SCIENTIFIC DISCIPLINARY AREA MATHEMATICS AND INFORMATICS

RESEARCH PROGRAM NO. 1
The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **10:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **13:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The interview will be held on **05.09.2019** at **14:30** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 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.ssa Patrizia Bagnerini on the phone number +39 010 3536001 or via the email address: bagnerini@dime.unige.it

Scientific coordinator: Prof.ssa Patrizia Bagnerini

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Prevention and management of forest fire risk through the use of collaborative drones swarms

Description: The grant concerns the study and development of a platform dedicated to the management of collaborative drones equipped with an integrated system for the automatic replacement of exhausted batteries and the transported payload, in collaboration with Inspire (www.be-inspire.com). The aim of the platform in this area is to prevent the risk of forest fires. The possibility offered by this new paradigm (using drones continuously over time and without the intervention of an operator) allows to hypothesize a completely new use of drones: not only to continuously monitor the fire risk (to estimate the type, moisture content of the vegetation, etc..), but most importantly to give the alert to the first outbreak, so as to activate timely response.

Scientific disciplinary sector: MAT/07 FISICA MATEMATICA

Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)

Required degree:
Laurea Magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-20 Ingegneria Aerospaziale e Astronautica, LM-21 Ingegneria Biomedica, LM-22 Ingegneria Chimica, 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-32 Ingegneria Informatica, LM-33 Ingegneria Meccanica, 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-48 Pianificazione Territoriale Urbanistica e ambientale, LM-69 Scienze e Tecnologie Agrarie, LM-73 Scienze e Tecnologie Forestali e Ambientali, LM-75 Scienze e Tecnologie per l'Ambiente e il Territorio.

Subjects of the interview:
The candidate will be required to demonstrate knowledge of at least one aspect of the development and management of drones: mechanical expertise or knowledge of drone-management algorithms, or environmental and/or forest fire applications, or computer and electronic skills. Competence in more than one of these fields is not required.

RESEARCH PROGRAM NO. 2

The assessment criteria for the qualifications and the interview will be affixed on **23.09.2019** at **10:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **23.09.2019** at **14:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

The interview will be held on **24.09.2019** at **11:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 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.

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. Federico Benvenuto via the email address: benvenuto@dima.unige.it

Scientific coordinator: Prof. Federico Benvenuto

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Forecasting extreme atmospheric phenomena in the Ligurian territory by means of machine learning methods

Description: The project is focused on the prediction of extreme atmospheric phenomena in the Ligurian territory using machine learning techniques. The basic idea of the project is that the historical series of atmospheric data contain information on the dynamics of the atmospheric phenomena and therefore this dynamic can be foreseen in the short term without resorting to the physical models that describe the general evolution. To predict it, it is necessary to design an algorithm that is able to learn from examples: by analyzing historical series of the past, the algorithm identifies recurrent phenomena (patterns) and evaluates their relevance for predictive purposes. The used techniques refer to the so-called supervised learning, in which a predictor is determined starting from a set of data (training set) and evaluated on the basis of a predetermined function (loss function).

Scientific disciplinary sector: MAT/08 - ANALISI NUMERICA

Place: Dipartimento di Matematica (DIMA)

Required degree:
Laurea Magistrale delle classi LM-40 Matematica, LM-17 Fisica, LM-18 Informatica

Subjects of the interview:
- Computational methods for image and data analysis - Supervised learning methods - Inverse problems

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

RESEARCH PROGRAM NO. 3

The assessment criteria for the qualifications and the interview will be affixed on **30.09.2019** at **10:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **30.09.2019** at **14:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

The interview will be held on **01.10.2019** at **15:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 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.

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 Anna Maria Massone via the email address: massone@dima.unige.it

Scientific coordinator: Prof.ssa Anna Maria Massone

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Unsupervised clustering for RIS (Radiology Information System) data stratification

Description: RIS database contains rich biomedical information that could lead to great benefits in the clinical work-flow if made available to a computational tool for patients' stratification and prognostic forecast. This project will implement a data analysis service able to allow evaluation of diagnostic paths and support therapeutic decisions, by using machine learning/soft computing approaches. Main activities of the project will be:
• The creation of a computational tool able to process RIS multi-modal data by using unsupervised clustering approaches for patients' stratification
• The implementation of machine learning methods, able to make probabilistic predictions of the clinical follow-up.Part of this activity will be carried out in collaboration wit Carestream Health Italia.

Scientific disciplinary sector: MAT/08 - ANALISI NUMERICA

Place: Dipartimento di Matematica (DIMA)

Required degree:
Laurea Magistrale delle classi LM-40 Matematica, LM-17 Fisica, LM-21 Ingegneria Biomedica, LM-18 Informatica.

Subjects of the interview:
- Computational methods for image and data analysis
- Machine learning and soft computing techniques
- Image processing methods

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

RESEARCH PROGRAM NO. 4

The assessment criteria for the qualifications and the interview will be affixed on **30.09.2019** at **10:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **30.09.2019** at **14:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

The interview will be held on **01.10.2019** at **11:00** in Dipartimento di Matematica (DIMA), Via Dodecaneso 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.

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. Michele Piana via the email address: piana@dima.unige.it

Scientific coordinator: Prof. Michele Piana

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Software Tool for Parametric Imaging in Nuclear Medicine

Description: This project focuses on a parametric imaging approach to data analysis in nuclear medicine. The objective is to develop a software tool for the reconstruction of images of the kinetic parameters describing the rate with which the radioactive tracer is exchanged between the functional compartments of a tumor. Specifically, in the two-year activity, the selected candidate will
1) realize an automatic pipeline acquiring the dynamical PET images from the industrial PACS, segmenting the tumor in such images, computing voxel-wise the values of the kinetic parameters, and reconstructing the parametric maps;
2) study the possibility to realize an analogous procedure directly from the raw sinogram acquired by the PET scanner.
Part of this activity will be devoted to the integration of the pipeline within the Carestream Health PACS.

Scientific disciplinary sector: MAT/08 - ANALISI NUMERICA

Place: Dipartimento di Matematica (DIMA)

Required degree:
Laurea Magistrale delle classi LM-40 Matematica, LM-17 Fisica, LM-21 Ingegneria Biomedica, LM-18 Informatica.

Subjects of the interview:
- Computational methods for image and data analysis
- Inverse problems
- Image processing methods

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

RESEARCH PROGRAM NO. 5

The assessment criteria for the qualifications and the interview will be affixed on **11.10.2019** at **9:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Viale Causa 13, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **11.10.2019** at **13:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Viale Causa 13, Genova.

The interview will be held on **11.10.2019** at **14:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Viale Causa 13, 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 Paolucci

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Innovative methods for planning and scheduling manufacturing production for Industry 4.0.

Description: The objective of the grant is the design and implementation of innovative planning and scheduling algorithms for manufacturing production. In particular (a) planning methods must be extended by considering the involvement of suppliers in an iterative refinement of production planning upstream of the ERP level; (b) an integrated model of tactical planning of production and inventory must be defined; (c) both a predictive (i.e., offline) and reactive scheduling of manufacturing operations, able to react to changes and disturbances that occur in real time with respect to a predictive schedule, must be developed. The research activity will be carried out using accademic knowledge and skills specific to industry, also using the joint SharedLab FI Liguria infrastructure.

Scientific disciplinary sector: MAT/09 - RICERCA OPERATIVA

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

Required degree:
Laurea Specialistica della classe 35/S Ingegneria informatica e Laurea Magistrale della classe LM-32 Ingegneria informatica

Subjects of the interview:
Discrete optimization methods, Metaheuristic and Matheuristic methods, Production scheduling models and algorithms, Production Planning Models

RESEARCH PROGRAM NO. 6

The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **8:00** in Polo Valle Puggia del Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Dodecaneso 35, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **11:30** in Polo Valle Puggia del Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Dodecaneso 35, Genova.

The interview will be held on **05.09.2019** at **12:00** in Polo Valle Puggia del Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Dodecaneso 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.

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. Stefano Rovetta via the email address: stefano.rovetta@unige.it

Scientific coordinator: Prof. Stefano Rovetta

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Machine learning for prognostic maintenance

Description: The activity will consist in studying, designing, and implementing a class of predictive maintenance methods of the prognostic type, based on machine learning. The final goal is to integrate, in an existing Computer Managed Maintenance Systems (CMMS), a novel predictive maintenance model that will complement the existing –and less efficient– scheduled and condition-based maintenance methods. The activity will be carried on in collaboration with TAM Software, developer of the CMMS. Locations: at DIBRIS, Genova, and at TAM Software, La Spezia.

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-25 Ingegneria dell'automazione, LM-27 Ingegneria delle telecomunicazioni, LM-29 Ingegneria elettronica, LM-32 Ingegneria informatica, LM-33 Ingegneria meccanica, LM-40 Matematica, LM-82 Scienze statistiche.

Subjects of the interview:
Competences in Machine learning and Coding. Discussion on the candidate's CV.

RESEARCH PROGRAM NO. 7

The assessment criteria for the qualifications and the interview will be affixed on **04.09.2019** at **9:30** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Dodecaneso 35, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **04.09.2019** at **12:30** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Dodecaneso 35, Genova.

The interview will be held on **04.09.2019** at **14:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Dodecaneso 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. Fabio Solari

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development and validation of new advanced simulation technologies for training and planning of diagnostic and operative interventions in medicine

Description: The activities aim to train a new professional with multidisciplinary skills (e.g. medicine, bioengineering, robotics, computer science) and to begin a path that will lead the SimAV to be a provider of innovative technological solutions and a cutting-edge research promoter in the field of advanced simulation in medicine, with particular attention to the user-specific needs of the Liguria territory. Specific objectives: To develop patient-specific solutions that allow doctors to carry out invasive examinations and surgeries after planning and testing them repeatedly in simulation; to develop Virtual / Augmented Reality solutions designed specifically for medical training; to create low-cost and portable prototypes that meet the specific users' needs, which cannot be satisfied by off-the-shelf solutions.

Scientific disciplinary sector: INF/01 – INFORMATICA

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

Required degree:
Laurea V.O. in Ingegneria biomedica, Informatica, Ingegneria Informatica, Laurea Specialistica delle classi 26/S Ingegneria biomedica, 35/S Ingegneria informatica, 23/S Informatica, Laurea Magistrale delle classi LM-21 Ingegneria biomedica, LM-32 Ingegneria informatica, LM-18 Informatica

Subjects of the interview:
Fundamentals of Biomedical Engineering: devices, data, and analysis; fundamentals of Virtual / Augmented reality and interaction; object-oriented programming (C ++ and / or C # and / or Java).

