

Disclaimer: Please note that only the Italian version of the present call for applications, issued with Rector's Decree No. 3523, dated 21.09.2020, is legally binding, the English version is provided for informational purposes only. The original Italian version is available at <https://unige.it/usg/it/dottorati-di-ricerca>

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Course in: BIOENGINEERING AND ROBOTICS

In agreement with the Foundation of the Italian Institute of Technology (Fondazione Istituto Italiano di Tecnologia – IIT)

Curriculum: ADVANCED AND HUMANOID ROBOTICS (CODE 8302)

Coordinator: Cannata Giorgio	
Department of IT, Bioengineering, Robotics and Systems Engineering (Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi – DIBRIS)	
Places: 4 – Grants: 4 (*)	
(*) 4 grants from the Foundation of the Italian Institute of Technology (IIT), the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 16.500,00.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS
Further information on how to present qualifications/publications	<p>Candidates must submit:</p> <ul style="list-style-type: none"> - the complete list of all the exams sat during their Bachelor’s and Master’s degree and/or equivalents (BS, Master) specifying the average of marks or equivalent indicator. - the specific research themes candidates want to be evaluated on (see the list of research themes listed below and on the doctorate website: http://phd.dibris.unige.it/biorob/index.php/howto-apply); - a project work related to one (or more) of the research themes offered (please use the template available at the website: http://phd.dibris.unige.it/biorob/index.php/how-to-apply); - a curriculum vitae et studiorum including all the technical-scientific studies/activities already done and pertinent to the doctoral programme; - Name(s), status and place of employment of the referee(s) - from one and up to three- chosen by the candidates to support their candidature.
Research Themes	<ol style="list-style-type: none"> 1. Mobile manipulation for service robots in dynamic environment 2. Snake Robot Arm for Inspection and Maintenance 3. Robot-Assisted Catheterization Systems 4. AI (Deep Learning) Systems for Medical Image Analysis and Diagnosis <p>The detailed description of the research themes can be found at the following link: http://phd.dibris.unige.it/biorob/index.php/how-to-apply https://www.iit.it/it/phd-school</p>
Information on references	<p>Candidates must choose not less than one and not more than three referees to support their candidature. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the Coordinator of the Doctoral Course at the following address: phd.biorob@dibris.unige.it</p> <p>The name, status and service place of the referees chosen by the candidates must be stated in their applications.</p>
Foreign Languages	English
Further Information	<p>The detailed description of the research themes can be found at the following link: http://phd.dibris.unige.it/biorob/index.php/how-to-apply For further informations about the research themes please contact: Dr. Ferdinando Cannella (Advanced Robotics): Ferdinando.Cannella@iit.it Dr. Lorenzo Natale (Humanoid Robotics): Lorenzo.Natale@iit.it</p>

Course in: CIVIL, CHEMICAL AND ENVIRONMENTAL ENGINEERING

Curriculum: STRUCTURAL AND GEOTECHNICAL ENGINEERING, MECHANICS AND MATERIALS (CODE 8303)

Coordinator: Roberta Massabò	
Department of Civil, Chemical and Environmental Engineering (Dipartimento di Ingegneria civile, chimica e ambientale – DICCA)	
Places: 1 (°) – Grants: 0	
(°) 1 place reserved for the employees of Seteco Ingegneria Srl	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	14.10.2020 – 9 am at the Department of Civil, Chemical and Environmental Engineering (Dipartimento di Ingegneria civile, chimica e ambientale – DICCA), Biblioteca Baldacci via Montallegro 1, Genova. Should there be a high number of candidates, the interviews will continue on the following day. The interview may also take place electronically, on candidates' request or if necessary due to health situation. Candidates requesting online interview must contact the doctoral secretarial staff (dottorato.dicca@unige.it) and Prof. Maria Pia Repetto (repetto@dicca.unige) at least 15 days before the evaluation. Candidates must have a reliable Internet connection to allow for the test to be carried out.
Further information on how to present qualifications/publications	The application (curriculum) must contain Transcripts of Records, stating the courses attended and marks obtained throughout the candidate's university career (Bachelor and M.Sc. degrees). Undergraduate candidates at the deadline of the public notice may submit further documentation, which they deem appropriate, in order to document their university career. The knowledge of foreign languages proved by an international certificate (TOEFL, CPE, CAE, FCE, ...) and attached to the cv would be an asset.
Exam Syllabus	The interview will be a detailed scientific discussion on the candidate's research project (10 pages max), Curriculum Vitae et Studiorum (10 pages max) and qualifications/publications (10 pages max). The interview is also aimed at verifying that the candidate has adequate knowledge to deal with studies in the chosen curriculum.
Research Themes	The research themes are those of the curriculum in “Structural and Geotechnical Engineering, Mechanics and Materials”; they are described in details on the course web page: http://dottorato.dicca.unige.it/eng/stmatgeo/ The research project (10 pages max) must include the candidate's research interests and motivations, a short abstract, the State of the Art and relevant references and the aims of the research activity.
Information on references	Candidates must choose at least one and no more than three referees to support their candidature. One of the referees must be the member of the curriculum committee (http://dottorato.dicca.unige.it/eng/info/staff/comitatostmatgeo.html) with whom the research project has been agreed. The referees must be university professors or experts in the subject. The reference letter must be sent by the referee, within the deadline of the public notice, to the doctoral secretariat at dottorato.dicca@unige.it . If the referee is not a university professor, he/she must also send the Curriculum Vitae and a list of publications. The name, status and current position of the referees chosen by the candidate must be stated in the application. Reference letters that are not presented as requested will not be taken into consideration.
Foreign Languages	English
Further Information	http://dottorato.dicca.unige.it/eng/ Prof. Maria Pia Repetto repetto@dicca.unige

