

<b>SCIENTIFIC DISCIPLINARY AREA: MATHEMATICS AND INFORMATICS</b>
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**RESEARCH PROGRAM NO. 1**

**The assessment criteria for the qualifications and the interview will be affixed on 22.12.2016 at ~~10.00~~ 8.30\*** in Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi (DIBRIS), Viale F. Causa 13, 16145 Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 22.12.2016 at ~~13.00~~ 11.30\*** in Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi (DIBRIS), Viale F. Causa 13, 16145 Genova.

**The interview will be held on 22.12.2016 at ~~14.00~~ 12.00\*** in Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi (DIBRIS), Viale F. Causa 13, 16145 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. Enrico PUPPO

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

**Title:** Scale-space techniques for the analysis of motion capture data.

**Description:** The activity includes the study, the design and implementation of scale-space analysis techniques and their application to data from motion capture. Such data consist of bundles of trajectories, describing motion of marks applied on the body of human bodies in motion, as acquired from a motion capture setup. Problems tackled in the project, on the basis of such techniques, can include: analysis of intra-personal synchronization during motion; segmentation of motion sequences into base-movements; inter-personal registration of corresponding movements executed in different times by different subjects; qualitative analysis of motion according to predefined Movement Principles.

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

**Place** Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi (DIBRIS)

**Required degree:**

Laurea V.O. in Informatica

Laurea Specialistica della classe 23/S Informatica

Laurea Magistrale della classe LM-18 Informatica

**Subjects of the interview:**

Scale-space techniques for signal analysis; problems of segmentation, registration and synchronization of data from motion capture.

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

\* *Timetable modified with Rectorale Decree n. 4251 dated 9.12.2016*

**RESEARCH PROGRAM NO. 2**

**The assessment criteria for the qualifications and the interview will be affixed** on **22.12.2016** at **9.00** in Dipartimento di Fisica (DIFI), Via Dodecaneso 33 – Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed** on **22.12.2016** at **12.30** in Dipartimento di Fisica (DIFI), Via Dodecaneso 33 – Genova.

**The interview will be held** on **22.12.2016** at **15.00** in Dipartimento di Fisica (DIFI), Via Dodecaneso 33 – Genova.

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

**Scientific coordinator:** Prof. Paolo PRATI

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

**Title:** Nuclear Astrophysics, The LUNA experiment.

**Description:** The project is linked to the construction at the Gran Sasso National Laboratory (LNGS) of a facility unique in the world, focused on an accelerator of light ions with a maximum terminal voltage of 3.5 MV and equipped with two measuring points to perform experiments with both solid and gas targets. In the very low background conditions of LNGS it will be possible to study, with sensitivity never reached before, nuclear processes fundamental in astrophysics. The LNGS already hosts the only ion accelerator in the world located deep underground. It is a machine with a maximum voltage of 0.4 MV terminal that has allowed to measure some very important processes in physics of the sun and brought LNGS and Italian physics to achieve leadership in the field ([http:// silvermoon. lngs.infn.it/](http://silvermoon.lngs.infn.it/)). At the moment a new project is ongoing and it will reinforce this leadership, equipping LNGS with an instrumental structure that will set the reference of nuclear astrophysics for the next twenty - thirty years.

**Scientific disciplinary sector:** FIS/04 NUCLEAR AND SUBNUCLEAR PHYSICS

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

**Required degree:**

Laurea V.O. in Fisica

Laurea Specialistica della classe 20/S Fisica

Laurea Magistrale della classe LM-17 Fisica

**Subjects of the interview:**

Nuclear astrophysics, gamma spectrometry, low energy ion accelerators, Monte Carlo simulation method, direct measurements of cross sections.

**RESEARCH PROGRAM NO. 3**

**The assessment criteria for the qualifications and the interview will be affixed on 22.12.2016 at 9.00** in Dipartimento di Farmacia (DIFAR), Viale Cembrano, 4 – Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 22.12.2016 at 12.00** in Dipartimento di Farmacia (DIFAR), Viale Cembrano, 4 – Genova.

**The interview will be held on 22.12.2016 at 12.30** in Dipartimento di Farmacia (DIFAR), Viale Cembrano, 4 – 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 OLIVERI

**NO.1 research fellowship - Duration: 18 months– Annual pre-tax amount: € 19.367,00**

**Title:** How to improve food safety and authentication: new analytical strategies in near infrared spectroscopy and hyperspectral imaging.

**Description:** The project is focused on the development and optimisation of state-of-the-art analytical methodologies aimed at performing safety and authenticity controls in food products of different nature. Innovative analytical technologies – such as temperature-resolved near infrared spectroscopy (NIRS) and hyperspectral imaging (HSI) will be exploited. In particular, efforts will be devoted at improving current limitations of these technologies, including the limit of detection.

A fundamental part of the project involves the development and application of advanced strategies for the multivariate chemometric processing of analytical data, with a special attention on signal pre-processing, class modelling and model validation.

**Scientific disciplinary sector:** CHIM/01 ANALYTICAL CHEMISTRY

**Place:** Dipartimento di Farmacia (DIFAR)

**Required degree:**

Dottorato di ricerca in Innovazione Tecnologica per le Scienze Agro-Alimentari e Ambientali o Scienze e Tecnologie della Chimica e dei Materiali

**Subjects of the interview:**

Near infrared spectroscopy (NIRS); Hyperspectral imaging techniques (HSI); chemometric methods for the processing of spectral and hyperspectral signals; analytical strategies for food authenticity, safety and shelf-life studies.

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 21.12.2016 at 10.00** in Dipartimento di Farmacia (DIFAR), sezione di San Martino, Viale Benedetto XV, 3 - Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 14.00** in Dipartimento di Farmacia (DIFAR), sezione di San Martino, Viale Benedetto XV, 3 - Genova

**The interview will be held on 22.12.2016 at 10.00** in Dipartimento di Farmacia (DIFAR), sezione di San Martino, Viale Benedetto XV, 3 - Genova

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

**Scientific coordinator:** Prof.ssa Chiara BRULLO

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

**Title:** Design and synthesis of new pyrazole and imidazo-pyrazole derivatives with potential anti-tuberculosis activity.

**Description:** Tuberculosis (TB) is an infectious pulmonary pathology responsible for significant mortality worldwide. The actual multicomponent treatment is characterized by a high risk of multidrug-resistance. Thus, many researchers are intensively searching for new anti-TB agents. Different high-throughput screening campaigns revealed new promising compounds able to block TB progression; some of them showed great structural similarity with our previous anti-inflammatory agents [Bruno et al. *BMCL*, 2007; Brullo et al. *Eur. J. Med. Chem.* 2012]. The analyses of our little library derivatives shown good *Mycobacterium t.* inhibition. Aim of this project is the synthesis of new derivatives similar to previous active compounds to obtain more potent molecules and able to overcome resistance obstacles.

**Scientific disciplinary sector:** CHIM/08 PHARMACEUTICAL CHEMISTRY

**Place:** Dipartimento di Farmacia (DIFAR)

**Required degree:**

Laurea Specialistica della classe 14/S Farmacia e farmacia industriale

**Subjects of the interview:**

Antituberculosis drugs and problems related to the onset of drug resistance.

Drug design and synthesis of heterocyclic molecules, in detail pyrazole derivatives.

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 **21.12.2016** at **09.30** in Laboratorio di Ecologia del Benthos, Polo Didattico San Martino, primo piano, Via Benedetto XV 5, Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed** on **21.12.2016** at **12.30** in Laboratorio di Ecologia del Benthos, Polo Didattico San Martino, primo piano, Via Benedetto XV 5, Genova.

**The interview will be held** on **21.12.2016** at **14.00** in Laboratorio di Ecologia del Benthos, Polo Didattico San Martino, primo piano, Via Benedetto XV 5, Genova.