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

RESEARCH PROGRAM NO. 8

The assessment criteria for the qualifications and the interview will be affixed on **02.09.2019** at **16:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 31, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.09.2019** at **14:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 31, Genova.

The interview will be held on **05.09.2019** at **10:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 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 Marina Di Carro on the phone number +39 010 3536198 or via the email address: marina.dicarro@unige.it

Scientific coordinator: Prof.ssa Marina Di Carro

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Quality of coastal waters in Liguria: an innovative approach for a fast determination of emerging organic pollutants

Description: The project, in collaboration with the Aquarium of Genoa, is about the improvement of an innovative method for continuous sampling of coastal waters, using passive samplers, for the determination of emerging contaminants (chemicals not considered by national and European legislation) by chromatography-mass spectrometry. In fact, for the Liguria region the quality of coastal waters and fish resources is fundamental for the protection of the environmental heritage and for the enhancement of natural resources for tourism and commercial purposes.
In the selected sites, different types of passive samplers will be deployed, in order to obtain qualitative and quantitative information on emerging contaminants.

Scientific disciplinary sector: CHIM/01 - CHIMICA ANALITICA

Place: Dipartimento di Chimica e Chimica Industriale (DCCI)

Required degree:
Laurea V.O. in Chimica, Chimica Industriale, Scienze biologiche, Scienze Ambientali, Laurea Specialistica delle classi 62/S Scienze Chimiche, 81/S Scienze e tecnologie della chimica industriale, 82/S Scienze e tecnologie per l'ambiente e il territorio, 6/S Biologia, Laurea Magistrale delle classi LM-54 Scienze Chimiche, LM-71 Scienze e tecnologie della chimica industriale, LM-75 Scienze e tecnologie per l'ambiente e il territorio, LM-6 Biologia.

Subjects of the interview:
Chromatographic and mass spectrometric techniques; sample preparation methods, in particular of food and/or environmental samples.

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

RESEARCH PROGRAM NO. 9

The assessment criteria for the qualifications and the interview will be affixed on **03.10.2019** at **13:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 31, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.10.2019** at **17:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 31, Genova.

The interview will be held on **04.10.2019** at **9:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 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. Maurizio Ferretti on the phone number +39 347 4806610 or via the email address: ferretti@chimica.unige.it

Scientific coordinator: Prof. Maurizio Ferretti

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 48.394,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: "Antibacterial membranes for treatment of surfaces and objects in high risk of contamination environment"

Description: The goal is to produce a functional composite material that can be used both in normal situations where safety and hygiene must be guaranteed (places of care, kindergartens, canteens) and as a system of disinfection in the vehicles used for the rescue and in the care stations equipped in emergency conditions in areas hit by disasters, for the removal of multi-resistant bacteria. This material will consist of a polymeric tissue, elastic, adhesive, suitable for covering different types of surfaces, loaded with TiO_2 nanoparticles, a photocatalyst capable of carrying out antibacterial activity in the presence of natural (solar) or artificial light sources but common (neon lamps).

Scientific disciplinary sector: CHIM/02 - CHIMICA FISICA

Place: Dipartimento di Chimica e Chimica Industriale (DCCI)

Required degree:
Laurea V.O. in Chimica, Chimica Industriale, Laurea Specialistica della Classe 62/S Scienze Chimiche, Laurea Magistrale della classe LM-54 Scienze Chimiche

Subjects of the interview:
- Synthesis of polymeric membranes by electrospinning technique
- Synthesis of TiO_2-NPs by sol-gel and hydrothermal techniques
- Test of antibacterial activity of membranes by photocatalysis

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

RESEARCH PROGRAM NO. 10

The assessment criteria for the qualifications and the interview will be affixed on **09.09.2019** at **9:30** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 31, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **09.09.2019** at **13:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 31, Genova.

The interview will be held on **09.09.2019** at **14:00** in Dipartimento di Chimica e chimica industriale (DCCI), Via Dodecaneso 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. Antonio Comite on the phone number +39 010 3536197 or via the email address: antonio.comite@unige.it

Scientific coordinator: Prof. Antonio Comite

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Study on the conversion of lignocellulosic biomass to valuable compounds

Description: The research project concerns with the study of the conversion of lignocellulosic biomass from waste to produce added value chemicals. The project starts with a definition of the scientific and technological state of the art. On selected lignocellulosic materials a mechanical processing and some characterization will be carried out in order to prosecute the activity with the study of the pretreatments (eg Steam Explosion, Hot Water Treatment) to open the structure. The fellow will study the conversion treatments with approaches inspired by Green Chemistry and by using both commercial and lab-made catalysts. For pretreatments and treatments the influence of different operating conditions will be verified (e.g. temperature, pressure, contact time, pH, etc.).

Scientific disciplinary sector: CHIM/04 - CHIMICA INDUSTRIALE

Place: Dipartimento di Chimica e Chimica Industriale (DCCI)

Required degree:
Laurea V.O. in Chimica, Chimica Industriale, Scienze Ambientali, Ingegneria Chimica, Ingegneria per l'ambiente e il territorio, Scienze biologiche, Laurea Specialistica delle classi 62/S Scienze Chimiche, 81/S Scienze e Tecnologie della Chimica Industriale, 82/S Scienze e Tecnologie per l'Ambiente e il Territorio, 27/S Ingegneria Chimica, 38/S Ingegneria per l'Ambiente e il Territorio, 6/S Biologia, Laurea Magistrale delle classi LM-54 Scienze Chimiche, LM-71 Scienze e Tecnologie della Chimica Industriale, LM-75 Scienze e Tecnologie per l'Ambiente e il Territorio, LM-22 Ingegneria Chimica, LM-35 Ingegneria per l'Ambiente e il Territorio, LM-6 Biologia.

Subjects of the interview:
Green chemistry and Circular Economy concepts, lignocellulosic materials, adsorption and catalysis

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

RESEARCH PROGRAM NO. 11

The assessment criteria for the qualifications and the interview will be affixed on **04.09.2019** at **9:00** in Dipartimento di Scienze della Terra, dell'Ambiente e della Vita (DISTAV), Corso Europa 26, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **04.09.2019** at **12:00** in Dipartimento di Scienze della Terra, dell'Ambiente e della Vita (DISTAV), Corso Europa 26, Genova.

The interview will be held on **04.09.2019** at **15:00** in Dipartimento di Scienze della Terra, dell'Ambiente e della Vita (DISTAV), Corso Europa 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. Francesco Faccini

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Technologies for integrated monitoring and geomorphological landslide risk reduction on the underground networks management

Description: The research develops skills in terms of analysis, monitoring and mitigation of slope instability in the context of the underground utility networks management, with particular attention to technological and methodological innovation. The activities aim to integrate data and systems for monitoring and mitigation of landslide hazards in the operating practices of energy and water networks, with a view to increase territorial security and improve the services. To enhance the training component and the transition from "science to practice" the project, promoted by the University of Genoa - DiSTAV, involves both companies (IREN, GISIG, Planetek), and research institution (CNR-IRPI of Turin).

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 della classe LM-74 Scienze e Tecnologie Geologiche, LM-75 Scienze e tecnologie per l'Ambiente e il Territorio, LM-60 Scienze della Natura.

Subjects of the interview:
Landslides hazard and risk, meteorology and climatology of Liguria, monitoring of unstable slopes, remote sensing, Geographic Information Systems

RESEARCH PROGRAM NO. 12

The assessment criteria for the qualifications and the interview will be affixed on **04.09.2019** at **9:30** in Laboratorio di Oncologia Cellulare, IST Nord, IRCCS Ospedale Policlinico San Martino, Largo Rosanna Benzi 10, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **04.09.2019** at **13:00** in Laboratorio di Oncologia Cellulare, IRCCS Ospedale Policlinico San Martino, Largo Rosanna Benzi 10, Genova.

The interview will be held on **04.09.2019** at **14:30** in Laboratorio di Oncologia Cellulare, IST Nord, IRCCS Ospedale Policlinico San Martino, Largo Rosanna Benzi 10, 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. Aldo Pagano

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Automation of biomonitoring and real-time risk assessment of toxigenic microalgae

Description: The project aims to provide the Agencies and any other institution responsible for the ecotoxicological sector, sophisticated monitoring tools and systems to be able to carry out a rapid and low-cost surveillance activity, thus speeding up the dissemination of information and improving risk management for public health.

Scientific disciplinary sector: BIO/13 BIOLOGIA APPLICATA

Place: Dipartimento di Medicina Sperimentale (DIMES)

Required degree:
Laurea V.O. in Biotecnologie (indirizzo biotecnologie mediche), Scienze Biologiche, Medicina e Chirurgia, Farmacia, Chimica, Laurea Specialistica delle classi 9/S Biotecnologie Mediche Veterinarie e Farmaceutiche, 6/S Biologia, 46/S Medicina e Chirurgia, 14/S Farmacia e Farmacia Industriale, 62/S Scienze Chimiche Laurea Magistrale delle classi LM-09 Biotecnologie Mediche Veterinarie e Farmaceutiche, LM-06 Biologia, LM-41 Medicina e Chirurgia, LM-13 Farmacia e Farmacia Industriale, LM-54 Scienze Chimiche.

Subjects of the interview:
Methods of biomonitoring of toxigenic algae based on endogenous fluorescence analysis and on digitalized imaging and image analysis procedures. Evaluation of the dangerousness parameters of different environmental and culture conditions.

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

RESEARCH PROGRAM NO. 13

The assessment criteria for the qualifications and the interview will be affixed on **03.09.2019** at **9:00** in Ex Istituto di Farmacologia, Viale Benedetto XV, 2, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.09.2019** at **12:00** in Ex Istituto di Farmacologia, Viale Benedetto XV, 2, Genova.

The interview will be held on **03.09.2019** at **15:00** in Ex Istituto di Farmacologia, Viale Benedetto XV, 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.

Scientific coordinator: Prof. Tullio Florio

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 48.394,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of an automatic assay for the screening of mechanosensitive ion channels

Description: The proposed activity aims at integrating a nanopositioning system in a fluorescence microscope to perform single cell mechanosensitivity measurements. In particular, the fellow will be required to drive an existing XYZ positioner to take a miniaturized force probe in close proximity with a cell and perform a controlled mechanical stimulus on it, while measuring the corresponding fluorescence, associated to the mechanosensing response of the cell. The system integrates an embedded controller to be programmed to achieve full synchronization between motion, image acquisition and illumination.

