazione (DISFOR)

**Required degree:** Dottorato di ricerca in discipline psicologiche.

**Subjects of the interview:** Characteristics of inclusive environments, with particular attention to school environments. Technology and accessibility. Technologies to support communication, learning and participation of students with disabilities, developmental disabilities, and other special educational needs

The candidate will need to prove his/her knowledge of the English language.

SCIENTIFIC DISCIPLINARY AREA LAW
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**RESEARCH PROGRAM NO. 50**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **9:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Privato, 4° piano, Via Balbi n. 22, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **12:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Privato, 4° piano, Via Balbi n. 22, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **06.02.2023** at **15:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Privato, 4° piano, Via Balbi n. 22, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof.ssa Valentina DI GREGORIO

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: MUR Direzione Generale della Ricerca - ufficio II - PNRR - Ecosistema dell'Innovazione ECS00000035 "RAISE (Robotics and AI for Socio-economic Empowerment) "**  
**D.D. N. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Technological innovation in the field of artificial intelligence and robotics with a view to social inclusion and mobility in *smart cities*, focusing on the civil law implications regarding *safety* and *security* profiles.

**Description:** Within the broader horizon of the study of technological solutions that, exploiting the potential offered by AI and robotics, promote the inclusiveness of individuals in urban spaces by improving their possibilities of interaction and movement, the research aims to analyze, from the perspective of civil law, the legal profiles inherent in the design, development, and implementation phases of new technologies.

In this context, particular attention will be paid to the security and safety profiles of the phenomenon, both from the perspective of compliance with relevant regulations and from the remedial perspective in case of their violation.

**Scientific disciplinary sector:** IUS/01 DIRITTO PRIVATO

**Place:** Dipartimento di Giurisprudenza

**Required degree:** Dottorato di ricerca in logistica e trasporti, pubblica amministrazione e innovazione per la disabilità e l'inclusione sociale, Robotics and Intelligent machines.

**Subjects of the interview:** The civil liability system with particular regard to the development and use of new technologies; security profiles, with reference to the protection of privacy, and safety in the processes of experimentation and development of prototypes. Principle of non-discrimination, protection of fundamental rights and inclusion of citizens - also in the framework of disability - in the urban context, with particular attention to the spatial dimension and mobility

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 51**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **9:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Commerciale, II piano, Via Balbi n. 22, Genova . The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **12:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Commerciale, II piano, Via Balbi n. 22, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **08.02.2023** at **15:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Commerciale, II piano, Via Balbi n. 22, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Andrea OTTOLIA

**NO. 1 research fellowship - Duration year 1 – Annual pre-tax amount: € 27.133,00**

**Funding: MUR Direzione Generale della Ricerca - ufficio II – PNRR - Ecosistema Dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”**

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Artificial intelligence between the enterprise and its stakeholders: interpretative solutions and regulatory models

**Description:** The project aims to analyze the interference between the Enterprise and its stakeholders in the use of artificial intelligence systems. The research will both investigate a wide set of interpretative legal issues in this field and assess the feasibility of alternative regulatory models. The project will emphasize the perspective and meaning of «Ethical AI».

**Scientific disciplinary sector:** IUS/04 DIRITTO COMMERCIALE

**Place:** Dipartimento di Giurisprudenza

**Required degree:** Dottorato di ricerca in diritto commerciale, diritto della proprietà intellettuale.

**Subjects of the interview:** Corporate and intellectual property law and AI issues; rules and proposals in further related fields such personal data protection and IP enforcement

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 52**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **07.02.2023** at **9:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Commerciale, II piano, Via Balbi n. 22, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **07.02.2023** at **12:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Commerciale, II piano, Via Balbi n. 22, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **09.02.2023** at **15:00** at Dipartimento di Giurisprudenza, Sezione di Diritto Commerciale, II piano, Via Balbi n. 22, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof. Andrea OTTOLIA

**NO. 1 research fellowship - Duration year 1 – Annual pre-tax amount: € 27.133,00**

**Funding:** MUR Direzione Generale della Ricerca - ufficio II – PNRR - Ecosistema dell'Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”

**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Applicative legal solutions for AI and the enterprise

**Description:** The project aims to identify applicative solutions to the wide set of legal issues concerning the «algorithmic enterprise» and «real world AI». The purpose is to elaborate a «business friendly» interpretative system within the wide topic of the so-called «Ethical AI». The research may imply the collection of empirical data, including best practices in both business and legal fields when necessary to the purpose. A specific focus may be requested for a business field or geographical area.