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

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

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

**Title:** Re-establishment of the Ribbed Limpet (*Patella ferruginea*) in Ligurian MPAs.

**Description:** *Patella ferruginea*, an endemic gastropod mollusc from the Western Mediterranean, is one of the most endangered invertebrates of the entire basin and is included in the lists of protected species, besides being considered a target species for assessing good marine environmental status. This species, historically found along all Ligurian coasts, has presently disappeared due to indiscriminate collection. This project aims to restore the population of *P. ferruginea* within the three Ligurian Marine Protected Areas, where the causes of extinction have been eliminated and adequate protection is ensured, through direct transfer of adults from Tavolara MPA and introduction of juveniles obtained by controlled reproduction in the laboratory.

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

**Place:** Dipartimento di Scienze della terra, dell'ambiente e della vita (DISTAV)

**Required degree:**

Dottorato di ricerca in Scienze ambientali (Scienza del mare)

**Subjects of the interview:**

Fundamentals of marine ecology and benthic ecology; sampling techniques; reproduction techniques of marine invertebrate in a controlled environment; analysis of ecological data, European Directives concerning protected species and Marine Strategy.

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

## **RESEARCH PROGRAM NO. 6**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 11.00** in Dipartimento di Scienze della terra, dell'ambiente e della vita (DISTAV), 5° piano Palazzo delle Scienze, 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 21.12.2016 at 15.30** in Dipartimento di Scienze della terra, dell'ambiente e della vita (DISTAV), 5° piano Palazzo delle Scienze, Corso Europa 26, Genova

**The interview will be held on 21.12.2016 at 16.00** in Dipartimento di Scienze della terra, dell'ambiente e della vita (DISTAV), 5° piano Palazzo delle Scienze, 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. Carla PRUZZO

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

**Title:** Molecular basis of interactions occurring between pathogenic vibrios and bivalve hemolymph.

**Description:** This project aims at clarifying, at least in part, molecular mechanisms responsible for the capacity of some vibrios to cause mortality in shellfish aquaculture. Persistence of bacteria inside bivalves and expression of the pathogenic potential largely depend upon the capability to survive to the antibacterial activity of cellular and soluble components of hemolymph. In *M. galloprovincialis* (Mg), an important role in defense from the pathogen *V. aestuarianus* (Va) is played by an opsonin (MgEP) that promotes phagocytosis and killing of these bacteria by hemocytes. The objectives of this project are: (i) to study the role of MgEP in mediating killing of pathogenic vibrios different from Va; (ii) to study the presence of MgEP-like opsonins in bivalves different from Mg; (iii) to study MgEP capability to promote killing of pathogenic vibrios by hemolymph of bivalves that lack it and evaluating MgEP possible use in aquaculture.

**Scientific disciplinary sector:** BIO/19 GENERAL MICROBIOLOGY

**Place:** Dipartimento di Scienze della terra, dell'ambiente e della vita (DISTAV)

**Required degree:**

Laurea V.O. in Scienze Biologiche

Laurea Specialistica della classe 6/S ( Biologia)

Laurea Magistrale della classe LM-6 Biologia

**Subjects of the interview:**

Biology and ecology of marine bacteria. Microorganisms pathogenic for bivalves and virulence factors. Diseases affecting bivalves in aquaculture plants. Isolation, cultivation, identification and typing of bacteria (culture dependent and molecular methods also based on “next generation sequencing”). Methods to analyze interactions between bacteria and bivalve cells and to study sensitivity to antibacterial activity of activity bivalve hemolymph. Protein separation, purification and analysis.

**RESEARCH PROGRAM NO. 7**

**The assessment criteria for the qualifications and the interview will be affixed** on **21.12.2016** at **9.00** in Dipartimento di Scienze della salute (DISSAL) Via Pastore, 1 – Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed** on **21.12.2016** at **14.00** in Dipartimento di Scienze della salute (DISSAL) Via Pastore, 1 – Genova

**The interview will be held** on **21.12.2016** at **15.00** in Dipartimento di Scienze della salute (DISSAL) Via Pastore, 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. Maria Pia SORMANI

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

**Title:** Measuring disability in progressive Multiple Sclerosis by an engineered glove: an italian multicenter prospective study.

**Description:** The objective of the project is to assess the ability to detect changes of the upper limb disability, in one year, in progressive MS patients, using a new quantitative measurement instrument, which is an engineered glove. The glove measures the parameters of the performance of the dominant hand during a sequence of opposition movements between thumb and other fingers (index, ring and pinkie, as speed of sequence, average duration of touch, time between two touches, and number of right or wrong sequences). It's an observational, multicentre, prospective study involving 20 Italian clinical centres and 200 progressive MS patients during 12 months, measuring with glove and clinical measurements. The associate researcher will be the trial manager of the study, with data collection tasks, quality controls, monitoring and collected data analysis.

**Scientific disciplinary sector:** MED/01 MEDICAL STATISTICS

**Place:** Dipartimento di Scienze della salute (DISSAL)

**Required degree:**

Laurea V.O. in Lingue e Letterature Straniere

Laurea V.O. in Statistica

Laurea Specialistica della classe 43/S (Lingue straniere per la comunicazione internazionale)

Laurea Specialistica della classe 92/S (Statistica per la ricerca sperimentale)

Laurea Specialistica della classe 48/S (Metodi per l'analisi valutativa dei sistemi complessi)

Laurea Magistrale della classe LM-38 (Lingue moderne per la comunicazione e la cooperazione)

Laurea Magistrale della classe LM-82 (Scienze statistiche)

**Subjects of the interview:**

Experience in the field of clinical research. Experience in the field of multiple sclerosis. Knowledge of database management. Knowledge of SPSS.

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 21.12.2016 at 9.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Viale Benedetto XV n.6, Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 12.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Viale Benedetto XV n.6, Genova.

**The interview will be held on 21.12.2016 at 12.15** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Viale Benedetto XV n.6, Genova.

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

**Scientific coordinator:** Prof. Alberto BALLESTRERO

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

**Title:** IT management according to Good Clinical Practice, project management and coordination of clinical and pre-clinical studies in the field of onco-haematological clinical trials in patients with breast cancer and colorectal cancer enrolled in clinical-translational research programs.

**Description:** Coordination and IT management of a spontaneous phase II, prospective, single-arm, multicenter, clinical trial in patients with locally advanced rectal adenocarcinoma (cT3-4 and / or N +), operable. Database compilation with prospective collection of clinical and pathological data of patients with breast cancer and colorectal cancer in early and / or advanced stages, followed at our center. Retrospective update of clinical and pathological data of the cohort of patients with a history of breast and colorectal cancer, in order to schedule clinical studies and / or clinical-translational research programs.

**Scientific disciplinary sector:** MED/09 INTERNAL MEDICINE

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

### **Required degree:**

Laurea V.O in Biotecnologie indirizzo Biotecnologie farmaceutiche

Laurea V.O in Chimica e tecnologie farmaceutiche

Laurea V.O Scienze Biologiche

Laurea Specialistica della classe 9/S (Biotecnologie mediche, veterinarie e farmaceutiche)

Laurea Specialistica della classe 14/S (Farmacia e farmacia industriale)

Laurea Specialistica della classe 6/S (Biologia)

Laurea Magistrale della classe LM-9 (Biotecnologie mediche, veterinarie e farmaceutiche)

Laurea Magistrale della classe LM-13 (Farmacia e farmacia industriale)

Laurea Magistrale della classe LM-6 (Biologia).

### **Subjects of the interview:**

- Knowledge of methodology of clinical trials, Good Clinical Practice, monitoring of clinical trials and data management.

-Knowledge of molecular biology: extraction of nucleic acids from human tissue, Real-Time PCR, Sanger sequencing, next generation sequencing (NGS).

-Personal attitude to scientific research

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 1.2.2017 at 9.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Viale Benedetto XV n.6, Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 1.2.2017 at 12.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Viale Benedetto XV n.6, Genova.

**The interview will be held on 1.2.2017 at 12.30** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Viale Benedetto XV n.6, Genova.

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

**Scientific coordinator:** Prof. Alessio NENCIONI

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

**Title:** Validation of Nampt (nicotinamide phosphoribosyltransferase) as a target in cancer treatment.

**Description:** The successful candidate will apply to the annotation of the anticancer properties of an anti-Nampt antibody and of Nampt inhibitors.