Scientific disciplinary sector: BIO/14 FARMACOLOGIA

Place: Dipartimento di Medicina Interna e Specialità Mediche (DIMI)

Required degree:
Laurea Specialistica delle classi 20/S Fisica, 23/S Informatica, 26/S Ingegneria biomedica, 29/S Ingegneria dell'automazione, 30/S Ingegneria delle telecomunicazioni, 32/S Ingegneria elettronica, 35/S Ingegneria informatica, Laurea Magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-21 Ingegneria Biomedica, LM-25 Ingegneria dell'Automazione, LM-27 Ingegneria delle Telecomunicazioni, LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica.

Subjects of the interview:
The interview panel will require to describe the completed curriculum of study. In particular, programming skill will be assessed, with special reference to open source operating systems and interpreted languages. If relevant, previous experience will be discussed related to deploying lab instrumentation (data acquisition, sensors, actuators, …) and using image acquisition decìvices (microscopes, CCD cameras, ...)

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

RESEARCH PROGRAM NO. 14

The assessment criteria for the qualifications and the interview will be affixed on **04.11.2019** at **15:00** in Dipartimento di Medicina Sperimentale (DIMES) - Patologia Generale, Via L.B.Alberti 2, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.11.2019** at **15:00** in Dipartimento di Medicina Sperimentale (DIMES) - Patologia Generale, Via L.B.Alberti 2, Genova.

The interview will be held on **06.11.2019** at **15:00** in Dipartimento di Medicina Sperimentale (DIMES) - Patologia Generale, Via L.B.Alberti 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.

Scientific coordinator: Prof.ssa Anna Maria Bassi

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: In vitro evaluation of neuroprotective potential of chemical compounds: assessment of a physiological relevant experimental platform.

Description: Research grant exclusively for young people under the age of 29 on 13.06.2018.The training and research activity focused on setting up a physiologically relevant in vitro platform as a therapeutic strategy that takes into account the pathogenesis and progression of glaucoma, one of the causes of blindness.Evaluation of the effects of prooxidant and pressure stressors on in vitro 3D millifluidic models of human trabecular meshwork and nerve origin cells.endpoints: confocal microscope analysis with selective marking of cellular components and molecules of interest, identification of biomarkers associated with: indices of viability / proliferation, cellular bioenergetics, oxidative stress, response signaling and adaptation to cellular damage.

Scientific disciplinary sector: MED/04 PATOLOGIA GENERALE

Place: Dipartimento di Medicina Sperimentale (DIMES)

Required degree:
Laurea Magistrale delle classi LM-06 Biologia, LM-21 Ingegneria Biomedica, LM-54 Scienze Chimiche.

Subjects of the interview:
The candidate has to fulfil the technical and scientific skills within the following fields (at least 4):- assessment of 3D in vitro cell cultures; - in vitro tests for the evaluation of viability and cell toxicity index; - Knowledge and application of molecular biology techniques for biomarker analysis (immunoblot, Elisa,PCR); - Performing analysis with spectrofluorimetric techniques- Use of molecular docking software and molecular dynamics for the in silico study of biological molecules and macromolecules;- Separation of compounds by chromatographic column;

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

RESEARCH PROGRAM NO. 15

The assessment criteria for the qualifications and the interview will be affixed on **04.09.2019** at **9:00** in U.O.C. Chirurgia Vascolare IRCCS San Martino IST – Monoblocco 12 piano levante (Sala Riunioni), Largo R. Benzi 10, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **04.09.2019** at **12:30** in U.O.C. Chirurgia Vascolare IRCCS San Martino IST – Monoblocco 12 piano levante (Sala Riunioni), Largo R. Benzi 10, Genova.

The interview will be held on **04.09.2019** at **15:00** in U.O.C. Chirurgia Vascolare IRCCS San Martino IST – Monoblocco 12 piano levante (Sala Riunioni), Largo R. Benzi 10, 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 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of a simulation multidisciplinary platform for the endovascular planning of complex aortic pathologies: from pre-operative imaging to biomechanical simulations

Description: The project aims to study the biomechanics and fluid dynamics of the aorta in subjects affected from aortic pathologies in order to develop a dedicated software which can provide practical help in daily clinical practice both during the pre-operative endovascular planning and during the treatment itself, going to impact on the percentages of intraoperative failure and post-operative complications and therefore reduce mortality and re-operations number. Furthermore, the study of these aspects of biomechanics and fluid dynamics could provide novel information for the design of new endoprostheses prototypes, adapted and optimized by computer simulations and in-vitro experiments aiming to reduce the risk of post-complications operating.

Scientific disciplinary sector: MED/22 CHIRURGIA VASCOLARE

Place: Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate (DISC)

Required degree:
Dottorato di ricerca in: Biotecnologie in Medicina Traslazionale con adeguata produzione scientifica derivante dall'esperienza di ricerca nell'ambito dell'analisi di immagini mediche in ambito vascolare.

Subjects of the interview:
• Presentation of the most relevant scientific results obtained by the candidate, including the research doctorate.
• In-depth knowledge in the field of medical imaging, medical imaging techniques and image processing with particular reference to the field of vascular surgery.
• Skills in Finite Element Analysis and Fluid Dynamics techniques, with particular reference to the biomedical and vascular field.

RESEARCH PROGRAM NO. 16

The assessment criteria for the qualifications and the interview will be affixed on **02.09.2019** at **7:30** in Padiglione 4 Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate (DISC), Ospedale S. Martino, Largo R. Benzi 10, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **02.09.2019** at **10:30** in Padiglione 4 Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate (DISC), Ospedale S. Martino, Largo R. Benzi 10, Genova.

The interview will be held on **02.09.2019** at **13:30** in Padiglione 4 Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate (DISC), Ospedale S. Martino, Largo R. Benzi 10, 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. Paolo Pera

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Carbon fiber framework in implant supported fixed prostheses

Description: Aim of the present research is to evaluate in vitro and in vivo the fiber reinforced composite used as framework material. The fractural strength. The flexural strength, static dinamic and elastic modulus will be evaluated. The adhesion strength between the framework and the esthetic veneering material will be evaluated. Frameworks will be made with different materials in order to evaluate the resistance of different materials. The in vivo behavior of the framework will be also evaluated.

Scientific disciplinary sector: MED/28 MALATTIE ODONTOSTOMATOLOGICHE

Place: Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate (DISC)

Required degree:
Laurea V.O. in Odontoiatria e Protesi Dentaria, Laurea Specialistica della classe 52/S Odontoiatria e Protesi dentaria, Laurea Magistrale della classe LM-46 Odontoiatria e Protesi dentaria.

Subjects of the interview:
Patophisiology of the mouth, Implant supported rehabilitation of the total and partially edentulous patient.

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

RESEARCH PROGRAM NO. 17

The assessment criteria for the qualifications and the interview will be affixed on **24.09.2019** at **9:00** in Campus Universitario di Savona, Palazzina Oliva, Piano I, Via Magliotto 2, Savona.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **24.09.2019** at **12:00** in Campus Universitario di Savona, Palazzina Oliva, Piano I, Via Magliotto 2, Savona.

The interview will be held on **24.09.2019** at **15:15** in Campus Universitario di Savona, Palazzina Oliva, Piano I, Via Magliotto 2, Savona.

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 Testa

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: AD4M-REHAB - A Device for Musculoskeletal Rehabilitation: development and testing of a network of wearable sensors to monitor upper limb movements in patients suffering from musculoskeletal, neuromotor or during post-surgical physiotherapy

Description: The optimization and validation project of an inertial sensor system for the functional assessment of upper limb movement in an ecological environment aims at:
(1) Optimization of device portability (ergonomics, size and battery life), requiring information on the orientation of the patient's limbs in very different measurement conditions found during normal activities of the day
(2) Thanks to the integration of a feedback system, to improve the subject's adherence to the prescriptions of the activities and to the movement limitations to be observed during the therapy. A system for monitoring the quantity and amplitude of movements performed at home with the upper limb will also allow to acquire information on the efficacy of a therapy and on the progression of the pathology.

Scientific disciplinary sector: MED/48 SCIENZE INFERMIERISTICHE E TECNICHE NEURO-PSICHIATRICHE E RIABILITATIVE

Place: Dipartimento di Neuroscienze, Riabilitazione, Oftalmologia, Genetica e Scienze Materno-Infantili (DINOGMI)

Required degree:
Laurea Magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica, LM/SNT2 Scienze riabilitative delle professioni sanitarie, LM-67 Scienze e Tecniche delle Attività Motorie Preventive e Adattative

Subjects of the interview:
Kinematics and motor control of the upper limb and characteristics of its alteration in the various neuromuscular and musculoskeletal pathological conditions. Clinical and inertial motion measurement systems (IMU), signal analysis, programming elements in Matlab, C ++, Phyton, C Sharp

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

RESEARCH PROGRAM NO. 18

The assessment criteria for the qualifications and the interview will be affixed on **24.09.2019** at **9:30** in Campus Universitario di Savona, Palazzina Oliva, Piano I, Via Magliotto 2, Savona.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **24.09.2019** at **15:00** in Campus Universitario di Savona, Palazzina Oliva, Piano I, Via Magliotto 2, Savona.

The interview will be held on **24.09.2019** at **16:30** in Campus Universitario di Savona, Palazzina Oliva, Piano I, Via Magliotto 2, Savona.

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 Testa

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Clinical validation of a System for Measuring and Training the Strength of Hand and Mouth

Description: Clinical validation of a System for Measuring and Training the Strength of Hand and Mouth (MAMBO) which integrates the use of sensors for measuring force in an IT platform capable of managing the signal coming from sensors in real time. The system therefore has the ability to measure the maximum force that can be delivered by the user, its precision, described with different indexes of motor control, and muscular endurance. The simultaneous recording of the signal coming from two load cells allows the generation of right-left motor coordination indices, useful for evaluating the central coordination mechanisms between cerebral hemispheres. The part of the device dedicated to the hand allows to investigate spinal mechanisms of motor control, while the part dedicated to the mouth allows us to take information on trigeminal control motor mechanisms.