Course in: DIGITAL HUMANITIES. DIGITAL TECHNOLOGIES, THE ARTS, LANGUAGES, CULTURES AND COMMUNICATION

In agreement with the University of Turin

Curriculum: LANGUAGES, CULTURES AND DIGITAL TECHNOLOGIES (CODE 8304)

Coordinator: Adorni Giovanni	
Department of modern languages and cultures (Dipartimento di Lingue e culture moderne – DLCM)	
Places: 1 – Grants: 1 (*)	
(*) 1 grant funded by Fondazione Intesa San Paolo Onlus, under condition to the approval of funding by Fondazione Intesa Sanpaolo Onlus. The annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	13.10.2020 – 9.30 am at the Department of Modern Languages and Cultures (Dipartimento di Lingue e culture moderne – DLCM), Piazza Santa Sabina 2, Genova. The room will be notified one the web site of the phd course (www.digitalhumanities-phd.it) The interview may also take place electronically if necessary due to health situation. Information on the interview will be published on the phd course website (www.digitalhumanities-phd.it).
Further information on how to present qualifications/publications	Together with their qualifications, candidates must include a research project on Digital Humanities pertinent and consistent with the themes and objectives specified in the "Research themes" section. The project must be structured in the following sections: - title; - summary; - objectives of the research project; - analysis of existing literature on the research topic; - research problems to be addressed and to be answered; - methodologies that are expected to be used to achieve the objectives; - expected results at the end of the three-year research period. The project will be evaluated according to the following points: • clarity of objectives, hypotheses and methodological approach to research; • originality and innovativeness of the proposal with respect to the reference literature; • clear feasibility of the timing of the work phases; • solid starting bibliographic bases. The candidate must also indicate potential foreign partner locations/research centers to possibly support the development of his research. The project must be max 4000 words long plus the bibliography.
Research Themes	The project has the final objective to identify already existing methods and resources, in particular digital, useful to support foreign language learning by university students with specific needs, such as students with SLD, with disabilities and foreign students. In addition, the project aims to produce such tools if they are not already available.
Information on references	Candidates must choose not less than one and not more than three referees to support their candidature. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the Coordinator of the Ph.D program at the following address: giovanni.adorni@unige.it and copy to: ilaria.torre@unige.it and luisa.zito@unige.it . The name, status and service place of the referees chosen by the candidates must be also stated in their applications.
Foreign Languages	Candidates must show their knowledge of at least one foreign language, besides their mother tongue, chosen from English, French, Spanish and German. Foreign candidates must show their knowledge of Italian.
Further Information	The contact person in administration for the Ph.D. course is Mrs. Luisa Zito: luisa.zito@unige.it .

	<p>Candidates shall possess the following additional requirements:</p> <ul style="list-style-type: none">- ISEE 2020 less than or equal to € 30.000,00 calculated applying the criterias established in art. 8 “Prestazioni per il diritto allo studio” – comma 2, 3 and 5 in D.P.C.M. 159/2013 “Regolamento concernente la revisione delle modalità di determinazione e i campi di applicazione dell’indicatore della situazione economica equivalente”;- master degree achieved from december 2015 to june 2020 no more than one year;- final grades no less than 100/110.
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Course in: HAEMATO-ONCOLOGY AND CLINICAL-TRANSLATIONAL INTERNAL MEDICINE

Curriculum: GERONTOLOGY, PATHOPHYSIOLOGY OF GERIATRIC DISEASES AND ANTI-AGEING MEDICINE (CODE 8305)

Coordinator: Alessio Nencioni	
Department of Internal Medicine and Medical Specialities (Dipartimento di Medicina interna e Specialità mediche – DIMI)	
Places: 1 – Grants: 0	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	14.10.2020 – 9.00 am - Remote interview
Exam Syllabus	<p>During the interview, the candidate will be evaluated with respect to the following criteria:</p> <ul style="list-style-type: none"> - Knowledge of the topics to be covered (see Research Themes) - Motivation - Logical thinking - Overall vision - Aptitude to carry out an independent project - Potential for excellence and leadership qualities - Capacity to work in team - Discussion of the presented project <p>Knowledge of the English language will be evaluated by a short reading and translation test.</p>
Research Themes	<ul style="list-style-type: none"> - The biochemistry of aging: regulation of i) autophagy, ii) IGF-1 signaling, iii) intracellular NAD , iv) sirtuins, v) response to oxidative stress. - Physiopathology of frailty in the elderly. - Aging and tumors: biology, main clinical problems in treatment, geriatric profiling of the elderly affected by cancer. - Caloric restriction and fasting as strategies for the promotion of longevity and for the treatment of diseases: biological rationale and clinical evidence. - The personalization of treatment of senior patients in the medical or surgical setting
Information on references	<p>Applicants are required to indicate 1 to 3 supporters to their application. Those supporters will have to be University Professors or recognized experts in the field. Supporters will take care of sending their approval letters, within the term, to the Responsible of the PhD Course Prof. Alessio Nencioni, Dipartimento di Medicina Interna DIMI, viale Benedetto XV n.6, (16132 Genova) e-mail: alessio.nencioni@unige.it, ricercadimi@unige.it and to Prof. Fiammetta Monacelli e-mail: fiammetta.monacelli@unige.it.</p> <p>Within the application form, applicants will have to specify in detail name, surname and affiliation of the reference tutors</p>
Foreign Languages	English
Further Information	<p>Contact professors:</p> <p>Prof. Alessio Nencioni alessio.nencioni@unige.it</p> <p>Prof. Fiammetta Monacelli fiammetta.monacelli@unige.it</p>

Course in: HAEMATO-ONCOLOGY AND CLINICAL-TRANSLATIONAL INTERNAL MEDICINE**Curriculum: DISEASES OF THE DIGESTIVE SYSTEM AND OF THE LIVER (CODE 8306)**