**Scientific disciplinary sector:** MED/09 INTERNAL MEDICINE

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

**Required degree:**

Dottorato di ricerca in Biotecnologie

**Subjects of the interview:**

NAD<sup>+</sup> biosynthesis, epithelial-to-mesenchymal transition, biological roles of secreted Nampt.

## **RESEARCH PROGRAM NO. 10**

**The assessment criteria for the qualifications and the interview will be affixed on 22.12.2016 at 9.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), 1° piano, Amministrazione, Viale Benedetto XV, 6 - Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 22.12.2016 at 12.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), 1° piano, Amministrazione, Viale Benedetto XV, 6 - Genova.

**The interview will be held on 22.12.2016 at 15.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), 1° piano, Amministrazione, Viale Benedetto XV, 6 - Genova.

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

**Scientific coordinator:** Prof. Giovanni PASSALACQUA

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

**Title:** Analysis of inflammatory and immunological aspects of nasal polyposis in the light of new treatments with biologics.

**Description:** Nasal Polyposis is a chronic inflammatory process that affect nasal cavity mucosa. It is often associated to comorbidities such as bronchial asthma and allergy. The experimental project will use cyto-histological and bio-molecular techniques in order to study the immunological and protein profile of polypoid tissue from patients treated with different biologics.

**Scientific disciplinary sector:** MED/10 RESPIRATORY DISEASES

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

**Required degree:**

Dottorato di Ricerca in: Medicina Interna, Autoimmunità e Malattie dell'Apparato Digerente

**Subjects of the interview:**

Cytological, histological and molecular laboratory techniques.

Image analysis in optical microscopy

Acquisition, management and analysis of experimental data.

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 22.12.2016 at 9.30** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), 1° piano, Amministrazione, Viale Benedetto XV, 6 - Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 22.12.2016 at 12.30** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), 1° piano, Amministrazione, Viale Benedetto XV, 6 - Genova

**The interview will be held on 22.12.2016 at 12.45** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), 1° piano, Amministrazione, Viale Benedetto XV, 6 - Genova

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

**Scientific coordinator:** Prof. Antonio PICCIOTTO

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

**Title:** Chronic kidney disease incidence in liver transplanted patients treated with tacrolimus or ciclosporin.

**Description:** Immunosuppression of liver transplanted patients is based on tacrolimus or ciclosporin. These drugs induce renal toxicity, expressed with acute or chronic damage, by mean of vasoconstriction. Aim of the study is to evaluate, retrospectively, liver transplanted patients on immunosuppressive therapy with tacrolimus or ciclosporin these endpoints:

1. Evaluation of patient clinical characteristics;
2. Incidence of CKD at 6 months and at 1, 3, 5 years post a LT;
3. Comparison of CKD incidence related to eGFR respectively calculated by CKD-EPI and MDRD.

**Scientific disciplinary sector:** MED/12 GASTROENTEROLOGY

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

**Required degree:**

Laurea V.O. in Medicina e Chirurgia

Laurea Specialistica della classe 46/S (Medicina e chirurgia)

Laurea Magistrale della classe LM-41 (Medicina e chirurgia)

**Subjects of the interview:**

Side effects of calcineurin inhibitors

Evaluation of renal function in liver transplanted patients

## **RESEARCH PROGRAM NO. 12**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 9.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Amministrazione, Viale Benedetto XV, 6 - Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 12.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Amministrazione, Viale Benedetto XV, 6 - Genova.

**The interview will be held on 21.12.2016 at 13.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Amministrazione, Viale Benedetto XV, 6 - Genova.

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

**Scientific coordinator:** Prof. Diego FERONE

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

**Title:** IGF-I and ALS secretion in systemic lupus erythematosus and systemic sclerosis.

**Description:** Different rheumatic and musculoskeletal disorders, including osteoarthritis (OA), rheumatoid arthritis (RA), as well as fibromyalgia are characterized by elevated circulating GH levels. Furthermore, reduced somatostatin levels seem to be strongly associated with joint inflammation (as seen in RA), as well as in elderly patients with the inflammatory complications of knee OA. Previous studies have also suggested that alterations in this hypothalamic/pituitary axis may contribute to systemic lupus erythematosus (SLE) progression. Similarly, IGF-I is reported involved in the development of systemic sclerosis (SS). The aim of the study is to measure inflammatory markers (ESR, CRP), renal function and 25OH vitamin D, in addition to the levels of IGF-I, IGFBP3 and ALS to evaluate the influence of these hormones on the activity of the disease, in age comparable patients affected by SS and SLE.

**Scientific disciplinary sector:** MED/13 ENDOCRINOLOGY

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

**Required degree:**

Diploma di Specializzazione in Endocrinologia e Malattie del Ricambio con adeguata produzione scientifica derivante da trial clinici, interventi a convegni nazionali ed internazionali e lavori pubblicati su riviste impattate.

**Subjects of the interview:**

Pituitary secretion and hormonal regulation, GH-IGF-I system, hormonal replacement therapy, LES, Scleroderma, modulation of immune system by hormones.

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 **21.12.2016** at **9.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Amministrazione, Viale Benedetto XV, 6 - Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed** on **21.12.2016** at **12.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Amministrazione, Viale Benedetto XV, 6 - Genova.

**The interview will be held** on **21.12.2016** at **14.00** in Dipartimento di Medicina Interna e Specialità Mediche (DIMI), Amministrazione, Viale Benedetto XV, 6 - Genova.

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

**Scientific coordinator:** Prof. Maurizio CUTOLO

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

**Title:** "Image fusion" in the study of pathophysiology and clinical follow-up of Rheumatic Diseases.

**Description:** The aim of the project is to integrate capillaroscopy, laser-doppler, ultrasound, DXA and MR for the early non invasive detection, of Rheumatic Diseases ("Image Fusion"). Currently the Division of Rheumatology of Di.M.I. converge the CROPO University (Centre for Research on Osteoporosis and Osteo-Articular disorders), the Center of Excellence on Systemic Sclerosis and Rare Diseases (recognized by the Ministry of Health), the Centre of the European Society of Rheumatology (EULAR) for the Training and Research in the field of imaging of the rheumatic diseases (EULAR "Imaging Network"). The project of "Image Fusion", already in place, requires the support of an expert in image processing (collection, analysis and processing) working with dedicated software.

**Scientific disciplinary sector:** MED/16 RHEUMATOLOGY

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

**Required degree:**

Laurea Magistrale della classe LM-4 (Architettura e ingegneria edile - architettura)

**Subjects of the interview:**

Knowledge and use of non-invasive techniques in Rheumatic Diseases and operating modules of "Image Fusion" for the optimization of their early diagnosis.

Practical use of: Videocap programs 3.0 (Capillaroscopy), Pim Soft (LASCA, LDF, statistical processing and data base management quantization), Esaote MyLabOne (Ecografia), Encore Software GE Healthcare version 16 (DXA).

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 21.12.2016 at 9.00** in Dipartimento di Neuroscienze, Riabilitazione, Oftalmologia, Genetica e Scienze Materno Infantili (DINOEMI) – Clinica Neurologica, Largo Daneo 3 (ex Via De Toni 5), Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 13.00** in Dipartimento di Neuroscienze, Riabilitazione, Oftalmologia, Genetica e Scienze Materno Infantili (DINOEMI) – Clinica Neurologica, Largo Daneo 3 (ex Via De Toni 5), Genova

**The interview will be held on 22.12.2016 at 11.00** in Dipartimento di Neuroscienze, Riabilitazione, Oftalmologia, Genetica e Scienze Materno Infantili (DINOEMI) – Clinica Neurologica, Largo Daneo 3 (ex Via De Toni 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. Giovanni ABBRUZZESE

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

**Title:** Observational study aimed to create a National registry to better understand the illness and to improve the care of PD patients.