Scientific disciplinary sector: MED/48 SCIENZE INFERMIERISTICHE E TECNICHE NEURO-PSICHIATRICHE E RIABILITATIVE

Place: Dipartimento di Neuroscienze, Riabilitazione, Oftalmologia, Genetica e Scienze Materno-Infantili (DINOGMI)

Required degree:
Laurea Magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica, LM/SNT2 Scienze riabilitative delle professioni sanitarie, LM-67 Scienze e Tecniche delle Attività Motorie Preventive e Adattative

Subjects of the interview:
Motor control of force delivery in masticatory muscles, force measurement systems, signal analysis, programming elements in Matlab, C ++, Phyton, C Sharp

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

SCIENTIFIC DISCIPLINARY AREA CIVIL ENGINEERING AND ARCHITECTURE

RESEARCH PROGRAM NO. 19

The assessment criteria for the qualifications and the interview will be affixed on **03.10.2019** at **9:00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Laboratorio di Idraulica, Via Montallegro 1, Genova

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.10.2019** at **13:00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Laboratorio di Idraulica, Via Montallegro 1, Genova

The interview will be held on **03.10.2019** at **16:00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Laboratorio di Idraulica, Via Montallegro 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. Luca G. Lanza

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Managing the impact of heavy meteo-hydrological events on the operation and safety of urban water networks

Description: The project deals with the analysis, monitoring and mitigation of meteo-hydrological hazard and its impact on the management of water services, with a specific focus on both technological and methodological innovation. The project is performed jointly by UNIGE and a local multi-utility (IREN), involving a group of stakeholders made of similar companies operating on the national territory. IREN will have the role of test case, providing data, case studies and real needs expressed by the final users. The research aims to develop methods to reduce the risk of failure in water supply and urban drainage networks, using smart mitigation solutions, and to ensure improvements in the quality of life in the urban areas, reducing the number of failures in water networks and therefore the lack of water supply and the risk of flooding in urban areas.

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:
Candidates must demonstrate knowledge in modern techniques for storm water management and control in urban areas and for optimizing urban water infrastructures, in the management of meteo-hydrological hazard and its impact on water networks. They should know basic hydrological processes related to the impact of extreme events on urbanised areas, basic hydraulics of water supply networks and urban drainage systems, as well as the SUDS techniques and the main specific software. Finally they must demonstrate capabilities in the analysis and interpretation of meteo-hydrological data and their accuracy and reliability.

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

RESEARCH PROGRAM NO. 20

The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **10:00** in CIELI (Centro Italiano di Eccellenza sulla Logistica i Trasporti e le Infrastrutture), II piano, Via Vivaldi 5, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **13:30** in CIELI (Centro Italiano di Eccellenza sulla Logistica i Trasporti e le Infrastrutture), II piano, Via Vivaldi 5, Genova.

The interview will be held on **05.09.2019** at **14:00** in CIELI (Centro Italiano di Eccellenza sulla Logistica i Trasporti e le Infrastrutture), II piano, Via Vivaldi 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. Davide Giglio

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: "STRONG BUS" - STRategies and Optimization algorithms for a New maintenance manaGement system

Description: The research activity consists in the definition and development of a prototype system that allows to implement predictive maintenance strategies for the fleet of public transport vehicles, in order to improve the efficiency of the public transport service. The prototype system will have to include some specific modules such as: a diagnostic subsystem for the acquisition of information on the state of the transport network and of vehicles, a data analysis and alarm generation subsystem, a subsystem for the management and optimization of maintenance activities at vehicle depots, and a subsystem for optimal vehicle allocation based on the planned maintenance activities. The activity will be carried out in collaboration with AMT Genova, the local public transport company.

Scientific disciplinary sector: ICAR/05 TRASPORTI

Place: Centro Italiano di Eccellenza sulla Logistica i Trasporti e le Infrastrutture (CIELI)

Required degree:
Laurea Magistrale delle classi LM-25 Ingegneria dell'Automazione, LM-26 Ingegneria della Sicurezza, LM-27 Ingegneria delle Telecomunicazioni, LM-28 Ingegneria Elettrica, LM-29 Ingegneria Elettronica, LM-31 Ingegneria Gestionale, LM-32 Ingegneria Informatica.

Subjects of the interview:
The interview will mainly assess the candidate's knowledge in one or more of the following topics: decision support systems (DSS); reliability engineering; models and methods for optimization; simulation models and systems; data analysis; software development and computer programming techniques.

RESEARCH PROGRAM NO. 21

The assessment criteria for the qualifications and the interview will be affixed on **03.09.2019** at **10:00** in Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sala Riunioni Area Trasporti, II piano, Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.09.2019** at **13:30** in Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sala Riunioni Area Trasporti, II piano, Via Montallegro 1, Genova.

The interview will be held on **03.09.2019** at **14:00** in Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sala Riunioni Area Trasporti, II piano, Via Montallegro 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. Nicola Sacco

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: MASTER - Mobility as a service based on rail transport

Description: Nowadays, in the urban context, a growing attention is dedicated to the so-called Mobility as a service (MaaS), intended as the holistic vision of infrastructures and transport services which, integrated together, provide users with efficient mobility solutions.
This project aims to improve rail-rail and rail-road intermodality to encourage the integrated use of rail and local transport. In particular, the aim of the research is to improve the coordination between the different modes of transport through the coordinated and extensive programming of the exercise of the different modes. The solutions found will be extended to other modes (metro, tram, etc.) in order to create a general offer model that makes rail transport the backbone capable of acting as the master of the entire system.

Scientific disciplinary sector: ICAR/05 TRASPORTI

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

Required degree:
Laurea Magistrale delle classi LM-25 Ingegneria dell'Automazione, LM-26 Ingegneria della Sicurezza, LM-27 Ingegneria delle Telecomunicazioni, LM-28 Ingegneria Elettrica, LM-29 Ingegneria Elettronica, LM-31 Ingegneria Gestionale, LM-32 Ingegneria Informatica

Subjects of the interview:
The interview will mainly assess the candidate's knowledge in one or more of the following topics: decision support systems (DSS); intermodal transport; rail transport; models and methods for optimization; simulation models and systems; data analysis; software development and computer programming techniques.

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

RESEARCH PROGRAM NO. 22

The assessment criteria for the qualifications and the interview will be affixed on **02.09.2019** at **10:00** in Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sala Riunioni Area Trasporti, Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **02.09.2019** at **13:30** in Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sala Riunioni Area Trasporti, Via Montallegro 1, Genova.

The interview will be held on **02.09.2019** at **14:00** in Dipartimento di Ingegneria Meccanica, Energetica, Gestionale e dei Trasporti (DIME), Sala Riunioni Area Trasporti, Via Montallegro 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. Nicola Sacco

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: OPUM: Last mile optimization

Description: The aim of the research is the optimal management of the distribution of goods through the so-called last railway mile (or penultimate railway mile), which goes from the port terminal to the destination inland terminal. To this end, the goal consists of improving the connections of the national railway network with ports, interprets, terminals and logistics platforms and to develop functional and reliable intermodal services, capable of generating a structural benefit for the logistics system of the Region and the Country. More in detail, the objectives of the research are to optimize operations to maximize the number of trains leaving and arriving from and in the port and to develop models for optimizing resources within the logistics platform.

Scientific disciplinary sector: ICAR/05 TRASPORTI

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

Required degree:
Laurea Magistrale delle classi LM-25 Ingegneria dell'Automazione, LM-26 Ingegneria della Sicurezza, LM-27 Ingegneria delle Telecomunicazioni, LM-28 Ingegneria Elettrica, LM-29 Ingegneria Elettronica, LM-31 Ingegneria Gestionale, LM-32 Ingegneria Informatica

Subjects of the interview:
The interview will mainly assess the candidate's knowledge in one or more of the following topics: decision support systems (DSS); logistics and maritime transport; models and methods for optimization; simulation models and systems; data analysis; software development and computer programming techniques.

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

RESEARCH PROGRAM NO. 23

The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **9:30** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **12:30** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro 1, Genova.

The interview will be held on **05.09.2019** at **14:30** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro 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 Chiara Calderini

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: CHAINS: non-destructive tests on existing metal tie-rods for the safety and the preservation of historic buildings

Description: The research aims to define diagnostic tools for the evaluation of the structural integrity and performance of historic metal tie-rods. The proposed tools will be derived from traditional diagnostic tests on modern steel structures, and will be based on visual inspections, thermographic investigations and electrical tests. In order to calibrate such techniques on an historic material and on buildings that are very different from those traditionally considered in the diagnostic of steel elements, laboratory experimental tests will be carried out. In particular, they will be oriented to simulate, in a controlled way, the typical conditions of existing tie-rods on site.

Scientific disciplinary sector: ICAR/09 TECNICA DELLE COSTRUZIONI

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

Required degree:
Laurea Magistrale delle classi LM-23 Ingegneria civile, LM-4 Architettura e Ingegneria Edile-Architettura

Subjects of the interview:
Structural mechanics, Modelling of masonry structures, Diagnostic techniques

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

RESEARCH PROGRAM NO. 24

The assessment criteria for the qualifications and the interview will be affixed on **11.09.2019** at **8:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Polo Navale, Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **11.09.2019** at **13:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Polo Navale, Via Montallegro 1, Genova.

The interview will be held on **11.09.2019** at **14:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Polo Navale, Via Montallegro 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. Diego Villa on the phone number +39 010 3352345 or via the email address: diego.villa@unige.it

Scientific coordinator: Prof. Diego Villa

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Developement of a framework for the geometry deformation for CFD applications (SMEMO-Shaper for Mesh Morphing)

Description: The present project aims to develop a framework for the management and creation of CAD geometries suitable for the use in open-source codes for CFD simulations.The project focuses on the development of mesh deformation techniques (Mesh Morphing) to significantly reduce the computational time required for the systematic analysis of different geosim. Therefore, this developed tool will be tested in an optimization framework or for systematic geometric analysis.The first applications will be focused on marine applications, but it may be applied also for similar applications in parent fields, as for instance aerodynamic and mechanic.

Scientific disciplinary sector: ING-IND/01 ARCHITETTURA NAVALE

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

Required degree:
Laurea V.O. in Ingegneria Navale, Ingegneria Meccanica, Ingegneria Civile, Laurea Specialistica della classe 37/S Ingegneria navale, 36/S Ingegneria Meccanica, 28/S Ingegneria Civile, Laurea Magistrale delle classi LM-34 Ingegneria Navale, LM-33 Ingegneria Meccanica, LM-23 Ingegneria Civile.