Coordinator: Alessio Nencioni	
Department of Internal Medicine and Medical Specialities (Dipartimento di Medicina interna e Specialità mediche – DIMI)	
Places: 1 – Grants: 1 (*)	
(*) 1 grant funded by DIMI, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	14.10.2020 – 9.00 am - Remote interview
Exam Syllabus	<p>During the interview, the candidate will be evaluated with respect to the following criteria:</p> <ul style="list-style-type: none"> - Knowledge of the topics to be covered (see Research Themes) - Motivation - Logical thinking - Overall vision - Aptitude to carry out an independent project - Potential for excellence and leadership qualities - Capacity to work in team - Discussion of the presented project <p>Knowledge of the English language will be evaluated by a short reading and translation test.</p>
Research Themes	<ul style="list-style-type: none"> - Advanced diagnostic techniques and classification systems for Eosinophilic Oesophagitis. - Personalisation of management and treatment for patients with Inflammatory Bowel Diseases. <p>Structure and physiology of the stomatognathic system: morphology of the different components in relation to their function</p> <p>rehabilitation of edentulous patients with implant prostheses with different loading protocols</p> <p>Peri-implant tissue diseases and prognostic factors predictive of dental implant success.</p>
Information on references	<p>Applicants are required to indicate 1 to 3 supporters to their application. Those supporters will have to be University Professors or recognized experts in the field. Supporters will take care of sending their approval letters, within the term, to the Responsible of the PhD Course Prof. Alessio Nencioni, Dipartimento di Medicina Interna DIMI, viale Benedetto XV n.6, (16132 Genova) e-mail: alessio.nencioni@unige.it, ricercadimi@unige.it , to Prof. Edoardo G. Giannini e-mail: edoardo.giannini@unige.it and Prof. Paolo Pera e-mail: paolopera@unige.it.</p> <p>Within the application form, applicants will have to specify in detail name, surname and affiliation of the reference tutors.</p>
Foreign Languages	English
Further Information	<p>Contact professors:</p> <p>Prof. Edoardo G. Giannini edoardo.giannini@unige.it</p> <p>Prof. Paolo Pera paolopera@unige.it</p>

Course in: HAEMATO-ONCOLOGY AND CLINICAL-TRANSLATIONAL INTERNAL MEDICINE

Curriculum: TRANSLATIONAL ONCOLOGY (CODE 8307)

Coordinator: Alessio Nencioni	
Department of Internal Medicine and Medical Specialities (Dipartimento di Medicina interna e Specialità mediche – DIMI)	
Places: 3 (°) – Grants: 1 (*)	
(*) 1 grant funded by DIMI, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
(°) 1 place reserved for the employees of Sidra Medicine	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	14.10.2020 – 9.00 am- Remote interview
Exam Syllabus	<p>During the interview, the candidate will be evaluated with respect to the following criteria:</p> <ul style="list-style-type: none"> - Knowledge of the topics to be covered (see Research Themes) - Motivation - Logical thinking - Overall vision - Aptitude to carry out an independent project - Potential for excellence and leadership qualities - Capacity to work in team - Discussion of the presented project <p>Knowledge of the English language will be evaluated by a short reading and translation test.</p>
Research Themes	<p>Monitoring of solid tumours by circulating tumour DNA. Prognostic and predictive molecular factors of the response to therapy in solid neoplasms. Preclinical studies of associations between new antineoplastic drugs. Pre-clinical and clinical trials in translational oncology. Innovative therapeutic approaches in solid tumours and haematological malignancies. Tumour pathology as disease of the molecular control networks. Molecular and pathogenetic aspects of cardio-toxicity from antineoplastic drugs.</p>
Information on references	<p>Applicants are required to indicate 1 to 3 supporters to their application. Those supporters will have to be University Professors or recognized experts in the field. Supporters will take care of sending their approval letters, within the term, to the Responsible of the PhD Course Prof. Alessio Nencioni, Dipartimento di Medicina Interna DIMI, viale Benedetto XV n. 6, (16132 Genova) e-mail: alessio.nencioni@unige.it, ricercadimi@unige.it, to Prof. Alberto Ballestrero, e-mail: aballestrero@unige.it and Prof. Francesco Boccardo, e-mail: F.Boccardo@unige.it.</p> <p>Within the application form, applicants will have to specify in detail name, surname and affiliation of the reference tutors</p>
Foreign Languages	English
Further Information	<p>Reference Professors: Prof Alberto Ballestrero, e-mail: aballestrero@unige.it Prof. Francesco Boccardo, e-mail: F.Boccardo@unige.it</p>

Course in: PHYSICS AND NANOSCIENCES

In agreement with the Istituto Italiano di Tecnologia (IIT - Italian Institute of Technology)

Curriculum: PHYSICS (CODE 8308)

Coordinator: Ferrando Riccardo	
Dipartimento di Fisica (DIFI)	
Places: 2 – Grants: 2 (*)	
(*) 2 from the Foundation of the Italian Institute of Technology (IIT), the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 16.500.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	14.10.2020 – 8:30 am - Remote interview (it is necessary to send an email by 10/10/2020 to phd@fisica.unige.it). The details about the connection will be in the answer to the email request.
Further information on how to present qualifications/publications	Each candidate must submit a description of the research project he/she intends to carry out during the three years of the PhD course. The project must be written in English. A maximum length of 6000 characters including spaces is allowed.
Exam Syllabus	<ul style="list-style-type: none"> - Discussion about the qualification of the candidate. - Discussion of the Master's thesis. - Presentation and discussion of the proposed research project. - Interview on basic physics topics (general physics, modern physics). - Verification of knowledge of the English language.
Research Themes	<ul style="list-style-type: none"> - Effects of electron-phonon interactions in multiferroics - Functional devices based on domain walls <p>For more information on research themes: Sergey.Artyukhin@iit.it</p>
Information on references	<p>Candidates must choose not less than one and not more than three referees to support the application. These contactss must be university professors or experts in the subject. It is preferable that at least one contact belongs to the University of Genoa or to the affiliated research bodies (CNR/INFN/IIT). The referents will be responsible for sending the reference letters, preferably written in English, within the deadline of the call. The letters must be addressed to the attention of the course coordinator Prof. Riccardo Ferrando to the e-mail address: phd@fisica.unige.it. The subject of the email must be: PHD REFERENCE LETTER - PHYSICS</p>
Foreign Languages	Excellent knowledge of both spoken and written English. A very basic knowledge of Italian is desirable.