**Description:** The purpose of this project is to create a National Registry to collect data on individuals with PD throughout an observational study. The data collected will be used by clinicians and researchers to better understand the illness and to improve the care of PD patients. The National Registry will contain demographic data, information about the patient's Parkinson's disease and other comorbid illness, patient assessments of PD related physical, emotional and cognitive disability and clinician tests of mobility, memory and cognition. It will also include data on the burden of the disease on caregivers. The tests and questionnaire instruments are currently in regular use in clinical practice. The intent of the registry is not to evaluate the instruments themselves but to collect essential data from previously validated tools.

**Scientific disciplinary sector:** MED/26 NEUROLOGY

**Place:** Dipartimento di Neuroscienze, Riabilitazione Oftalmologia, Genetica e Scienze Materno Infantili (DiNOEMI)

**Required degree:**

Titolo di Specializzazione Medica in Neurologia con adeguata produzione scientifica derivante da formazione didattica specialistica post-laurea sui disturbi e il trattamento farmacologico della malattia di Parkinson.

**Subjects of the interview:**

Diagnosis, prognosis, pharmacological treatments of Parkinson's disease and its relationship with patients and caregivers quality of life. National and international guideline on Parkinson's disease.

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 21.12.2016 at 8.30** in Biblioteca della Clinica Neurologica del Dipartimento di Neuroscienze, riabilitazione, oftalmologia, genetica e scienze materno-infantili (DINOEMI) – Largo Paolo Daneo, 3 - Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 11.30** in Biblioteca della Clinica Neurologica del Dipartimento di Neuroscienze, riabilitazione, oftalmologia, genetica e scienze materno-infantili (DINOEMI) – Largo Paolo Daneo, 3 – Genova

**The interview will be held on 21.12.2016 at 13.00** in Biblioteca della Clinica Neurologica del Dipartimento di Neuroscienze, riabilitazione, oftalmologia, genetica e scienze materno-infantili (DINOEMI) – Largo Paolo Daneo, 3 – Genova

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

**Scientific coordinator:** Prof. Matilde INGLESE

**NO.1 research fellowship - Duration: 1 year – Annual pre-tax amount: € 31.015,00**

**Title:** The Multiple Sclerosis Connectome: Conventional and novel MRI approaches.

**Description:** The characterization of the structural and functional features of human brain complex networks has the potential to improve our understanding of the mechanisms leading to irreversible clinical disability and cognitive impairment in patients with multiple sclerosis (MS), an inflammatory/demyelinating and neurodegenerative disease of the central nervous system. Among the available MRI techniques, diffusion weighted imaging (DWI) and functional MRI (fMRI) allow the mapping of the principal structural and functional connections of the brain.

The project aims are:

- a) To define how MS modify the brain structural connectome using both traditional diffusion tensor imaging (DTI) methods and novel, high b-values, multi-shells DWI approaches.
- b) To assess the clinical impact of structural and functional network measures
- c) To estimate the predictive value of structural and functional network measures on clinical outcomes

**Scientific disciplinary sector:** MED/26 NEUROLOGY

**Place:** Dipartimento di Neuroscienze, riabilitazione, oftalmologia, genetica e scienze materno-infantili (DINOEMI)

**Required degree:**

Laurea Magistrale della classe LM-40 (Matematica)

**Subjects of the interview:**

Principles of diffusion weighted imaging  
Conventional and novel DWI methods for brain applications  
Neuroradiological alterations of demyelinating diseases

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

## RESEARCH PROGRAM NO. 16

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 09.00** in Padiglione Sommariva IRCCS San Martino –IST, 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 21.12.2016 at 12.00** in Padiglione Sommariva, C/o IRCCS San Martino –IST, largo R. Benzi, 10, Genova

**The interview will be held on 21.12.2016 at 14.00** in Padiglione Sommariva, C/o IRCCS San Martino –IST, 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.**

*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. Gianmario Sambuceti on the phone number +39 010 555 2026 (4811) or via the email address:sambuceti@unige.it*

**Scientific coordinator:** Prof. Gianmario SAMBUCETI

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

**Title:** “SCM-ALS - Spinal cord metabolism in Amyotrophic Lateral Sclerosis”.

**Description:** Funding will support the participation to the project “SCM-ALS - Spinal cord metabolism in Amyotrophic Lateral Sclerosis”. This program aims to characterize the effects of amyotrophic lateral sclerosis on several functions of the spinal cord, mostly on the metabolism of tissues included within the spinal canal. This task will be pursued by a computational approach to PET/CT imaging and will thus ask for specific skills in nuclear medicine as well as in the Neuroimaging in degenerative disorders. These competences are considered prerequisites to correlate imaging data with clinical indexes of disease localization and aggressiveness. We point out that a significant part of the work will be spent in Turin in cooperation with the local University and with the imaging Center IRMET SpA.

**Scientific disciplinary sector:** MED/36 DIAGNOSTIC IMAGING AND RADIOTHERAPY

**Place:** Dipartimento di Scienze della salute (DISSAL)

**Required degree:**

Laurea V.O. in Medicina e Chirurgia

Laurea Specialistica della classe 46/S (Medicina e Chirurgia)

Laurea Magistrale della classe LM-41 (Medicina e Chirurgia)

**Subjects of the interview:**

Use of fluoro-deoxyglucose in neuroimaging; Computational image analysis; pathophysiology of amyotrophic lateral sclerosis, principles of PET/CT imaging.



**RESEARCH PROGRAM NO. 17**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 8.30** in Centro Internazionale in Monitoraggio Ambientale (CIMA Foundation), Palazzina Marchi del Campus di Savona, Via A. Magliotto 2 - 17100 Savona

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 12.30** Centro Internazionale in Monitoraggio Ambientale (CIMA Foundation), Palazzina Marchi del Campus di Savona, Via A. Magliotto 2 - 17100 Savona

**The interview will be held on 21.12.2016 at 15.00** in Centro Internazionale in Monitoraggio Ambientale (CIMA Foundation), Palazzina Marchi del Campus di Savona, Via A. Magliotto 2 - 17100 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.**

*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. Luca Ferraris on the phone number +39 019230271 or via the email address: info@cimafoundation.org*

**Scientific coordinator:** Prof. Luca FERRARIS

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

**Title:** Development of advanced tools for operational flood forecasting and assimilation of satellite products in hydrologic models.

**Description:** CIMA Foundation is a partner of the H-SAF (EUMETSAT Satellite Application Facility on Support to Operational Hydrology and Water Management) project within which develops and maintains an active research program for the validation and the use of soil moisture, precipitation and snow satellite products in hydrological modelling. The objective of the research is to develop innovative tools for the assimilation of satellite products in distributed hydrological models, the validation of the satellite products, increase the knowledge of the water cycle and develop new tools for flood forecasting.

**Scientific disciplinary sector:** ICAR/02 HYDRAULIC AND MARINE CONSTRUCTIONS AND HYDROLOGY

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

**Required degree:**

Laurea Specialistica della classe 28/S (Ingegneria civile), 33/S (Ingegneria energetica e nucleare), 38/S (Ingegneria per l'ambiente e il territorio), 20/S (Fisica) o 45/S (Matematica)

Laurea Magistrale della classe LM-23 (Ingegneria civile), LM-30 (Ingegneria energetica e nucleare), LM-26 Ingegneria della sicurezza, LM-35 (Ingegneria per l'ambiente e il territorio), ), LM-17 Fisica o LM-40 (Matematica)

**Subjects of the interview:**

Hydrology, hydro-meteorology, distributed hydrological modelling, data assimilation in hydrological models, flood forecasting.

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 22.12.2016 at 9.00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA) presso il Laboratorio di Idraulica “E. Marchi”, 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 22.12.2016 at 12.00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA) presso il Laboratorio di Idraulica “E. Marchi”, Via Montallegro 1 – Genova

**The interview will be held on 22.12.2016 at 15.00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA) presso il Laboratorio di Idraulica “E. Marchi”, 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 Giovanni LANZA

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

**Title:** Study of precipitation intensity measurement errors via laboratory activities and CFD.

**Description:** The research associate is expected to perform laboratory activities for the development and improvement of a calibration device for non-catching type precipitation gauges, which has the purpose to reproduce precipitation with specific micro-physical characteristics. He/she will also work on the development of CFD simulations (both RANS and LES models) for the study of aerodynamic fields developing around measuring instruments and their influence on the collection efficiency (studying the precipitation particles trajectories through a Lagrangian scheme). The validation of these models will require the comparison of the results with real rainfall measurements from field sites and tests to be performed in the wind tunnel.