**Scientific disciplinary sector:** IUS/04 DIRITTO COMMERCIALE

**Place:** Dipartimento di Giurisprudenza

**Required degree:** Dottorato di ricerca in diritto commerciale, in diritto della proprietà intellettuale.

**Subjects of the interview:** Corporate and IP legal issues in technological fields; methods and approaches to elaborate applicative solutions; the concept of «Ethical AI» when the enterprise is concerned; investigation and classification methods

The candidate will need to prove his/her knowledge of the english language.

**RESEARCH PROGRAM NO. 53**

**Scientific coordinator:** Prof. Alessio TEI

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**

**Annual pre-tax amount: € 23.250,00**

**Funding: Partenariato Esteso – PE2 -NEST - Network 4 Energy Sustainable Transition, a valere sull'area tematica 2 "Scenari Energetici del Futuro" (SPOKE 8)**

**D.D. n. 1561 del 11.10.2022**

**CUP D33C22001330002**

**Title:** Economic assesment of final users' Energy Management Systems

**Description:** The research activity is connected to the project “Network for Energy Sustainable Technologies” (NEST) and it aims at assessing final users’ energy management systems. The activity will have to take into consideration the determinants of demand and supply, the different value chains, business models, and related market characteristics with the goal of providing an evaluation matrix the links different energy solutions and final users’ characteristics. The research activity will also include the analysis and evaluation of business opportunities related to the development and the design of managerial tools for implementing energy management systems for heterogeneous business fields.

**Scientific disciplinary sector:** SECS-P/06 ECONOMIA APPLICATA

**Place:** Dipartimento di Economia

**Required degree:** Laurea specialistica delle classi 19/S Finanza, 25/S Ingegneria aerospaziale e astronautica, 28/S Ingegneria civile, 29/S Ingegneria dell'automazione, 30/S Ingegneria delle telecomunicazioni, 31/S Ingegneria elettrica, 32/S Ingegneria elettronica, 33/S Ingegneria energetica e nucleare, 34/S Ingegneria gestionale, 38/S Ingegneria per l'ambiente e il Territorio, 54/S Pianificazione territoriale urbanistica e ambientale, 64/S Scienze dell'economia, 82/S Scienze e tecnologie per l'ambiente e il territorio, 83/S Scienze economiche per l'ambiente e la cultura, 84/S Scienze economico-aziendali; Laurea magistrale delle classi LM-16 Finanza, LM-20 Ingegneria aerospaziale e astronautica, LM-23 Ingegneria civile, LM-24 Ingegneria dei sistemi edilizi, LM-25 Ingegneria dell'automazione, LM-26 Ingegneria della sicurezza, LM-27 Ingegneria delle telecomunicazioni, LM-28 Ingegneria elettrica, LM-29 Ingegneria elettronica, LM-30 Ingegneria energetica e nucleare, LM-31 Ingegneria gestionale, LM-35 Ingegneria per l'ambiente e il territorio, LM-48 Pianificazione territoriale urbanistica e ambientale, LM-56 Scienze dell'economia, LM-75 Scienze e tecnologie per l'ambiente e il territorio, LM-76 Scienze economiche per l'ambiente e la cultura, LM-77 Scienze economico aziendali.

**Subjects of the interview:** Energy Economics, Logistics, Transport Economics, Transport Business

The candidate will need to prove his/her knowledge of the english language.

## **RESEARCH PROGRAM NO. 54**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **9:00** at Dipartimento di Economia (DIEC), Via F. Vivaldi n. 5, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website.