Course in: COMPUTER SCIENCE AND SYSTEMS ENGINEERING**Curriculum: COMPUTER SCIENCE (CODE 8309)**

Coordinator: Delzanno Giorgio	
Department of IT, Bioengineering, Robotics and Systems Engineering (Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi – DIBRIS)	
Places: 2 – Grants: 2 (*)	
(*) 1 grant funded by Camelot Biomedical Systems S.r.l., the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 16.500. (*) 1 grant funded by DIBRIS funds by funds from the project “Cognitively-inspired architectures for human motion understanding” Aerospace USA, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	12.10.2020 - 2.00 pm at the Department of IT, Bioengineering, Robotics and Systems Engineering (Dipartimento di Informatica, bioingegneria, robotica e ingegneria dei sistemi – DIBRIS), Sede di Valletta Puggia, Via Dodecaneso 35, Genova. An interview and via video conference is also possible on the same day or on following days, should there be a high number of candidates.
Further information on how to present qualifications/publications	Instructions and guidelines to prepare a research project are available at the URL http://phd.dibris.unige.it/csse/index.php/how-to-apply
Exam Syllabus	The comparative procedure consists of - an assessment of the candidate qualifications - an interview to verify background and knowledge of the candidate as well as motivations and goals of the research proposal submitted with the application.
Research Themes	The research areas of the Computer Science Curriculum http://phd.dibris.unige.it/csse/ are: - Artificial intelligence and Multi-agent Systems - Data Science and Engineering - Secure and Reliable Systems - Human-Computer Interaction - Science and Technology for Health As described on the website http://phd.dibris.unige.it/csse/ . Only projects compatible with activities carried out by reaserach groups of Dibris and Camelot Biomedical Systems will be considered.
Information on references	Candidates must select between one and three external references (academic researchers or experts in the research area of the research proposal). Candidates must also indicate their names, qualifications, and affiliations in the application form. Furthermore, reference persons are required to send a recommendation letter for the candidate to the email: phd.compsci@dibris.unige.it before the deadline of the application. A template for the reference letter is available at the URL: http://phd.dibris.unige.it/csse/index.php/how-to-apply
Foreign Languages	English
Further Information	Coordinator of the PhD Course Prof. Giorgio Delzanno DIBRIS Via Dodecaneso 35, Genova (+39) 0103536603 giorgio.delzanno@unige.it

Course in: MECHANICAL, ENERGY AND MANAGEMENT ENGINEERING**Curriculum: MECHANICS, MEASUREMENTS AND MATERIALS (CODE 8310)**

Coordinator: Tagliafico Luca Antonio	
Department of Mechanical, Energetics, Management and Transport Engineering (Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti – DIME)	
Places: 1 – Grants: 1 (*)	
(*) 1 grant funded by IDS Spa, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	12.10.2020 – 9.00 am at the Department of Mechanical, Energetics, Management and Transport Engineering (Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti – DIME), MEC section, Via All’Opera Pia 15/a - 16145 Genova. Upon a motivated request, the interview may also take place electronically (Skype video conference) by getting in touch in time with the contact person for the curriculum Prof. Giovanni Berselli, (giovanni.berselli@unige.it) and copy to the Coordinator of the Doctoral Course Prof. Luca A. Tagliafico (tgl@dittec.unige.it) specifying the candidate’s name, Skype address and the curriculum he/she is referring to.
Further information on how to present qualifications/publications	The qualifications/publications must contain a detailed explanation and the development plan of how to present a possible research project, quoting the Robotics and Mechatronics (RM) syllabus, and the field qualifications/publications it refers to, in order to evaluate the candidate’s ability to organize and carry out research. If admitted to the doctoral course, the candidate will generally carry out his/her activity within the syllabus chosen for his/her project, but not necessarily on the specific activities described and planned in the actual project.
Exam Syllabus	The interview will focus on the discussion of the project, the qualifications presented by the candidate and on all the specific themes bound to the Mechanics, Measurements And Materials curriculum (MMM).
Research Themes	The Mechanics, Measurements and Materials (MMM) syllabus focuses on research themestypical of the Macrosectors it refers to. In particular the research themes suggested concern the functional and constructive design sector, CAD, CAE, PLM, PDM, additive manufacturing (polymer-based metals and composites (machine and material methods in combination), the mechanic behaviour of materials, materials and implants for medical, industrial and marin applications, calculus modelling and applications of composite components also for orthotics and biomedical applications, environmental compatibility and recycling, mechanical and mechatronic systems, motor vehicles, railway vehicles, airplanes, mechanical automation, working, raising and transport systems, lubrication, vibrations and noise, sound quality, experimental methods, diagnostics and qualifying of machines and components, monitoring and maintenance, reliability, reverse logistics.
Information on references	Candidates must choose not less than one and not more than three referees to support their candidature. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the contact person for the curriculum MMM, Prof. Giovanni Berselli, at the following address giovanni.berselli@unige.it and copy to the Coordinator Prof. Luca A. Tagliafico at the following address tgl@dittec.unige.it . The name, status and service place of the referees chosen by the candidates must be stated in their applications.
Foreign Languages	English
Further Information	Coordinator of the Doctoral Course Prof. Luca Antonio Tagliafico DIME/TEC via all’Opera Pia 15/A 16145 Genova (+39) 0103532880 tgl@dittec.unige.it Contact person for the MMM Curriculum Prof. Giovanni Berselli DIME/MEC via all’Opera Pia 15/A 16145 Genova (+39) 0103532839 giovanni.berselli@unige.it