**Scientific disciplinary sector:** ICAR/02 HYDRAULIC AND MARINE CONSTRUCTIONS AND HYDROLOGY

**Place:** Dipartimento di Ingegneria civile, chimica e ambientale (DICCA)

**Required degree:**

Dottorato di ricerca in Fluidodinamica e Processi dell’Ingegneria Ambientale

**Subjects of the interview:**

The research associate will demonstrate knowledge on different measurement techniques of liquid and solid precipitation, as well as their main sources of uncertainty, in fluid dynamic processes concerning the topics of this announcement and must have experiences in developing numerical models using existing CFD software (Ansys Fluent and OpenFOAM). He/She should also have experience in data analysis and interpretation from rain measurement campaigns in the field as well as in performing rain gauge tests in the wind tunnel.

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

## **RESEARCH PROGRAM NO. 19**

**The assessment criteria for the qualifications and the interview will be affixed on 22.12.2016 at 10.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15a, Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 22.12.2016 at 13.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15a, Genova.

**The interview will be held on 22.12.2016 at 15.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15a, Genova.

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

**Scientific coordinator:** Prof. Davide GIGLIO

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

**Title:** Development of optimization models and methods to increase sustainability of production and logistic systems.

**Description:** The increase of environmental and energy related performance in industrial systems is a primary target at all decision levels, from the strategic-tactical level to the operational one. The proposed research activity has the objective of defining and solving specific planning and optimization problems, that take into consideration sustainability constraints, which characterize modern production and logistic systems. The activity will be carried out both at a general level, starting from the state of the art of the relevant scientific literature, and with reference to national and international projects and activities (in particular, to the project “Smart Manufacturing 2020” of the Italian Technology Cluster “Smart Factory” and to the activities of the European Technology Platform ALICE).

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

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

**Required degree:**

Laurea V.O. in Ingegneria Gestionale, Ingegneria Industriale, Ingegneria Informatica, Ingegneria Meccanica  
Laurea Specialistica della classe 29/S (Ingegneria dell’automazione), 34/S (Ingegneria gestionale), 35/S (Ingegneria informatica), 36/S (Ingegneria meccanica)  
Laurea Magistrale della classe LM-25 (Ingegneria dell’automazione), LM-26 (Ingegneria della sicurezza), LM-31 (Ingegneria gestionale), LM-32 (Ingegneria informatica), LM-33 (Ingegneria meccanica)

**Subjects of the interview:**

- Management of production and logistic systems
- Planning and optimization algorithms for manufacturing production in assembly systems
- Metaheuristics and matheuristics for combinatorial optimization

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 21.12.2016 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 21.12.2016 at 12.00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via Montallegro 1, Genova

**The interview will be held on 21.12.2016 at 15.00** 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.**

**Scientific coordinator:** Prof. Giovanni SOLARI

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

**Title:** Wind monitoring, modelling, simulation and forecasting.

**Description:** A climatology is defined as mixed when different wind phenomena may occur. In Europe it is typical the occurrence of three phenomena: extra-tropical cyclones, downbursts and intermediate events. Taking a cue from the wind monitoring network realized for the European projects "Wind and Ports" and "Wind, Ports and Sea" the present research pursues four objectives: 1) to implement procedures for the separation and classification of different wind phenomena; 2) to develop models for their representation and simulation with particular regard to the assessment of wind loading on structures; 3) to develop forecasting criteria of synoptic phenomena including the assimilation of local measurements; 4) to develop criteria to predict the conditions in which thunderstorms may occur.

**Scientific disciplinary sector:** ICAR/09 STRUCTURAL ENGINEERING

**Place:** Dipartimento di Ingegneria civile, chimica e ambientale (DICCA)

**Required degree:**

Dottorato di ricerca in Geofisica o in Ingegneria Civile e Ambientale

**Subjects of the interview:**

Wind engineering, wind climatology, wind modelling, structural dynamics, probability theory and random processes, atmospheric physics.

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

## **RESEARCH PROGRAM NO. 21**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 9.30** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via Opera Pia 15a, Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 12.30** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via Opera Pia 15a, Genova

**The interview will be held on 21.12.2016 at 13.30** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via Opera Pia 15a, Genova

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

**Scientific coordinator:** Prof.ssa Francesca PIRLONE

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

**Title:** Tools, strategies and best practices to realize a start-up accelerator which seek to enhance the cross-border territory (IT-FR).

**Description:** The research aims at identifying tools, strategies and best practices to realize a cross-border start-up accelerator aimed at enhancing the area. Such research has to consider the environment, economic and social aspects and the characteristics of the analyzed territories to support start-ups in establishing successful objectives and strategies.

Initially it will be developed a cognitive phase on the potentialities and vocation of the territory, to the best practices, to the market and competitors at different level of scale and the resources necessary to start a small/medium enterprise. The second phase involves the planning of courses aimed at the training of those who will work in this sector. The third and final stage involves the creation of an accelerator start-up for the analyzed areas.

**Scientific disciplinary sector:** ICAR/20 URBAN AND REGIONAL PLANNING

**Place:** Dipartimento di Ingegneria civile, chimica e ambientale (DICCA)

**Required degree:**

Dottorato di ricerca in luoghi e tempi della città e del territorio

**Subjects of the interview:**

Urban planning instruments; sustainability, best practices and sustainable development tools.

**RESEARCH PROGRAM NO. 22**

**The assessment criteria for the qualifications and the interview will be affixed** on 22.12.2016 at 8.45 in Dipartimento di Ingegneria navale, elettrica, elettronica e delle telecomunicazioni DITEN (ex DINAV), 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 22.12.2016 at 11.45 in Dipartimento di Ingegneria navale, elettrica, elettronica e delle telecomunicazioni DITEN (ex DINAV), Via Montallegro 1, Genova.

**The interview will be held** on 22.12.2016 at 12.00 in Dipartimento di Ingegneria navale, elettrica, elettronica e delle telecomunicazioni DITEN (ex DINAV), 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. Paola Gualeni

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

**Title:** Holistic approach of ship design in a life-cycle perspective.

**Description:** The aim of the activity is to develop a methodology and a decision support tool able to project the design process activity along the whole ship life cycle. In particular, for several selected ship typologies, the main parameters will be selected in order to characterize the ship performance in the production phase, the operational activity and the dismantling process, together with the most appropriate KPIs (Key Performance Indicator) for the evaluation of a life cycle performance. A tool named “ship configurator” will be developed and this in turn will be integrated within a H2020 project in a much wider calculation architecture for the ship LCPA (Life Cycle Performance Assessment). Finally the whole tool will be applied to a set of selected ship typologies, in the field of passenger ships, cargo ships, service vessels and work boats.

**Scientific disciplinary sector:** ING-IND/01 NAVAL ARCHITECTURE

**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:**

Ship Design, ship classification and typologies (technical characteristics and operational profile), notions about LCA (Life Cycle Assessment) and LCC (Life Cycle Cost)

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 21.12.2016 at 9.00** 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 21.12.2016 at 12.30** in Dipartimento di ingegneria navale, elettrica, elettronica e delle telecomunicazioni (DITEN) Via Montallegro 1, Genova

**The interview will be held on 21.12.2016 at 14.30** 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:** Dott. Marco ALTOSOLE

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

**Title:** Ship voyage optimization by propulsion simulation.

**Description:** The proposed research is aimed at the identification of numerical models and programming techniques to solve the problem of the “ship voyage optimization“. Unlike conventional weather routing solutions, the final algorithm will have to consider also speed management, ship response in terms of motions and possible engine overloads due to severe weather conditions as further constraints of the problem. The ship performance modelling, indispensable for a proper evaluation of the fuel consumption, will be faced by considering the ship motions in terms of added resistance and safety. The propulsion system model will consider also the age of the vessel and will represent the core of the ship voyage optimization process.