Subjects of the interview:
CFD solver for Marine applications.Description of CAD techniques and their impact on the ability to represent and deform a specific body shape.Definition of a computational mesh: its effect on the expected accuracy.Object-oriented and high-level programming tools.

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

RESEARCH PROGRAM NO. 25

The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **8:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Polo Navale, Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **13:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Polo Navale, Via Montallegro 1, Genova.

The interview will be held on **05.09.2019** at **14:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Polo Navale, Via Montallegro 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. Michele Viviani on the phone number +39 320 4248046 or via the email address: michele.viviani@unige.it

Scientific coordinator: Prof. Michele Viviani

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of numerical procedures for captive model test simulations

Description: The present project aims to develop CFD tools for the simulation of captive model tests (PMM, rotating arm) in order to predict some of the hydrodynamic coefficients used for the ship maneuvering simulations. The focus of the project will be the definition and validation (adopting available experimental measurements) of numerical procedures with a high cost/benefit ratio, trying to reduce the number and complexity of simulations, granting contemporarily an high reliability of simulations. Therefore, all the simulation should be enough robust to be applied in an industrial work-flow with an adequate computational effort.

Scientific disciplinary sector: ING-IND/01 ARCHITETTURA NAVALE

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

Required degree:
Laurea V.O. in Ingegneria Navale, Laurea Specialistica della classe 37/S Ingegneria navale, Laurea Magistrale della classe LM-34 Ingegneria navale

Subjects of the interview:
CFD tools in marine field. The ship maneuverability and the standard captive and free running model tests. Definition and use of the ship hydrodynamic coefficients.

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

RESEARCH PROGRAM NO. 26

The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **09:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **14:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via Montallegro 1, Genova.

The interview will be held on **05.09.2019** at **15:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via Montallegro 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. Dario Boote

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: SILENTYACHT - Methodologies for reducing the noise and vibration propagation on board superyachts and megayachts through the use of numerical models

Description: The fellow will study all the structural and noise propagation implications of using the new machinery that are and will be installed on super and mega yachts as a result of the request of a ship more ecofriendly. In particular:
• 	Limitation of noise transmission due to the bow thruster
• 	New shaft line configurations to assess any whirling issues
• 	Study of foundation structures of new on-board machinery for hybrid vessels and their noise propagation on board
• 	Propagation of noise through the glass structures of super and megayachts

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 V.O. in Ingegneria Navale, Laurea Specialistica della classe 37/S Ingegneria Navale, Laurea Magistrale della classe LM-34 Ingegneria Navale

Subjects of the interview:
Principles of noise and vibration propagation on board of pleasure craft, numerical methods for structural analysis by finite element analyses, numerical methods of Statistical Energy Analyses for the propagation of noise and vibrations. Knowledge of the English language is also required

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

RESEARCH PROGRAM NO. 27

The assessment criteria for the qualifications and the interview will be affixed on **10.09.2019** at **8:00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **10.09.2019** at **13:00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro 1, Genova.

The interview will be held on **10.09.2019** at **14:00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Montallegro 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. Jan Oscar Pralits on the phone number +39 010 3352496 or via the email address: jan.pralits@unige.it

Scientific coordinator: Prof. Jan Oscar Pralits

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: State of the art numerical simulations of the atmospheric chamber to study bioaerosol

Description: The main objective of this project is to perform numerical analyses and measurements in some representative scenarios of dynamics in the atmospheric chamber and to study the basic mechanisms that regulate the behaviour and diffusion/deposition of the biological component of atmospheric particulate, the so-called bioaerosol that is bacteria, viruses, and other microorganisms present in the atmosphere. To achieve this objective it is proposed to develop a numerical model of fluid dynamics in OpenFOAM including the transport and phase change of microorganisms of interest. The model will support the tests in the atmospheric chamber at the Genoa section of the INFN. Finally, analysis and measurements are envisaged in some scenarios of the biological component of atmospheric particulate matter.

Scientific disciplinary sector: ING-IND/06 FLUIDODINAMICA
Place: Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA)

Required degree:
Laurea V.O. in Ingegneria Meccanica, Ingegneria Aerospaziale, Ingegneria Civile, Fisica, Ingegneria per l'Ambiente e il territorio, Laurea Specialistica delle classi 36/S Ingegneria Meccanica, 37/S Ingegneria Navale, 25/S Ingegneria Aerospaziale e Astronautica, 20/S Fisica, 50/S Modellistica matematico-Fisica per l'Ingegneria, 28/S Ingegneria Civile 38/S Ingegneria per l'ambiente e il territorio, Laurea Magistrale delle classi, LM-33 Ingegneria Meccanica, LM-34 Ingegneria Navale, LM-20 Ingegneria Aerospaziale e Astronautica, LM-44 Modellistica matematico-Fisica per l'Ingegneria, LM-23 Ingegneria Civile, LM-17 Fisica, LM-35 Ingegneria per l'Ambiente e il territorio.

Subjects of the interview:
Use of CFD solvers for three-dimensional applications with turbulent flow
Definition of a computational mesh: impact on the results.
Object-oriented programming and high-level programming languages.
Description of flow modeling with particles

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

RESEARCH PROGRAM NO. 28

Scientific coordinator: Prof. Carlo Cravero

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of a simulation platform for the aerodynamics of ships

Description: The research project is aimed at the development of a simulation platform for the external flows to ships and their interaction with structures in order to improve the passengers comfort or to minimize the interaction of hot exhaust gases with critical components of the deckhouse. Crucial issues are: geometrical complexity and model dimensions, large recirculating unsteady turbulent flow structures and wakes typical from bluff bodies, uncertainty in boundary condition values and input data. These aspects need a special focus in order to set up a simulation platform sufficiently accurate and to be efficiently used in the industrial design routine. The platform will be applied to reference industrial cases to be calibrated and tested before its implementation into the industrial design environment.

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

Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)

Required degree:
Laurea V.O. in Ingegneria Meccanica, Ingegneria Navale, Fisica, Ingegneria per l'ambiente e il territorio, Laurea Specialistica delle classi 36/S Ingegneria Meccanica, 37/S Ingegneria Navale, 38/S Ingegneria per l'Ambiente ed il Territorio, 20/S Fisica, Laurea Magistrale delle classi LM-33 Ingegneria Meccanica, LM-34 Ingegneria Navale, LM-35 Ingegneria per l'Ambiente e il Territorio, LM-17 Fisica.

Subjects of the interview:
CFD techniques, aerodynamics

RESEARCH PROGRAM NO. 29

Scientific coordinator: Prof. Carlo Cravero

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Simulation of glass container production process

Description: The research goal is to develop numerical tools based on CFD for the simulation of the glass container production process starting from the glass gob. These aspects are of high interest for various reasons: better control over the formation process with reduced waste rate, understanding of the physical process and of the effects of control parameters, innovative training systems for personal (that is currently trained based on experience gained and not by the underlying physics of the process). The heat transfer modelling and the melted glass thermophysical modelling will be critical and fundamental issues to study in order to develop a representative simulation model of the real process. The numerical models will be calibrated and validated with experimental data acquired with the support of the industrial partner.

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

Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)

Required degree:
Dottorato di ricerca in Ingegneria delle macchine e dei sistemi per l'energia, l'ambiente e i trasporti con adeguata produzione scientifica derivante da pubblicazioni a congressi internazionali o su riviste scientifiche riguardanti l'applicazione delle tecniche numeriche CFD a componenti o sistemi industriali

Subjects of the interview:
CFD techniques for glass production systems and for glass container production process

RESEARCH PROGRAM NO. 30

The assessment criteria for the qualifications and the interview will be affixed on **02.09.2019** at **9:00** in Sezione MASET del Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Montallegro 1, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **02.09.2019** at **12:00** in Sezione MASET del Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Montallegro 1, Genova

The interview will be held on **02.09.2019** at **12:30** in Sezione MASET del Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Montallegro 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. Pietro Zunino

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Theoretical and experimental analysis of physics phenomena in valves

Description: The main objectives of the present research proposal concern with:
- Evaluation of the theoretical-empirical relation describing the drag coefficient with direct flow on different valve geometries and dimensions;
- Evaluation of the theoretical-empirical relation describing the drag coefficient and the efficiency with reverse flow and determination of the pressure distribution on the valve surfaces;
- Evaluation of theoretical-empirical relations describing the disturbances generated with a partially opened valve, with the aim of understanding the effects due to different geometries on the valve efficiency.

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

Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)

Required degree:
Laurea V.O. in Ingegneria Meccanica, Laurea Specialistica della classe 36/S Ingegneria Meccanica,
Laurea Magistrale della classe LM-33 Ingegneria Meccanica.

Subjects of the interview:
Operation with steady and unsteady boundary condition of turbomachinery components. Design of turbomachinery components. CFD applied to open and closed systems.

RESEARCH PROGRAM NO. 31

Scientific coordinator: Prof. Alessandro Sorce

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 66.650,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Data-Driven model development for the predictive diagnostic of strategic Combined Cycle components

Description: The research activity focuses on the selection of the most promising measurements and extraction methods for the creation of Data-driven models. After a careful study of the state of the art on machine learning algorithms, Black-Box models will be developed (selecting the most relevant variables) and validated. In the second phase, the development of classification/clustering tools will be developed to support decisions and predictive maintenance actions. The activities will be composed by the development of the necessary informatics tool and a validation on real cases.

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:
Dottorato di ricerca in Ingegneria delle macchine e dei sistemi per l'energia, l'ambiente e i trasporti.

Subjects of the interview:
Combined Cycle and their component, Data driven methods for model development, diagnostic.

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

RESEARCH PROGRAM NO. 32

Scientific coordinator: Prof. Alberto Traverso

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 57.114,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Innovative solutions for energy harvesting in thermal cycles

Description: During the first year the activities will be dedicated to the definition of the performance obtained from the set of different thermal cycles in cascade, highlighting the technological solutions with the best thermoeconomic features. In the second year, instead, optimal control strategies will be identified for the technological solutions showing the most attractive performance. The work is divided into two work packages, each one covering one year of research.
WP-1 Thermoeconomic study and optimization of ultra-compact Organic Rankine Cycles
WP-2 Dynamic analysis and control strategies

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 V.O. in Ingegneria Meccanica, Laurea Specialistica della classe 36/S Ingegneria meccanica
Laurea Magistrale della classe LM-33 Ingegneria meccanica.