Course in: MECHANICAL, ENERGY AND MANAGEMENT ENGINEERING**Curriculum: ROBOTICS AND MECHATRONICS (8311)**

Coordinator: Tagliafico Luca Antonio	
Department of Mechanical, Energetics, Management and Transport Engineering (Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti – DIME)	
Places: 1 – Grants: 1 (*)	
(*) 1 grant funded by DIME, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	12.10.2020 – 9.00 am at the Department of Mechanical, Energetics, Management and Transport Engineering (Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti – DIME), MEC section, Via All’Opera Pia 15/a - 16145 Genova. Upon a motivated request, the interview may also take place electronically (Skype video conference) by getting in touch in time with the contact person for the curriculum Matteo Zoppi (Matteo. zoppi@unige.it) and carbon copy to the Coordinator of the Doctoral Course Prof. Luca A. Tagliafico (tgl@ditec.unige.it) specifying the candidate’s name, Skype address and the curriculum he/she is referring to. (RM)
Further information on how to present qualifications/publications	The qualifications/publications must contain a detailed explanation and the development plan of a possible research project, quoting the Robotics and Mechatronics (RM) syllabus, and the field it refers to, in order to evaluate the candidate’s ability to organize and carry out research. If admitted to the doctoral course, the candidate will generally carry out his/her activity within the syllabus chosen for his/her project, but not necessarily on the specific activities described and planned in the actual project.
Exam Syllabus	The interview will be a discussion of the research project and qualifications/publications presented and on the correlated themes which feature in the RM curriculum.
Research Themes	The Robotics and Mechatronics (RM) syllabus focuses on research themes typical of the Macrosectors it refers to. In particular the research themes suggested concern the development of robot and manipulation, switch systems, home automation (domotics), remote manipulation, modular robots and robots for safety, intelligent mini-vehicles, assembly systems, fluid automation; models and simulation of systems for robotics and mechatronics, man-machine interaction, collaborative robotics, cooperative robotics, robot programming, integration of robotic systems, mechatronics for the automatic machine sectors and for the mechanical and marine mechanical industry.
Information on references	Candidates must choose not less than one and not more than three referees to support their candidature. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the contact person for the curriculum RM, Prof. Matteo Zoppi, at the following address matteo.zoppi@unige.it , and copy to the Coordinator Prof. Luca A. Tagliafico at the following address tgl@ditec.unige.it . The name, status and service place of the referees chosen by the candidates must be stated in their applications.
Foreign Languages	English
Further Information	Coordinator of the Doctoral Course Prof. Luca Antonio Tagliafico DIME/TEC via all’Opera Pia 15/A 16145 Genova (+39) 0103532880 tgl@ditec.unige.it Contact person for the RM Curriculum Prof. Matteo Zoppi DIME/MEC via all’Opera Pia 15/A 16145 Genova (+39) 0103532964 matteo.zoppi@unige.it

Course in: MECHANICAL, ENERGY AND MANAGEMENT ENGINEERING**Curriculum: TECHNOLOGIES AND PLANTS (CODE 8312)**

Coordinator: Tagliafico Luca Antonio	
Department of Mechanical, Energetics, Management and Transport Engineering (Dipartimento di Ingegneria meccanica, energetica, gestionale e dei trasporti – DIME)	
Places: 1 – Grants: 1 (*)	
(*) 1 grant from the University, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS
Further information on how to present qualifications/publications	The qualifications/publications must contain a detailed explanation and the development plan of how to present a possible research project, quoting the Technologies and Plants (TP) syllabus, and the field (TP.1 or TP.2) it refers to, in order to evaluate the candidate's ability to organize and carry out research. If admitted to the doctoral course, the candidate will generally carry out his/her activity within the syllabus chosen for his/her project, but not necessarily on the specific activities described in the actual project.
Research Themes	The Technologies and Plants (TP) syllabus focuses on research themes typical of the macro-sectors it refers to. It is organized into two specializations: TP.1 Processing Technologies and Systems Specialization: -Analysis of the variables that influence the mechanical and micro-structural characteristics of welded joints implemented with traditional and innovative techniques. -Study of the potential of robotic welding plants. -Singling out of solutions that allow the obtaining of glued joints with adequate characteristics (study of the surface preparation methods, analysis of the behaviour of adhesives in different environmental conditions). -Study of the problems concerning the fine-tuning and monitoring of the processing of metallic and non-metallic materials. -Study and singling out of construction techniques of moulds for polymeric materials. -Surface analysis and fine-tuning of techniques to obtain the desired degree of finishing and chemical reactivity. TP.2 Industrial Plants Specialization: -Design and management of production processes. -Technical and economic assessments of Engineering and industrialization of new products and production cycles. -Industrial sustainability, quality, safety, remanufacturing, demanufacturing. -Manufacturing strategies: Lean Manufacturing, World Class Manufacturing, Agile Manufacturing. -Industrial logistics. -Life Cycle Assessment of plants and processes. -Key enabling technology 4.0 for production and industrial plants: simulation, IoT, augmented and virtual realities, manufacturing analytics. The activities that will be carried out within the doctoral course aim at training young researchers to be capable of developing theoretical and experimental research starting from the analysis of the state of the art and autonomously developing innovative solutions.
Information on references	Candidates must choose not less than one and not more than three referees to support their candidature. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the contact person for the curriculum TP, Prof. Carla Gambaro, at the following address Carla.Gambaro@unige.it and copy to the Coordinator Prof. Luca A. Tagliafico at the following address tgl@ditec.unige . The name, status and service place of the referees chosen by the candidates must be stated in their applications.
Foreign Languages	English
Further Information	Coordinator of the Doctoral Course: Prof. Luca A. Tagliafico DIME/TEC via all'Opera Pia 15/A 16145 Genova