**Scientific disciplinary sector:** ING-IND/02 SHIP STRUCTURES AND MARINE ENGINEERING

**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:**

Marine propulsion, ship energy efficiency, numerical optimization techniques, simulation, neural networks.

## **RESEARCH PROGRAM NO. 24**

**The assessment criteria for the qualifications and the interview will be affixed on 23.12.2016 at 9.00** in Polo navale del 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 23.12.2016 at 12.00** in Polo navale del Dipartimento di Ingegneria navale, elettrica, elettronica e delle telecomunicazioni (DITEN), Via Montallegro 1, Genova.

**The interview will be held on 23.12.2016 at 12.15** in Polo navale del 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.**

*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. Cesare Mario Rizzo on the phone number +39 3204248071 or via the email address: cesare.rizzo@unige.it*

**Scientific coordinator:** Prof. Cesare Mario RIZZO

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

**Title:** Application of fluid structure interaction analysis in naval architecture.

**Description:** This project proposal concerns the main fluid-structure interaction applications in naval architecture and marine engineering, studied by means of numerical analyses. Sail system applications will be the starting point to transfer the gained knowledge to dynamic and impulsive phenomena. Numerical analyses will be implemented on typical test cases and, as far as possible, experimental validation of numerical models will be obtained not only through experimental data available in open literature but also performing dedicated tests in the Marine Structures Testing Lab of DITEN during the project.

**Scientific disciplinary sector:** ING-IND/02 SHIP STRUCTURES AND MARINE ENGINEERING

**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:**

Numerical and experimental analysis of marine structures, FEM, CFD, FSI, non linear analysis

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 21.12.2016 at 9.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15A, Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 13.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15A, Genova

**The interview will be held on 21.12.2016 at 14.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15A, Genova

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

**Scientific coordinator:** Prof. Luigi CARASSALE

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

**Title:** Measurements for characterization and validation of components in turbomachinery.

**Description:** Engineerization of measurements on turbomachinery components through

- 1) identification of the quantities to be measured,
- 2) selection of instrumentation,
- 3) integration of instrumentation in the machine,
- 4) definition of SW and HW for data acquisition.

Sensor installation and verification of the measurement chain defined at the previous point.

Supervision of experimental tests and data processing for the characterization and validation of machine components. In this phase, the data acquisition will be carried out at the experimental site.

**Scientific disciplinary sector:** ING-IND/13 APPLIED MECHANICS

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

**Required degree:**

Laurea Magistrale della classe LM-33 (Ingegneria meccanica)

**Subjects of the interview:**

Structural dynamics, signal processing, turbomachinery

## RESEARCH PROGRAM NO. 26

**The assessment criteria for the qualifications and the interview will be affixed on 22.12.2016 at 8.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15A, Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 22.12.2016 at 12.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15A, Genova

**The interview will be held on 22.12.2016 at 12.15** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Via Opera Pia 15A, Genova

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

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (SKYPE video conference call), promptly contacting Prof. Matteo Zoppi on the phone number +39 320 438 2160 or via the email address: zoppi@dimec.unige.it*

**Scientific coordinator:** Prof. Matteo ZOPPI

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

**Title:** Interval analysis of mechanisms with closed loop kinematic chains.

**Description:** The researcher will complete the development of a code for the calculation of mechanisms with closed loop kinematic chains using interval analysis. The code will be used for the study of mechanisms so assessing effectiveness and performance. First, mechanisms will be addressed with properties known either from the literature or by different methods of calculation; the use will be then extended to mechanisms with architectures new or only in part studied.

**Scientific disciplinary sector:** ING-IND/13 APPLIED MECHANICS

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

**Required degree:**

Laurea V.O. in Ingegneria meccanica, Ingegneria elettronica, Ingegneria elettrica, Informatica o Fisica.

Laurea Specialistica della classe 36/6 (Ingegneria meccanica), 32/S (Ingegneria elettronica), 29/S (Ingegneria dell'automazione), 31/S (Ingegneria elettrica), 35/S (Ingegneria informatica), 20/S (Fisica), 50/S (Modellistica matematico-fisica per l'ingegneria) 66/S (Scienze dell'universo).

Laurea Magistrale della classe LM-33 (Ingegneria meccanica), LM-29 (Ingegneria elettronica), LM-25 (Ingegneria dell'automazione), LM-26 (Ingegneria della sicurezza), LM-28 (Ingegneria elettrica), LM-32 (Ingegneria informatica), LM-17 Fisica, LM-44 (Modellistica matematico-fisica per l'ingegneria) o LM-58(Scienze dell'universo).

**Subjects of the interview:**

Robotics. Method of kinematic and singularity analysis of mechanisms.

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 04.01.2017 at 9.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Sezione MIG, Via Opera Pia 15a, Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 04.01.2017 at 12.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Sezione MIG, Via Opera Pia 15a, Genova

**The interview will be held on 04.01.2017 at 14.00** in Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti (DIME), Sezione MIG, Via Opera Pia 15a, Genova

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

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (SKYPE video conference call), promptly contacting Prof. Roberto Revetria on the phone number +39 3207982156 or via the email address: roberto.revetria@unige.it*

**Scientific coordinator:** Prof. Roberto REVETRIA

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

**Title:** Development of a model of integration between Genoa and Ansaldo Energia Ansaldo Energia Project Quality Management Switzerland for two contracts in Oman with use of new gas turbines GT26.

**Description:** Study of management and technical characteristics of the two contracts in Oman (fired combined cycle IBRI of 1510 MW and 1710 MW SOHAR III). Support the Project Quality Manager and Project Manager. Developing operational expertise for integration in project teams, collecting relevant data anomalies and not the life of the contracts and integration and implementation of the software in use on the contract. Learned lessons and experiences.

**Scientific disciplinary sector:** ING-IND/17 INDUSTRIAL MECHANICAL PLANTS

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

**Required degree:**

Laurea Magistrale della classe LM-33 (Ingegneria meccanica)

**Subjects of the interview:**

Cogeneration plants, plant engineering, risk analysis, dimensioning of systems, principles of quality management, project management principles.

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

## **RESEARCH PROGRAM NO. 28**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 9.00** 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 21.12.2016 at 12.00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA) - Via Montallegro, 1 - Genova

**The interview will be held on 21.12.2016 at 13.00** 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.**

**Scientific coordinator:** Prof. Fabrizio BARBERIS

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

**Title:** Characterization and evaluation of novel devices for dental implantology.

**Description:** The project will be carried out in collaboration with outstanding companies in the field of production of dental prostheses and dental care instrumentation and will address the following topics:

- characterization of materials in use and study of novel materials in view of improving mechanical and functional properties
- study of the main factors which determine the primary stability of permanent anchorage devices (implants) used in dental implantology
- experimental evaluation of the response of native bone to insertion of a prosthetic fixture

Basing on the experimental results the possible feedback to surgical techniques will be evaluated.

**Scientific disciplinary sector:** ING-IND/22 MATERIALS SCIENCE AND TECHNOLOGY

**Place:** Dipartimento di Ingegneria civile, chimica e ambientale (DICCA)

**Required degree:**

Dottorato di ricerca in Ingegneria Chimica, dei Materiali e di Processo

**Subjects of the interview:**

Principles of solids mechanics, chemical and materials engineering. Measurement of mechanical properties of metals, polymers, composites and biological tissue. Techniques of chemico-physical analysis (XRD, FTIR, Optical and electronic microscopy, rheometry, calorimetry). Surface properties and their evaluation.

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

## **RESEARCH PROGRAM NO. 29**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 9.00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via 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 21.12.2016 at 12.00** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via Opera Pia 15, Genova

**The interview will be held on 21.12.2016 at 12.30** in Dipartimento di Ingegneria civile, chimica e ambientale (DICCA), Via 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. Elisabetta ARATO

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

**Title:** Feasibility analysis for the development of technologies for the selective elimination of cyanides from AFO gas.