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **14:00** at Dipartimento di Economia, Via F. Vivaldi n. 5, Genova  
The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **06.02.2023** at **15:00** at Dipartimento di Economia, Via F. Vivaldi n. 5, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

**Scientific coordinator:** Prof.ssa Renata DAMERI

**NO. 1 research fellowship - Duration years 2 – Annual pre-tax amount: € 23.250,00**

**Funding: PNRR - Ecosistema dell’Innovazione ECS00000035 “RAISE (Robotics and AI for Socio-economic Empowerment)”**

**D.D. N. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**

**CUP D33C22000970006**

**Title:** Data collection and analysis for urban dashboards

**Description:** The research activity regards the search, collection, balancing, and analysis of data to realize urban dashboards. Such dashboards should be addressed to both policy-makers and local PA officials. The main topic of the analysis regards the quality of life in cities and neighbourhoods and the inclusion of all citizens, with a specific focus on disadvantaged individuals. Data collection and balancing is at the basis of the AI application to multi-dimensional databases. The data collection and balancing should put together several aspects, such as: social, economic, infrastructural, environmental ones. The research activity will be therefore interdisciplinary, at the crossroad between economics, urbanistic and social sciences

**Scientific disciplinary sector:** SECS-P/07 ECONOMIA AZIENDALE

**Place:** Dipartimento di Economia

**Required degree:** Dottorato di ricerca in Scienze economico-aziendali, Scienze dell’architettura.

**Subjects of the interview:** Smart city; data analysis in smart cities; dashboard design for urban smartness assessment; how to use national, local, and infra-city level data for analysing the quality of life in cities and neighbourhoods

The candidate will need to prove his/her knowledge of the english language.



**RESEARCH PROGRAM NO. 55**

**Predetermination and publication of the criteria for the evaluation of qualifications and the interview:** on **06.02.2023** at **10:00** at Dipartimento di Scienze della Formazione (DISFOR), Corso Andrea Podestà n. 2, Genova. The Commission meets to prepare the criteria for the evaluation of qualifications and the interview. These criteria are published on the Department's website

**Publication of the results of the evaluation of qualifications as well as the indication of the candidates admitted to the interview:** on **06.02.2023** at **14:00** at Dipartimento di Scienze della Formazione (DISFOR), Corso Andrea Podestà n. 2, Genova. The Commission in charge discloses the results of qualifications assessment and the indication of the names of the candidates admitted to the interview by posting at the exam site, publication on the Department's website and contextual email communication to each of the candidates.

**The interview will be held:** on **07.02.2023** at **10:30** at Dipartimento di Scienze della Formazione (DISFOR), Corso Andrea Podestà n. 2, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (Skype video conference call) promptly contacting Prof. Mauro Migliavacca via the email address: [mauro.migliavacca@unige.it](mailto:mauro.migliavacca@unige.it)*

**Scientific coordinator:** Prof. Mauro MIGLIAVACCA

**NO. 1 research fellowship - Duration year 1 possibly renewable for one more year**  
**Annual pre-tax amount: € 23.250,00**

**Funding: MUR Direzione Generale della Ricerca - ufficio II - Ecosistema dell'Innovazione ECS00000035**  
**"RAISE (Robotics and AI for Socio-economic Empowerment)"**  
**D.D. n. 1053 del 23.06.2022, registrato dalla Corte dei Conti il 25.07.2022 n. 1970**  
**CUP D33C22000970006**

**Title:** Technological innovation and social inclusion. Site-based and needs analysis

**Description:** The project represents a part of the SPOKE 1 of the RAISE Ecosystem (Robotics and AI for Socio-economic Empowerment), selected by the PNRR funds for innovation ecosystems for Liguria. The main focus of the RAISE ecosystem is linked to the actions to improve people's living conditions through the introduction of robotic devices and AI, defining as explicit objectives the safety and protection of the territory, the improvement of inclusiveness levels of urban environments, focusing on the relationship between technological innovation and social inclusion. In particular, the project relating to the grant aims to carry out: site-based analysis, needs analysis, and writing reports.

**Scientific disciplinary sector:** SPS/09 SOCIOLOGIA DEI PROCESSI ECONOMICI E DEL LAVORO

**Place:** Dipartimento di Scienze della Formazione (DISFOR)

**Required degree:** Dottorato di ricerca afferente alle discipline sociologiche, psicologiche, economiche e statistiche.

**Subjects of the interview:** Testing of methodological skills, predisposition to teamwork, and general skills about social research and the analysis of socio-economic data

The candidate will need to prove his/her knowledge of the English language.