(+39) 0103532880
tgl@ditec.unige.it

Contact person for the TP curriculum:
Prof. Carla Gambaro
DIME/MIG
via all'Opera Pia 15
16145 Genova
(+39) 0103532889
gambaro@diptem.unige.it

Course in: MATHEMATICS AND APPLICATIONS

Curriculum: MATHEMATICAL METHODS FOR THE ANALYSIS OF DATA (CODE 8313)

Coordinator: Vigni Stefano	
Department of Mathematics (Dipartimento di Matematica – DIMA)	
Places: 3 – Grants: 3 (*)	
(*) 1 grant funded by DIMA, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28. (*) 1 grant funded by ESAOTE S.p.A., the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28. (*) 1 grant funded by Roche S.p.A., the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	14.10.2020 - 9.00 am - - Remote interview (via Skype) The interviews may continue on 15.10.2020. In due course, candidates will be contacted by the examining commission.
Exam Syllabus	The comparative assessment procedure consists in the assessment of qualifications/publications and in interview on the research project presented by the candidate.
Further information on how to present qualifications/publications	Besides the documentation listed in art. 3 of the public notice, candidates must present: - if available, their 5 year degree thesis (to be uploaded online). Furthermore: - in their curriculum their three year degree and 5 year degree marks should be indicated; - a research project (2 pages max.) which describes the research theme they intend to work on during the Doctoral Course.
Research Themes	Tema 1 (Roche): Development of artificial intelligence algorithms in personalized healthcare Abstract: This project aims to investigate how artificial intelligence (simulation, inverse problems, machine learning) may be utilized to better understand healthcare data with the objective to accelerate the development of new drugs and the assessment of their effectiveness and impact even at a societal level. Tema 2: Computational analysis of multi-modal biomedical and health data Abstract: This project is concerned with the development of artificial intelligence techniques for the analysis of multi-modal biomedical and health data. In the three years of this project, the PhD student will work at machine learning, inverse and simulation problems aimed at the interpretation of oncological and neurological data, including imaging, omics, biochemical and health data. Tema 3 (Esaote): Development and optimisation of algorithms for the formation and processing of ultrasonic biomedical images
Information on references	Candidates must choose not less than one and not more than three referees to support their candidature. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the Coordinator of the Doctoral Course at the following address: Prof. Stefano Vigni Dipartimento di Matematica, Università di Genova via Dodecaneso 35 16146 Genova or, alternatively, to the email address: vigni@dima.unige.it The name, status and service place of the referees chosen by the candidates must be stated in their applications.
Foreign Languages	English
Further Information	Prof. Stefano Vigni Dipartimento di Matematica, Università di Genova via Dodecaneso 35 16146 Genova GE E-mail: vigni@dima.unige.it

Course in: NEUROSCIENCES**In agreement with the Foundation of the Italian Institute of Technology (Fondazione Istituto Italiano di Tecnologia – IIT)****Curriculum: NEUROSCIENCES AND NEUROTECHNOLOGIES (CODE 8314)**

Coordinator: Schenone Angelo	
Department of Neurosciences, rehabilitation, ophthalmology, genetics and mother and child sciences (Dipartimento di Neuroscienze, riabilitazione, oftalmologia, genetica e scienze materno-infantili – DINOEMI)	
Places: 3 (°) – Grants 2 (*)	
(*) 2 grants funded by the Istituto Italiano di Tecnologia (IIT), the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 16.500,00.	
(°) 2 specifically reserved to scholarship holders within the international mobility programme: H2020-MSCA-ITN-2019, progetto ENTRAIN VISION: European Network for integrated training on Innovative Therapies for Vision Restoration	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS
Further information on how to present qualifications/publications	The following documentation must be sent in the manner established in the competition notice: a) title and brief description of the degree thesis; b) list of exams taken, with marks; c) postgraduate research activities (including abstracts at conferences and scientific publications); d) an original research project in English signed by the candidate, on Neuroscience topics related to the research topics of the call, of a maximum of 10 pages (Arial 11 character).The project must include: Background, rationale, Experimental Plan, Expected Results, Timeline of the project, References.; e) names, qualification and place of employment of the referees not less than 1 and not more than 3, who must send the reference letters on the candidate directly to the email address: rossana.ciancio@iit.it ; f) declaration of knowledge of English as used language in the doctoral school.
Research Themes	Here are listed the titles of research themes; to have an overview of complete research themes abstract go to: https://www.iit.it/phd-school a) Functional dissection of the piRNA pathway in mammalian adult neurogenesis – Tutor: Davide De Pietri Tonelli b) Large scale analysis of protein-RNA interactions in neurological diseases - Gian Gaetano Tartaglia; c) Development of membrane-targeted azobenzene-based compounds for vision restoration (progetto ENTRAIN VISION) Tutors: Fabio Benfenati, Guglielmo Lanzani
Information on references	Candidates must choose not less than one and not more than three referees to support their application. These contacts must be university professors or experts in the subject. The referents will be responsible for sending the reference letters in pdf format, within the deadline of the call, to the contact person of the Curriculum in Neuroscience and Brain Technologies, Prof. Fabio Benfenati, to the email address: rossana.ciancio@iit.it .
Foreign Languages	English
Further Information	For further information, please write to: rossana.ciancio@iit.it