**Description:** The study focuses on the issues related to the purification of the blast furnace outlet gas with particular reference to the emission limits set by the current BAT (Best Available Techniques). In the framework of the present activity the elimination of cyanides from AFO gas by scrubber absorption will be studied by identifying the main parameters that can be checked or proposing innovative technologies currently under study or available on the market. Secondly, the process of reduction of cyanides in the washing water will be studied also optimizing the water restoration sent to a slag granulation plant in order to produce by-products for cement.

**Scientific disciplinary sector:** ING-IND/24 FUNDAMENTALS OF CHEMICAL ENGINEERING

**Place:** Dipartimento di Ingegneria civile, chimica e ambientale (DICCA)

**Required degree:**

Dottorato di ricerca in Fluidodinamica e Processi dell'Ingegneria Ambientale

**Subjects of the interview:**

Process analysis and simulation, chemical thermodynamics and kinetics, chemical reactor theory.

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

## RESEARCH PROGRAM NO. 30

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 9.00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via 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 21.12.2016 at 12.00** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via Opera Pia 15, Genova

**The interview will be held on 21.12.2016 at 12.15** in Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA), Via 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 Perego on the phone number +39 010 3532916 or via the email address: p.perego@unige.it*

**Scientific coordinator:** Prof.ssa Patrizia PEREGO

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

**Title:** Extraction and encapsulation of high-added value compounds from spent coffee grounds.

**Description:** The coffee-based beverages lead to the production of a large quantity of waste, among which the exhausted coffee powder. This can be used as a source of antioxidants: molecules that find wide application in the food, cosmetic and pharmaceutical industries. The experimentation involves the use of a matrix coming from automatic coffee machines, subjected to non-conventional solvent extraction (high pressure and temperature and extraction assisted with microwave) for the recovery of high added value molecules. The extracts thus obtained will be characterized and micro-encapsulated using a spray dryer to make them more bioavailable. The critical operating parameters for extraction and encapsulation will be optimized using an experimental design using software "Statistics".

**Scientific disciplinary sector:** ING-IND/25 CHEMICAL PLANTS

**Place:** Dipartimento di Ingegneria civile, chimica e ambientale (DICCA)

**Required degree:**

Dottorato di ricerca in Ingegneria Chimica, dei Materiali e di Processo

**Subjects of the interview:**

HPLC, Colorimetric analysis, Chromatography, Micro and nano-incapsulation.

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

## **RESEARCH PROGRAM NO. 31**

**The assessment criteria for the qualifications and the interview will be affixed on 22.12.2016 at 9.30** in Dipartimento di Ingegneria navale, elettrica, elettronica e delle telecomunicazioni (DITEN), Via 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 22.12.2016 at 12.30** in Dipartimento di ingegneria navale, elettrica, elettronica e delle telecomunicazioni (DITEN), Via Opera Pia 11A, Genova

**The interview will be held on 22.12.2016 at 14.30** in Dipartimento di ingegneria navale, elettrica, elettronica e delle telecomunicazioni (DITEN), Via 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. Federico SILVESTRO

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

**Title:** Development and implementation of models for microgrids and power grids for naval applications.

**Description:** The topic of the research concerns the definition and development - from technical and functional description of medium and low voltage electrical distribution networks for naval systems or stand-alone networks - of algorithms for the management of generation and load.

The electrical network must be modeled and simulated in a suitable computing environment to be chosen during the research and the simulation results will be compared with experimental data. Storage systems and the associated automation and control systems will be developed. Algorithms to be used in monitoring systems (PMS Power Management System) for voltage control in the network and for the definition of the generation commitment and control will be developed.

**Scientific disciplinary sector:** ING-IND/33 ELECTRICAL POWER SYSTEMS

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

**Required degree:**

Laurea Specialistica della classe 31/S (Ingegneria Elettrica)

Laurea Magistrale della classe LM-28 (Ingegneria Elettrica)

**Subjects of the interview:**

Modeling and simulation; analysis of electrical energy systems; modeling of generation systems for naval electrical systems; Control strategies for on-board systems.

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

## **RESEARCH PROGRAM NO. 32**

**Scientific coordinator:** Prof. Daniele CAVIGLIA

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

**Title:** Sensor networks for real-time rainfall monitoring.

**Description:** The activity relates to the field of environmental monitoring and will concern the study and development of sensor networks (wireless or wired) for real-time detection of atmospheric precipitation, which derive an estimation of the rain rate falling in the survey area from the attenuation data of microwave signals (terrestrial or satellite). In particular, methodologies for the data quality control of the measurements in relation to the characteristics of the phenomenon conditions will be addressed, as well as the development of an improved approach for the interpretation of the microwave attenuation basing on a comparative experiment with the rainfall measurement provided by conventional sensors (rain gauges and meteorological radar).

**Scientific disciplinary sector:** ING-INF/01 ELECTRONICS

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

**Required degree:**

Dottorato di Ricerca in "Ingegneria Elettronica, Informatica, della Robotica e delle Telecomunicazioni o "Monitoraggio dei Sistemi e Gestione dei Rischi Ambientali" o "Fluidodinamica e Processi dell'Ingegneria Ambientale"

**Subjects of the interview:**

- Sensor networks for rainfall intensity measurement
- Data quality control procedures
- Methods of comparative analysis of areal and punctual measurements obtained from sensors with different technologies



## **RESEARCH PROGRAM NO. 33**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 10.00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via 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 21.12.2016 at 13.00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via Opera Pia 11A, Genova

**The interview will be held on 21.12.2016 at 16.00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN), Via 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. Matteo PASTORINO

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

**Title:** Inverse scattering methods for the microwave diagnostic of brain strokes.

**Description:** The present project is devoted to study numerical methods for the electromagnetic diagnostic based on the inversion of data obtained from the interaction between incident electromagnetic field at microwave frequencies and the human head when an ischemic or an hemorrhagic stroke is present. In particular, it will be focused on the study and implementation of algorithms for the dielectric reconstruction based on the formulation of the inverse electromagnetic scattering problem. The project to be developed will include an analysis of the state of the art in the field of microwave biomedical imaging and a phase in which the optimal solutions for the above mentioned problem are defined. Finally, the most interesting methods will be implemented and the obtained results will be properly validated.

**Scientific disciplinary sector:** ING-INF/02 ELECTROMAGNETIC FIELDS

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

**Required degree:**

Laurea V.O. in Ingegneria elettronica o Ingegneria delle telecomunicazioni

Laurea Specialistica della classe 32/S (Ingegneria elettronica), 30/S (Ingegneria delle telecomunicazioni),

Laurea Magistrale della classe LM-29 (Ingegneria elettronica), LM-27 (Ingegneria delle telecomunicazioni).

**Subjects of the interview:**

Inverse problems theory in applied electromagnetics at microwave frequencies and numerical methods for the solution of such kind of problems in engineering. Regularization and treatment of the nonlinearity and ill-posedness of inverse problems.

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 21.12.2016 at 10.00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Satellite Communications and Networking Laboratory (SCNL), Via dell'Opera Pia 13, Pad. E, 3° floor, Genova

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed on 21.12.2016 at 15.00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Satellite Communications and Networking Laboratory (SCNL), Via dell'Opera Pia 13, Pad. E, 3° floor, Genova

**The interview will be held on 21.12.2016 at 16.00** in Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni (DITEN) - Satellite Communications and Networking Laboratory (SCNL), Via dell'Opera Pia 13, Pad. E, 3° floor, 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. Mario MARCHESE

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

**Title:** Algorithms and Protocols for Data Routing in DTN Networks.

**Description:** The activity will concern the study and implementation of routing, congestion and flow control, and scheduling algorithms and protocols for Delay and Disruption Tolerant (DTN) Networks. A survey of the state of the art will be performed in order to identify techniques and strategies already defined in this field. After that, the research will be focused on the identification of variables and parameters relevant in this kind of networks for the realization of these techniques and strategies. An implementation and test phase will follow in order to propose and develop new algorithms and protocols or improvements to the already existing ones.

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

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

**Required degree:**

Laurea Magistrale della classe LM-27 (Ingegneria delle telecomunicazioni)

**Subjects of the interview:**

Routing Algorithms and Protocols, Flow and Congestion Control Algorithms and Strategies, Scheduling Policies, Matlab and C/C++ knowledge.