Subjects of the interview:
Dynamics and control of energy systems, innovative energy systems, instrumentation and measurement methods for power plant parameters.

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

RESEARCH PROGRAM NO. 33

Scientific coordinator: Prof. Alberto Traverso

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 66.650,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Innovative technologies for powering remote monitoring systems

Description: The research activity focuses on the study of innovative technologies for storage and generation of electricity for remote systems, for example for environmental monitoring. During the first phase, after a careful study of the state of the art on energy storage and generation systems for remote systems, the most promising technologies for these applications will be selected, for a subsequent investigation both theoretical and experimental. In particular, the characteristics of Tesla type turbo-expanders for remote power supplies galvanically isolated from the grid will also be considered.
In the second phase a detailed analysis of the most promising applications will follow, also simulating the most interesting energy production scenarios.

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 V.O. in Ingegneria Meccanica, Laurea Specialistica della classe 36/S Ingegneria meccanica, Laurea Magistrale della classe LM-33 Ingegneria meccanica.

Subjects of the interview:
The research activity focuses on the study of innovative technologies for storage and generation of electricity for remote systems, for example for environmental monitoring. During the first phase, after a careful study of the state of the art on energy storage and generation systems for remote systems, the most promising technologies for these applications will be selected, for a subsequent investigation both theoretical and experimental. In particular, the characteristics of Tesla type turbo-expanders for remote power supplies galvanically isolated from the grid will also be considered.
In the second phase a detailed analysis of the most promising applications will follow, also simulating the most interesting energy production scenarios.

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

RESEARCH PROGRAM NO. 34
The assessment criteria for the qualifications and the interview will be affixed on **02.09.2019** at **8:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **02.09.2019** at **11:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The interview will be held on **02.09.2019** at **14:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 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. Agostino Bruzzone on the phone number +39 3207982138 or via the email address: agostino@itim.unige.it

Scientific coordinator: Prof. Agostino Bruzzone
NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Augmented Operator for Iron&Steel plants, augmented reality, integration of Cyber-Physical System in a wearable solution for steel plant operators to increase perception and ability to support management and control of production processes.
Description: OPAS aims to define and test innovative Augmented Reality solutions for Iron&Steel industry. An innovative Augmented Operator that integrates in the equipment sensor systems along with connected and mobile IT supports, combined with AR tools to obtain new functions, perception capability integrated with data from detection, control and automation systems; interaction with such systems and visualization in augmented environment. It is expected to develop a logic and physics grid (eg optical) that can be integrated with portable solutions (ie "mobile" and / or wearable) solutions for supporting control of areas and procedures for more effective management of industrial processes, service, maintenance and operators supervision.

Scientific disciplinary sector: ING-IND/17 IMPIANTI INDUSTRIALI MECCANICI
Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)
Required degree:
Laurea V.O. in Ingegneria navale, Ingegneria meccanica, Ingegneria informatica, Ingegneria industriale, Ingegneria elettronica, Ingegneria elettrica, Ingegneria civile, Informatica, Ingegneria per l'ambiente e il territorio, Ingegneria gestionale, Matematica, Laurea Specialistica delle classi 37/S Ingegneria navale, 36/S Ingegneria meccanica, 35/S Ingegneria informatica, 32/S Ingegneria elettronica, 34/S Ingegneria gestionale, 31/S Ingegneria elettrica, 29/S Ingegneria dell'automazione, 28/S Ingegneria civile, 38/S Ingegneria per l'ambiente e il territorio, 50/S Modellistica matematico-fisica per l'ingegneria, 23/S Informatica, 100/S Tecniche e metodi per la società dell'informazione, Laurea Magistrale delle classi LM-34 Ingegneria navale, LM-33 Ingegneria meccanica, LM-32 Ingegneria informatica, LM-29 Ingegneria elettronica, LM-31 Ingegneria gestionale, LM-28 Ingegneria elettrica, LM-26 Ingegneria della sicurezza, LM-25 Ingegneria dell'automazione, LM-23 Ingegneria civile, LM-24 Ingegneria dei sistemi edilizi, LM-44 Modellistica matematico-fisica per l'ingegneria, LM-18 Informatica, Scienze della Difesa e della Sicurezza (Engineering Technology for Stategy and Security)
Subjects of the interview:
M&S Techniques and Methodologies, Verification Validation and Accreditation, Interoperable simulation for Complex Systems.

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

RESEARCH PROGRAM NO. 35
The assessment criteria for the qualifications and the interview will be affixed on **03.09.2019** at **8:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.09.2019** at **11:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The interview will be held on **03.09.2019** at **14:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 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. Agostino Bruzzone on the phone number +39 3207982138 or via the email address: agostino@itim.unige.it

Scientific coordinator: Prof. Agostino Bruzzone
NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Drones and intelligent autonomous systems operating in industrial plants to control process parameters and improve reliability and efficiency
Description: DRIIM investigates the potential of intelligent autonomous systems (UAVs, UGVs, mobile robots) with special attention to needs and opportunities coming from Iron&Steel industry. It studies the characteristics and functionality when used in monitoring the plant to control process parameters and increase production efficiency. DRIIM supports the reduction of personnel exposure in certain areas or in critical operating conditions. DRIIM focuses on industrial environment with several constraints (e.g. Atex areas, dust, temperatures). DRIIM will propose analysis about operational needs and systems currently available, by verifying their compatibility with the operational scenario and effectiveness for the detection and control of the related industrial processes.
Scientific disciplinary sector: ING-IND/17 IMPIANTI INDUSTRIALI MECCANICI
Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)
Required degree:
Laurea V.O. in Ingegneria navale, Ingegneria meccanica, Ingegneria informatica, Ingegneria industriale, Ingegneria elettronica, Ingegneria elettrica, Ingegneria civile, Informatica, Ingegneria per l'ambiente e il territorio, Ingegneria gestionale, Matematica, Laurea Specialistica delle classi 37/S Ingegneria navale, 36/S Ingegneria meccanica, 35/S Ingegneria informatica, 32/S Ingegneria elettronica, 34/S Ingegneria gestionale, 31/S Ingegneria elettrica, 29/S Ingegneria dell'automazione, 28/S Ingegneria civile, 38/S Ingegneria per l'ambiente e il territorio, 50/S Modellistica matematico-fisica per l'ingegneria, 23/S Informatica, 100/S Tecniche e metodi per la società dell'informazione, Laurea Magistrale delle classi LM-34 Ingegneria navale, LM-33 Ingegneria meccanica, LM-32 Ingegneria informatica, LM-29 Ingegneria elettronica, LM-31 Ingegneria gestionale, LM-28 Ingegneria elettrica, LM-26 Ingegneria della sicurezza, LM-25 Ingegneria dell'automazione, LM-23 Ingegneria civile, LM-24 Ingegneria dei sistemi edilizi, LM-44 Modellistica matematico-fisica per l'ingegneria, LM-18 Informatica, LM/DS Scienze della Difesa e della Sicurezza (Engineering Technology for Stategy and Security)

Subjects of the interview:
M&S Techniques and Methodologies, Verification Validation and Accreditation, Interoperable simulation for Complex Systems.

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

RESEARCH PROGRAM NO. 36

The assessment criteria for the qualifications and the interview will be affixed on **06.09.2019** at **9:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **06.09.2019** at **12:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 15, Genova.

The interview will be held on **06.09.2019** at **14:00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via all'Opera Pia 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.

Scientific coordinator: Prof. Flavio Tonelli

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Study of design and implementation of machine learning tools, in contexts of industrial Internet of Things, for cognitive, reactive and adaptive control of next generation supply chain and factory shop-floor

Description: Thanks to the adoption of the Internet of Things (IoT), it is possible to integrate information from different sources and from different decision levels to improve the ability to manage the life cycle not only of the product but also of the processes. The aim of this research grant is to analyze, study and implement machine learning algorithms on an advanced platform that implements monitoring techniques and cognitive controls both for the supply chain and for the shop floor in manufacturing. The first part of the research plan will include the analysis of traditional techniques by analyzing the evolution of the IoT application scenario. The second part of the research plan will focus on the study and comparison of the various techniques and tools of date.

Scientific disciplinary sector: ING-IND/17 IMPIANTI INDUSTRIALI MECCANICI

Place: Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME)

Required degree:
Laurea V.O. in Ingegneria Meccanica, Ingegneria Gestionale, Ingegneria Informatica, Laurea Specialistica delle classi 36/S Ingegneria meccanica, 34/S Ingegneria gestionale, 35/S Ingegneria Informatica, Laurea Magistrale delle classi LM-31 Ingegneria Gestionale, LM-32 Ingegneria Informatica, LM-33 Ingegneria Meccanica

Subjects of the interview:
Internet of Things, Supply Chain, Production Management, Machine Learning, Cognitive Driven Supply Chain

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

RESEARCH PROGRAM NO. 37

The assessment criteria for the qualifications and the interview will be affixed on **11.09.2019** at **9:30** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via all'Opera Pia 15, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **11.09.2019** at **12:30** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via all'Opera Pia 15, Genova.

The interview will be held on **11.09.2019** at **13:00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via all'Opera Pia 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. Renzo Di Felice via the email address: renzo.difelice@unige.it

Scientific coordinator: Prof. Renzo Di Felice

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Numerical model describing transport phenomena in novel membrane distillation systems, applied to seawater desalination processes.

Description: This research project concerns membrane distillation processes applied to sea water desalination, with particular reference to the development of a modeling and simulation of the process itself, in order to optimize its operation and its application in different contexts and configurations.
Membrane Distillation (MD) is a membrane-based separation process whose driving force is thermodynamic and is mainly used in the treatment of aqueous solutions. The hydrophobic and highly porous membrane separates the feeding solution from the permeate, while the feeding solution is in direct contact with the membrane surface. As a result of the pressure gradient present in the membrane, the volatile compounds of the feeding solution evaporate and the vapor molecules pass through the pores of the membrane from the starting solution to the permeate stream.

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

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

Required degree:
Laurea V.O. in Ingegneria Chimica, Ingegneria per l'Ambiente e il territorio, Chimica Industriale, Laurea Specialistica delle classi della classe 27/S Ingegneria Chimica, 38/S Ingegneria per l'Ambiente e il territorio, 81/S Scienze e tecnologie della chimica industriale, Laurea Magistrale delle classi LM-22 Ingegneria Chimica, LM-71 Scienze e Tecnologie della Chimica Industriale, LM-35 Ingegneria per l'Ambiente e il Territorio

Subjects of the interview:
Transport phenomena in multiphase systems; Membrane processes; Chemical process modeling.