Course in: SCIENCE AND TECHNOLOGY OF CHEMISTRY AND MATERIALS

In agreement with the Foundation of the Italian Institute of Technology (Fondazione Istituto Italiano di Tecnologia - IIT)

Curriculum: CHEMICAL SCIENCES AND TECNOLOGIES (CODE 8315)

Coordinator: : Riva Renata	
Department of Chemistry and Industrial Chemistry (Dipartimento di Chimica e Chimica Industriale – DCCI)	
Places: 1 (°) – Grants: 0	
<p>(°) 1 place covered by research grants funded by the program H2020 - WorkProgramme 2018-2020, Marie Skłodowska-Curie Innovative Training Networks "Characterization, compatibilization, processing and properties of recycled polyolefins" (REPOL).</p> <p>Beneficiaries must be categorised as early-stage researchers (ESR), or they rather must be in their first 4 years of their research career at the date of the recruitment and not to have been already awarded a Phd degree before and satisfy the 'mobility rule': they must not have resided or carried out their main activity (work, study etc.) in Italy for more than 12 months in the three years prior to the date of recruitment.</p>	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	<p>13.10.2020 – 10.00 am at the Department of Chemistry and Industrial Chemistry (Dipartimento di Chimica e Chimica Industriale – DCCI), via Dodecaneso 31, Genova.</p> <p>The interview may take place electronically (Skype, Teams etc.), for justified reasons. For the purpose of identification, the candidate has to show the original document (the same provided in the application).</p> <p>The justified request for videoconferencing must be sent no later than 10/10/2020 by e-mail to dario.cavallo@unige.it (subject: PhD_interview).</p>
Further information on how to present qualifications/publications	<p>Evaluable qualifications:</p> <ol style="list-style-type: none"> 1. educational qualifications with marks; 2. transcript of records (list of exams with marks); 3. recommendation letters (maximum three); 4. research project written in Italian or English; 5. curriculum vitae et studiorum; 6. additional qualifications (postgraduate qualifications, publications in scientific journals, congress presentations, patents, study or research awards). <p>All candidates have to attach to the application the certificates related to all the academic qualifications, reporting the mark and duration of the study cycles. For students not yet graduated, who are admitted sub condicione, the presentation of the certificate is required with the marks obtained in the individual exams.</p> <p>Foreign applicants must also clearly report the number of years corresponding to each cycle of studies carried out before enrolling in the University.</p> <p>In case of admission to the doctorate, the candidate will carry out his research not necessarily in the specific activities described in the project he/she has presented.</p>
Exam Syllabus	The candidate will discuss with the Committee the research project he/she has presented. The Committee will evaluate the research project for its originality, feasibility, methodology, timeline and relevance within the research topics listed in the call. In this way the Committee will be able to evaluate the candidate's attitude to develop a scientific project. During the presentation the Committee will ascertain the candidate knowledge of English language.
Research Themes	Polymeric, hybrid and nanocomposite materials.
Information on references	<p>Candidates must provide not less than one and not more than three recommendation letters to support their application. The authors are university professors or experts in the research topics of the PhD course and they must provide the letters within the deadline of the call, exclusively by email to grotti@unige.it (subject: PhD_letter).</p> <p>The name, status and place of employment of the authors of the recommendation letters must be stated in the application.</p>
Foreign Languages	English
Further Information	<p>Prof. Dario Cavallo (+39) 0103356086 dario.cavallo@unige.it</p> <p>Administrative contact person Mrs. Noemi Pretelli (+39) 0103358752 noemi@chimica.unige.it</p>

Course in: SCIENCE AND TECHNOLOGY FOR ELECTRICAL ENGINEERING, COMPLEX SYSTEMS FOR MOBILITY

Curriculum: ELECTRICAL ENGINEERING (CODE 8316)

Coordinator: Marchesoni Mario	
Department of Marine, Electrical, Electronic and Telecommunications Engineering (Dipartimento di Ingegneria navale, elettrica, elettronica e delle telecomunicazioni – DITEN)	
Places: 2 (°) – Grants: 0.	
(°) 1 place reserved for the employees of IESolutions Soluzioni Intelligenti per l'Energia s.r.l. (°) 1 place reserved for the employees of AlgoWatt S.p.A.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS
Further information on how to present qualifications/publications	Applicants will have to submit: 1) a research project up to 10 pages long; 2) an updated CV; 3) a short abstract of the master's thesis, if available. Candidates who have not yet graduated must present the list and the marks of the exams passed in the master's degree program up to the moment of submission of the application.
Research Themes	(A) Automation: industry, process and transport. Manufacturing plants modeling. Management, monitoring and control of electrical systems. Innovative techniques and optimization for electromagnetic device design. Electric drives for robotics, manufacturing automation and processes. Advanced instrumentation and fieldbus applications. (B) Energy: Protection from electrostatic hazard. Insulation defects evaluation with partial discharge measurement. Technical-economic evaluations for the energy market. Energy efficiency. Distributed generation. Smartgrid. Quality of service. Design of circuit breakers, electric machines and actuators and magnetic devices for energy storage. Static energy converters. (C) Electronics: Modeling of power electronic systems and components. Advanced control techniques for converters. Electrostatic discharge protection systems for electronic devices. Complex systems modeling. Analysis and synthesis of circuits and nonlinear dynamic systems. Neural networks. Electronic systems design. (D) Industrial electromagnetic compatibility: Electromagnetic compatibility among electrical, power electronic and communications systems. Modeling, simulation and measurement methods. Lightning current numerical modeling. Electromagnetic modeling with full Maxwell approach. (E) Transport: Traffic management and control systems. Modeling for RAMS predictive analysis. Electrified systems for public transport. Energy management of electric and hybrid vehicles. Electric traction motor diagnostics. Electric drives for rail traction, road and ship propulsion. (F) Environment: Numerical simulation and measurement and field reduction techniques. Optimized design of low emission devices. Low environmental impact systems.
Information on references	Candidates must choose not less than one and not more than three referees to support the application. These referees must be university professors or experts in the subject and it will be their concern to send reference letters, within the deadline of the public notice, to the Coordinator of the Doctoral Course at the following address: mario.marchesoni@unige.it . The name, status and service place of the referees chosen by the candidates must be stated in their applications.
Foreign Languages	English
Further Information	Prof. Mario Marchesoni University of Genova DITEN (Department of Electrical, Electronics and Telecommunication Engineering and Naval Architecture) Via all'Opera Pia 11a, I-16145 - Genova, Italy mario.marchesoni@unige.it tel: +39 0103532183; fax: +39 0103532700; Laura Brunelli University of Genova DITEN (Department of Electrical, Electronics and Telecommunication Engineering and Naval Architecture) Via all'Opera Pia 11a, I-16145 - Genova, Italy brunelli@dinav.unige.it tel: +39 0103532286; fax: + 39 0103532777