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 21.12.2016 at 8.30** in Dipartimento di Informatica Bioingegneria Robotica ed 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 21.12.2016 at 12.30** in Dipartimento di Informatica Bioingegneria Robotica ed Ingegneria dei Sistemi (DIBRIS), Via Opera Pia 13, Genova.

**The interview will be held on 21.12.2016 at 16.30** in Dipartimento di Informatica Bioingegneria Robotica ed 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. Antonio Sgorbissa on the phone number +39 0103532706 or via the email address: antonio.sgorbissa@unige.it*

**Scientific coordinator:** Prof. Antonio SGORBISSA

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

**Title:** Robots and distributed sensor networks to support independent living.

**Description:** The project aims at developing robotic systems, as well as wearable and environmental sensor networks, with the aim of assisting elderly people in everyday activities, through innovative monitoring and automation solutions.

The project breakthrough is in the fact that, differently from existing systems, it aims at developing systems that are culturally “competent”, i.e., able to modify their own perceptual, motor and verbal behavior depending on the cultural characteristics of the person that they are assisting.

**Scientific disciplinary sector:** ING-INF/05 INFORMATION PROCESSING SYSTEMS

**Place:** Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi (DIBRIS)

**Required degree:**

Laurea Specialistica della classe 35/S (Ingegneria informatica)

Laurea Magistrale della classe LM-32 (Ingegneria informatica)

**Subjects of the interview:**

Mobile Robots, wearable and distributed sensor networks, mathematical models, automation techniques for recognizing human activities, assistive robotics applications.

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 21.12.2016 at 8.00** in Dipartimento di Informatica Bioingegneria Robotica ed 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 21.12.2016 at 14.00** in Dipartimento di Informatica Bioingegneria Robotica ed Ingegneria dei Sistemi (DIBRIS) ,Via Opera Pia 13, Genova

**The interview will be held on 21.12.2016 at 16.00** in Dipartimento di Informatica Bioingegneria Robotica ed 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. Maura CASADIO

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

**Title:** Body-machine interface for neuro-rehabilitation of stroke survivors.

**Description:** The project aims at developing adaptive/smart tools, based on Body—Machine interfaces (BMI) and robotic technologies, which may help stroke survivors to recover functions of the upper body by exploiting/enhancing their residual capabilities, while avoiding the easy shortcut" of being content with stereotypical compensatory strategies.

The work is organised in three general objectives:

- (I) TO TRANSLATE BODY—DERIVED SIGNALS onto BMI commands, encoding Subjects' state, impairment and residual abilities.
- (ii) TO DESIGN AND IMPLEMENT ADAPTIVE BMIS for rehabilitation devices, based on the individual characteristic of each subject.
- (iii) TO ENCODE INFORMATION of the subject's state of motion and interaction with the environment INTO APPROPRIATE SENSORY FEEDBACK.

**Scientific disciplinary sector:** ING-INF/06 ELECTRONIC AND INFORMATICS BIOENGINEERING

**Place:** Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi (DIBRIS)

**Required degree:**

Laurea Magistrale della classe LM-21 (Ingegneria biomedica)

**Subjects of the interview:**

Body machine interface, Robot- rehabilitation, electromyography signals, muscle synergy, biomechanical movement, stroke.

**RESEARCH PROGRAM NO. 37**

**The assessment criteria for the qualifications and the interview will be affixed on 21.12.2016 at 9.00** in C.I.E.L.I. - Centro Italiano di Eccellenza sulla Logistica Integrata - 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 21.12.2016 at 12.00** in C.I.E.L.I. - Centro Italiano di Eccellenza sulla Logistica Integrata - Via Vivaldi, 5 Genova

**The interview will be held on 21.12.2016 at 15.00** in C.I.E.L.I. - Centro Italiano di Eccellenza sulla Logistica Integrata - 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.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (SKYPE video conference call), promptly contacting Prof.ssa Paola Ivaldi on the phone number +39 010 209 9976/+39 010209 – 51186 or via the email address: Paola.Ivaldi@giuri.unige.it*

**Scientific coordinator:** Prof. Paola IVALDI

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

**Title:** Brussels Ia and transport (BRiATra) JUST/2014/JCOO/AG/CIVI/7706.

**Description:** The objective of the project is the performance of specific activities connected to the European Project EU JUST/2014/Action Grants Brussels Ia and transport (BRiATra), which -after having concluded the necessary theoretical analysis concerning the object of the inquiry- on 1st February 2017 enters into its second and last year. The “assegnista” will be engaged in the coordination and management of the activities of the different partners during the final year of the project, with specific reference to: technical and scientific support, communication among the partners and with the European Commission, collection and circulation of the partial outcomes of the research, as well as synthesis of the final results of the project with a view to the finalisation of the concluding documents.

**Scientific disciplinary sector:** IUS/13 INTERNATIONAL LAW

**Place:** C.I.E.L.I. Centro Italiano di Eccellenza sulla Logistica Integrata

**Required degree:**

Laurea Specialistica della classe 22/S (Giurisprudenza)

Laurea Magistrale della classe LMG/01 (Giurisprudenza)

**Subjects of the interview:**

Transfrontier and transnational cooperation – private international law – European Union law, competences of European Union.

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 **21.12.2016** at **10.30** in Dipartimento di Economia (DIEC), 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 **21.12.2016** at **13.30** in Dipartimento di Economia (DIEC), Via Vivaldi 5, Genova

**The interview will be held** on **21.12.2016** at **14.00** in Dipartimento di Economia (DIEC), 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. Alberto QUAGLI

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

**Title:** ERP and accounting knowledge.

**Description:** The ICT persistent evolution has generated a constant increase in enterprise processes computerization and automation levels. As for Enterprise Resource Planning (ERP) systems, technological development has enhanced software capabilities enough to make the human competencies no longer directly relevant.

This has brought to a depletion of accounting knowledge in general and has given rise to a different way of employing accounting knowledge in enterprise resource planning. Indeed, the completeness of ERP accounting modules and their extremely detailed procedures brought a change in worker skills, moving from a “know why” type of knowledge (in the matter in question based on the knowledge of accounting theory and logic) to a “know how” type of knowledge, that entails the ability to use ERP software but leads also to an uncritical attitude.

This research project wishes to analyze the new accounting knowledge boundaries in ERP systems, paying specific attention to the role played by accounting education in this context.

**Scientific disciplinary sector:** SECS-P/07 BUSINESS ADMINISTRATION AND MANAGEMENT

**Place:** Dipartimento di Economia (DIEC)

**Required degree:**

Laurea V.O. in Economia e commercio o Economia Aziendale o Economia Marittima e dei Trasporti

Laurea Specialistica della classe 84/S (Scienze economico aziendali)

Laurea Magistrale della classe LM-77 (Scienze economico aziendali)

**Subjects of the interview:**

Knowledge of Enterprise Resource Planning systems; methods of the research project; knowledge of direct survey methods; experiences accrued in research projects.

**RESEARCH PROGRAM NO. 39**

**Scientific coordinator:** Prof. Mauro PALUMBO

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

**Title:** Therapeutic communities and exit from addiction.

**Description:** To develop a research which, starting from a review of the scientific literature, analyze the paths that enable young people addicted to drugs to enter in treatment programs through community services. Detect good practices in the territory of Genoa and in other selected areas, to identify the key features, the monitoring and transferability.

The research will, taking advantage of the new technologies, discover and experiment ways to bring the target to services (apps, web portal, corporate communication) for informational purposes and recovery. the researcher will also find potential partners for the participation in international programmes financed (eg. Justice Programme "Drugs Policy Initiatives").

**Scientific disciplinary sector:** SPS/07 GENERAL SOCIOLOGY

**Place:** Dipartimento di Scienze della formazione (DISFOR)

**Required degree:**

Dottorato di ricerca in Sociologia, Metodologia della ricerca nelle scienze umane, Psicologia

**Subjects of the interview:**

Methodology of social research

Drug addiction studies

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