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

RESEARCH PROGRAM NO. 38

The assessment criteria for the qualifications and the interview will be affixed on **25.09.2019** at **13:15** in Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso 31, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 25.09.2019 at **16:15** in Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso 31, Genova.

The interview will be held on **25.09.2019** at **16:20** in Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso 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.ssa Paola Costamagna

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: 'Training on membrane filtration technology, through the development of a research on an innovative plant for the treatment of black and gray water on board ships'

Description: The activity will take place in collaboration with the EXXRO company. The present project proposes an interdisciplinary approach to the treatment of black and gray waters on board ship, and the development of a prototype system based on multi-stage membrane filtration, aiming at separating the solid phase (to be disposed of) from the purified liquid phase (reusable or dischargeable into the sea). Experimental measurements will be performed at EXXRO, which will result from the start-up of two commercial filters already available. In particular, samples will be taken for the measurement of particle size distribution upstream and downstream the filters themselves and over time. The development of a simulation model based on particle size distribution will proceed hand in hand with the development of the prototype plant.
Part of the activity will be carried out in EXXRO, with the possibility of off-site activities.

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, LM-17 Fisica, LM-71 Scienze e Tecnologie della Chimica Industriale

Subjects of the interview:
Membrane filtration. Reverse osmosis. Statistic analysis. Material balances.

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

RESEARCH PROGRAM NO. 39

The assessment criteria for the qualifications and the interview will be affixed on **05.09.2019** at **9:30** in Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso 31, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **05.09.2019** at **12:30** in Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso 31, Genova.

The interview will be held on **05.09.2019** at **12:35** in Dipartimento di Chimica e Chimica Industriale (DCCI), Via Dodecaneso 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.ssa Paola Costamagna

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of an interdisciplinary training course aimed at the study of new prognostic models for application in the energy field, with particular reference to the MSR chemical reactors used for hydrogen production

Description: The activity will take place in collaboration with the IPLOM refinery. The activity will focus on methane steam reforming (MSR) chemical reactors for hydrogen production. Although these reactors implement a consolidated technology, they still present some problems; in particular, carbon deposition. A model of the MSR reactor will be developed; the equations will be integrated using the COMSOL Multiphysics software. The results will be validated on the basis of IPLOM experimental data. At that point the simulation code will be the basis for the development of a prototype diagnostic and prognostic system, devoted to monitoring and to the recognition and predictive detection of reactor malfunctioning, in particular carbon deposition. Part of the research will be carried out in IPLOM, with the possibility of off-site activities.

Scientific disciplinary sector: ING-IND/25 IMPIANTI CHIMICI

Place: Dipartimento di Chimica e Chimica Industriale (DCCI)

Required degree:
Laurea Magistrale della classe LM-22 Ingegneria chimica

Subjects of the interview:
Chemical reactors. Hydrogen. Assessment of the environmental impact of chemical plants. Fault detection and identification (FDI).

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

RESEARCH PROGRAM NO. 40

The assessment criteria for the qualifications and the interview will be affixed on **24.09.2019** at **14:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 11a, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **24.09.2019** at **17:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 11a, Genova.

The interview will be held on **24.09.2019** at **17:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 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.

Scientific coordinator: Prof. Francesco Conte

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: PEC-Microgrid: Energy Planning and Microgrid Control

Description: The current methodologies and software platforms dedicated to the study of optimal sizing of multi-energy districts are mainly based on information relating to costs and power absorption, not taking into consideration aspects related to the issue of reliability and resilience of the integrated system. Consequently, these tools do not provide indications on the reliability of the possible solutions for the realization of the system, defined essentially in terms of the size of the generators and of the equipment in general. The objective of this project is to develop a methodology for the correct sizing and management of micro-grids, to support the reliable and resilient integration of renewable energy sources.

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 della classe LM-28 Ingegneria Elettrica

Subjects of the interview:
Knowledge of analytical tools for the analysis of electrical distribution systems, renewable generation, storage systems and control systems.
Software tools for modeling, simulation and optimization

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

RESEARCH PROGRAM NO. 41

The assessment criteria for the qualifications and the interview will be affixed on **26.09.2019** at **10:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - (bacheca piano 1), Via all'Opera Pia 11a, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **26.09.2019** at **14:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - (bacheca piano 1), Via all'Opera Pia 11a, Genova.

The interview will be held on **26.09.2019** at **15:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - (Laboratorio NICES - piano 1), Via all'Opera Pia 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 (SKYPE video conference call) promptly contacting Prof. Marco Invernizzi on the phone number +39 010 3352184 or via the email address: marco.invernizzi@unige.it

Scientific coordinator: Prof. Marco Invernizzi

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Analysis of the multilevel converters impact into high penetrated renewables energy grids in order to increment the sustainability, the resiience and the flexibility of energy supply.

Description: The research project has two goals:
the former is to develop and design MMC in order to have a full exploitation of large wind power plants through the management of reactive power compensation.
The second goal in to analyse the HVDC performance based on MMC managed in order to increment the resilience of electric systems in geographical islands (especially with high penetration of renewable energies such as Sardinia) and to make the re-start of the power grid easier and faster after backout due to catastrophic events.

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 della classe LM-28 Ingegneria Elettrica

Subjects of the interview:
Electrical power grids, electrical power grid management, renewable energies integration, converters control techniques.

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

RESEARCH PROGRAM NO. 42

The assessment criteria for the qualifications and the interview will be affixed on **26.09.2019** at **9:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 11a, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **26.09.2019** at **12:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 11a, Genova.

The interview will be held on **26.09.2019** at **14:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 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.

Scientific coordinator: Prof. Stefano Massucco

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: AI for Energy Management: Analysis of Methodologies and Implementation of Artificial Intelligence Tools for the Management of Energy Consumption in the Tertiary and Industrial Sectors

Description: This research project is related to the development of skills, methodologies and tools to monitor energy consumption in industrial and tertiary buildings, to identify the state and the operating mode of the users, in order to plan an adequate management strategy aimed at increasing energy efficiency.
The aim of this research project is therefore the development of integrated methods and tools for non-intrusive energy monitoring, forecasting and management of the electrical loads of industrial and tertiary buildings, to reduce energy consumption, management costs and emissions, and for the integration of renewable energy sources and the usage of energy storage.

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-40 Matematica; LM-21 Ingegneria Biomedica; LM-32 Ingegneria Informatica; LM-29 Ingegneria Elettronica.

Subjects of the interview:
Knowledge of analytical tools for energy consumption forecasting and renewable generation. Data mining and Artificial Intelligence. SW tools for modeling, simulation and optimization

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

RESEARCH PROGRAM NO. 43

The assessment criteria for the qualifications and the interview will be affixed on **23.09.2019** at **10:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - (bacheca piano 1), Via all'Opera Pia 11a, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **23.09.2019** at **14:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - (bacheca piano 1), Via all'Opera Pia 11a, Genova.

The interview will be held on **23.09.2019** at **15:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via all'Opera Pia 11A (Laboratorio NICES piano 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. Renato Procopio on the phone number +39 010 3352721 or via the email address: renato.procopio@unige.it

Scientific coordinator: Prof. Renato Procopio

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: PV+Storage&GO

Description: The achievement of a sustainable development requires a full and complete integration of renewable energy sources such as photovoltaic (PV) and wind power plants into the electrical system.
The winner of the call will have to develop an aggregation system of various dispatchable units in order to avoid a fragmented management. The core of the project will be also based on:
1) development of optimization logics for systems consisting of batteries and photovoltaic units;
2) the evaluation of the possible effects and interactions of battery and photovoltaic systems in islanded configuration.
The project will be carried out with the collaboration of Schneider Electric at Cairo Montenotte (SV) and of the DITEN researchers. The project in question will adopt the necessary monitoring tools in order to guarantee the best industrially valid results and therefore the basis for a sustainable economic development of the project itself.

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-30 Ingegneria Energetica e nucleare, LM-35 Ingegneria per l'Ambiente e il territorio, LM-17 Fisica, LM-18 Informatica, LM-32 Ingegneria Informatica, LM-40 Matematica, LM-82 Scienze statistiche

Subjects of the interview:
Power systems control and management, integration of renewable sources, energy management systems, PV production forecasting.

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

RESEARCH PROGRAM NO. 44

The assessment criteria for the qualifications and the interview will be affixed on **04.09.2019** at **9:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - ELIOS Lab, Via Opera Pia 11/A, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **04.09.2019** at **12:30** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via Opera Pia 11/A, Genova.

The interview will be held on **04.09.2019** at **14:00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - ELIOS Lab, 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.

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. Francesco Bellotti on the phone number +39 3939762508 or via the email address: franz@elios.unige.it

Scientific coordinator: Prof. Francesco Bellotti

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Automatic inspection system for transport infrastructures

Description: The project will implement an edge computing system for data acquisition from the field and their automatic classification for predictive maintenance support of transport infrastructures. The system includes a client module, on the edge, and cloud server module. The system, which will interface with the Atmosphere database, provides modules for:• Programmable acquisition of data from the field• Statistical cleaning of data according to measurement theory• Classification by supervised and unsupervised machine learning algorithmsManagement of the breakdown of the edge / cloud workload in order to dynamically optimize the Quality of Service

Scientific disciplinary sector: ING-INF/01 ELETTRONICA

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

Required degree:
Laurea V.O. in ingegneria elettronica, ingegneria delle telecomunicazioni, ingegneria informatica, informatica, Laurea Specialistica delle classi 32/S Ingegneria Elettronica, 29/S Ingegneria dell'Automazione, 30/S Ingegneria delle Telecomunicazioni, 35/S Ingegneria Informatica, 23/S Informatica, Laurea Magistrale delle classi LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica, LM-27 Ingegneria delle Telecomunicazioni, LM-25 Ingegneria dell'Automazione, LM-18 Informatica

Subjects of the interview:
Architectures for data management in edge computing; Machine learning algorithms; Use of microcontrollers for processing signals from the field

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

RESEARCH PROGRAM NO. 45

Scientific coordinator: Prof.ssa Silvana Dellepiane

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of AI algorithms on IoT platform for home rehabilitation.