Course in: SECURITY, RISK AND VULNERABILITY**Doctoral Course in agreement with the Bruno Kessler Foundation (Fondazione Bruno Kessler – FBK)****Curriculum: CYBERSECURITY AND RELIABLE ARTIFICIAL INTELLIGENCE (CODICE 8317)**

Coordinator: Alessandro Armando	
CENTRO STRATEGICO INTERDIPARTIMENTALE SU SICUREZZA, RISCHIO E VULNERABILITÀ	
Places: 1 – Grants: 1 (*)	
(*) 1 grant funded by Fondazione FBK, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	15.10.2020 - 9:00 am - Remote interview The candidate must have a reliable internet connection, in order to allow the test to take place.
Further information on how to present qualifications/publications	The research project (10 pages max) must include the candidate's research interests and motivations, a short abstract, the State of the Art and relevant references and the aims of the research activity. The application (curriculum) must contain Transcripts of Records, stating the courses attended and marks obtained throughout the candidate's university career (Bachelor and M.Sc. degrees). Undergraduate candidates at the deadline of the public notice may submit further documentation, which they deem appropriate, in order to document their university career.
Exam Syllabus	The interview will be a detailed scientific discussion on the candidate's research project (10 pages max), Curriculum Vitae et Studiorum (10 pages max) and qualifications/publications (10 pages max). The interview is also aimed at verifying that the candidate has adequate knowledge to deal with studies in the chosen curriculum.
Research Themes	FBK Research line is: - AI-based Network Security Further information and guidelines for the writing the research projects are available at http://sicurezza.unige.it/dottorato
Information on references	Candidates must choose at least one and no more than three referees to support their candidature. The referees must be university professors or experts in the subject. If the referee is not a university professor, he/she must also send the Curriculum Vitae and a list of publications. The reference letter must be send by the referees ,within the deadline of the public notice, to the Coordinator of the PhD program (alessandro.armando@unige.it). The name, status and current position of the referees chosen by the candidate must be stated in the application. Reference letters that are not presented as requested will not be taken into consideration.
Foreign Languages	English
Further Information	Coordinatore of the PhD Program: Prof. Alessandro Armando DIBRIS, Via Dodecaneso 35, Genova (+39) 3281003201 – alessandro.armando@unige.it

Course in: SECURITY, RISK AND VULNERABILITY

Doctoral Course in agreement with the Bruno Kessler Foundation (Fondazione Bruno Kessler – FBK)

Curriculum: MANAGEMENT AND SECURITY (CODICE 8318)

Coordinator: Alessandro Armando	
CENTRO STRATEGICO INTERDIPARTIMENTALE SU SICUREZZA, RISCHIO E VULNERABILITÀ	
Places: 1 – Grants: 1 (*).	
(*) 1 grant fund by Dipartimento di Economia, the annual gross amount of the grant, including social security expenses to be paid by the recipient, is € 15.343,28.	
Comparative assessment procedure	QUALIFICATIONS/PUBLICATIONS AND INTERVIEW
Interview	12.10.2020 – 2.30 pm - via Skype Candidates will be notified about it and in the case of large numbers of candidates, a calendar of appointments can be defined.
Further information on how to present qualifications/publications	“Qualifications” are the information contained in the application and in the Curriculum Vitae et Studiorum, the research project, as well as further qualifications. The application form and its attachment can be written in Italian or English.
Exam Syllabus	The interview will be a discussion on the Curriculum Vitae et Studiorum and qualifications/publications and an in depth presentation of the candidate’s research project. The interview is also aimed at verifying that the candidate has adequate knowledge to deal with studies in the chosen curriculum.
Research Themes	Lines of research characterizing the curriculum are focused on the following macro-areas: a. industry analysis and case studies, in relationship to security b. security as shared topic among organizations (with specific reference to aspects connected with workers security and vulnerability)
Information on references	Candidates must choose at least one and no more than three referees to support their candidature. The referees must be university professors or experts in the subject. If the referee is not a university professor, he/she must also send the Curriculum Vitae and a list of publications. The reference letter must be send by the referees, within the deadline of the public notice, to the coordinator of the curriculum (Teresina.torre@economia.unige.it), object: reference letter – Name –phd. The name, status and current position of the referees chosen by the candidate must be stated in the application. Reference letters that are not presented as requested will not be taken into consideration.
Foreign Languages	English
Further Information	Coordinator of the PhD Course Prof. Alessandro Armando DIBRIS, Via Dodecaneso 35, Genova (+39) 3281003201 – alessandro.armando@unige.it Responsible of the Curriculum Prof.ssa Teresina Torre DIEC, Via Vivaldi 5. Genova (+39) teresina.torre@economia.unige.it