Description: The proposal, named REHAB.AI, is drafted by the NUMIP laboratory of the Department of Naval, Electrical, Electronics and Telecommunications Engineering (DITEN) of the Faculty of Engineering of the University of Genoa in collaboration with Knowhedge S.r.l. within the topics and areas of specialization related to life sciences, accessibility, active aging in a smart city / smart society context.
The REHAB.AI project involves the study of innovative methodologies for the implementation of an active aging support system based on technologies such as IoT, AI and machine-learning applied to the patient home assistant and monitoring of his health status, of daily activities and specific therapeutic plans (eg rehabilitation) through implementations on the hardware platform at the patient's home to be rehabilitated with AI algorithms operating locally (edge computing).

Scientific disciplinary sector: ING-INF/03 TELECOMUNICAZIONI

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

Required degree:
Laurea V.O. in Informatica, Ingegneria Biomedica, Ingegneria della Telecomunicazioni, Ingegneria Elettronica, Ingegneria Informatica, Matematica, Fisica, Laurea Specialistica delle classi 23/S Informatica, 26/S Ingegneria Biomedica, 30/S Ingegneria delle Telecomunicazioni, 32/S Ingegneria Elettronica, 35/S Ingegneria Informatica, 45/S Matematica, 20/S Fisica, 50/S Modellistica Matematico-Fisica per l'Ingegneria, 100/S Tecniche e Metodi per la Società dell'Informazione Laurea Magistrale delle classi LM-17 Fisica, LM-18 Informatica, LM-21 Ingegneria Biomedica, LM-27 Ingegneria delle Telecomunicazioni, LM-29 Ingegneria Elettronica, LM-32 Ingegneria Informatica, LM-40 Matematica, LM-44 Modellistica Matematico-Fisica per l'Ingegneria, LM-66 Sicurezza Informatica, LM-91 Tecniche e Metodi per la Società dell'Informazione

Subjects of the interview:
Machine-learning techniques, serious-games for rehabilitation/health, signal processing, software development.

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

RESEARCH PROGRAM NO. 46

The assessment criteria for the qualifications and the interview will be affixed on **17.09.2019** at **9:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **17.09.2019** at **12:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, Genova.

The interview will be held on **17.09.2019** at **14:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, 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 Michela Robba on the phone number +39 3805105692 or via the email address: michela.robba@unige.it

Scientific coordinator: Prof.ssa Michela Robba

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 48.394,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Definition and implementation of models, methods and technologies for the management of electric vehicles and charging infrastructures

Description: The activity will be focused on different complementary issues regarding the planning and management of charging infrastructures, the scheduling of electric vehicles (EVs) in smart grids characterized by renewables and storage systems, and the routing of EVs for the transportation of goods, waste and people. Specific attention will be devoted to the development of methods and models for the optimization of the schedule of EVs and charging stations' power management.

Scientific disciplinary sector: ING-INF/04 AUTOMATICA

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

Required degree:
Laurea V.O. in Ingegneria elettrica, Ingegneria nucleare, Ingegneria informatica, Laurea Specialistica delle classi 31/S Ingegneria Elettrica, 35/S Ingegneria Informatica, 33/S Ingegneria Energetica e Nucleare, Laurea Magistrale delle classi LM-28 Ingegneria Elettrica, LM-32 Ingegneria Informatica, LM-30 Ingegneria Energetica e Nucleare.

Subjects of the interview:
Optimization, simulation, models' identification, smart grid and microgrid, adaptive observer, batteries.

RESEARCH PROGRAM NO. 47

The assessment criteria for the qualifications and the interview will be affixed on **06.09.2019** at **9:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **06.09.2019** at **13:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, Genova.

The interview will be held on **06.09.2019** at **16:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, 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. Fulvio Mastrogiovanni

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Development of an innovative smart assistant for professionals based on IoT, AI on chip and blockchain technologies

Description: The work aims at introducing a new-generation smart assistant to support professional activities in various sectors. The research to carry out will be focused on the design and development of an HW/SW solution aimed at been deployed in business environments and based on: (i) the acquisition and organisation of data relevant for carrying out a specific activity (first computational level); (ii) an HW platform equipped with an AI-enabled chipset, intelligent and personalised algorithms integrated in an operational activity model at different levels (second computational level); (iii) a trusted/secure environment for the exchange and management of information/data and algorithms; (iv) the integration in an environment based on distributed and decentralized networks (using blockchain technologies) to enable a proper security level associated with transactions of algorithms and critical data among the involved professionals.

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 Magistrale della classe LM 32 Ingegneria Informatica.

Subjects of the interview:
Distributed and decentralised architectures, machine learning, knowledge representation systems.

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

RESEARCH PROGRAM NO. 48

The assessment criteria for the qualifications and the interview will be affixed on **06.09.2019** at **9:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Viale Francesco Causa 13, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **06.09.2019** at **12:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Viale Francesco Causa 13, Genova.

The interview will be held on **06.09.2019** at **14:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Viale Francesco Causa 13, 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. Alessio Merlo on the phone number +39 366 6060 815 or via the email address: alessio.merlo@unige.it

Scientific coordinator: Prof. Alessio Merlo

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 47.574,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: HealthChain

Description: The project aims to apply innovative and advanced technologies of Information and Communication Technology in the health field. In particular, a system based on Blockchain technology will be implemented for the management and storage through a distributed system of oncological information between different hospital entities. This technology guarantees scalability of the system and greater security of the data managed, as the data will be managed access, and in addition the data will be encrypted to manage the privacy of patients, but also simplifies the sharing of information, with the possibility of access to data also in off-line mode for the various bodies involved.

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 Informatica, Ingegneria Informatica, Ingegneria Elettronica, Ingegneria delle Telecomunicazioni, Ingegneria Biomedica, Laurea Specialistica delle classi 23/S Informatica, 35/S Ingegneria Informatica, 30/S Ingegneria delle Telecomunicazioni, 32/S Ingegneria elettronica, 26/S Ingegneria Biomedica. Laurea Magistrale delle classi LM-18 Informatica, LM-32 Ingegneria Informatica, LM-29 Ingegneria Elettronica, LM-27 Ingegneria delle Telecomunicazioni, LM-21 Ingegneria Biomedica.

Subjects of the interview:
● Computer Science
● Blockchain Technologies

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

RESEARCH PROGRAM NO. 49

The assessment criteria for the qualifications and the interview will be affixed on **27.09.2019** at **10:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via dell'Opera Pia 13, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **27.09.2019** at **14:30** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via dell'Opera Pia 13, Genova

The interview will be held on **27.09.2019** at **15:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via dell'Opera Pia 13, 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 Maura Casadio on the phone number +39 3474419095 or via the email address: maura.casadio@unige.it

Scientific coordinator: Prof.ssa Maura Casadio

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Personalised telematic system for assistance, monitoring and treatment of neuromotor disabilities in a domestic environments

Description: The final objective of this project is the development and experimental validation of a Personalized Guidance System (PGS) for monitoring, assisting and providing rehabilitative treatment of people with neurological diseases or injuries in the home environment. The system will be supported by an infrastructure of network for remote interaction between the users and health personnel (doctors, physiotherapists).
The PGS will

1. valuate the residual motor skills of the users and identify the degrees of freedom that they can control with greater skill
2. adapt this control space to the user's evolving capabilities by exploiting the machine learning algorithms;
3. gradually challenge the user to involve silent or weak degrees of freedom to achieve rehabilitation goals.

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

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

Required degree:
Laurea V.O. in Ingegneria biomedica, Informatica, Scienze dell'informazione, Ingegneria elettronica, Ingegneria Informatica, Ingegneria delle telecomunicazioni, Fisica, Matematica, Laurea Specialistica, delle classi 26/S Ingegneria biomedica, 30/S Ingegneria delle telecomunicazioni, 32/S Ingegneria elettronica, 35/S Ingegneria informatica, 23/S Informatica, 20/S Fisica, 45/S Matematica, Laurea Magistrale delle classi LM-21 Ingegneria biomedica, LM-27 Ingegneria delle telecomunicazioni, LM-26 Ingegneria della sicurezza, LM-29 Ingegneria elettronica, LM-18 Ing. Informatica/ Computer science, LM-17 Fisica, LM-40 Matematica, LM-32 ingegneria Informatica, LM-25 Ingegneria dell'Automazione, LM-92 Teorie delle Telecomunicazioni. LM-32 Ingegneria Informatica (ROBOTICS ENGINEERING)

Subjects of the interview:
Technologies for assistance and rehabilitation. Analysis of data and biomedical signals. Basic concepts in medical informatics, methods for organising and processing health data.

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

RESEARCH PROGRAM NO. 50

The assessment criteria for the qualifications and the interview will be affixed on **03.10.2019** at **9:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via dell'Opera Pia 13, Genova.

The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on **03.10.2019** at **12:00** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via dell'Opera Pia 13, Genova

The interview will be held on **03.10.2019** at **12:30** in Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Via dell'Opera Pia 13, 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. Paolo Massobrio on the phone number +39 3552761 or via the email address: paolo.massobrio@unige.it

Scientific coordinator: Prof. Paolo Massobrio

NO. 1 research fellowship - Duration 2 years – Biennial pre-tax amount: € 49.130,00

Exclusive destination of the research fellowship to candidates who are 29th years old or below that age at the date of 15.6.2018 (publication notice of public date n. 422 of 13.6.2018 of Regione Liguria)

Title: Interconnected neuronal networks coupled to high density microtransducers - NEUROCHIP

Description: The brain is a complex system whose electrical activity derives from the activation of interconnected neuronal groups. Such a functionality will be demonstrated by recreating in vitro an experimental framework consisting of interconnected neuronal networks coupled to microelectrode arrays with 4096 microelectrodes (3Brain) to study network dynamics. At the end of the project, the developed experimental set-up will be used to recreate "interconnected brain regions on a chip", i.e. a co-culture in which neurons extracted from different regions define a complex heterogeneous structure. This system will be established through the use of cortico-thalamic-striatal neurons which are the main brain regions involved in Parkinson's disease.

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-32 Ingegneria Informatica, LM21 Ingegneria Biomedica, LM-18 Informatica, LM-17 Fisica, LM-44 Modellistica Matematico-Fisica per l'Ingegneria

Subjects of the interview:
Multichannels acquisition systems; software tools for data analysis; techniques for micro-electrode array compartmentalization; patterning

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