



Freie Universität Bozen  
Libera Università di Bolzano  
Università Lìedia de Bulsan

## **FREE UNIVERSITY OF BOZEN-BOLZANO**

### **SELECTION PROCEDURES**

**for the conferral of**

**13**

**fixed-time RESEARCH ASSISTANT CONTRACT**

**for**

**COLLABORATION at RESEARCH ACTIVITY**

Vice Rector's Decree

of 13.02.2019

no. 11/2019

# FREE UNIVERSITY OF BOZEN-BOLZANO

## VICE RECTOR'S DECREE

### no. 11/2019

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Selection procedures for the awarding of 13 fixed-time research assistant contract for collaboration at research activity

### THE VICE RECTOR

**IN VIEW OF** the Statute of the Free University of Bozen-Bolzano;

**IN VIEW OF** the law 30th December 2010, no. 240, stating "Provisions concerning the organization of universities, academic personnel and recruitment, as well as the delegation of the Government for providing incentives for the quality and efficiency of the university system", and in particular its art. 22 concerning the awarding of research assistant contracts for the performance of research activity;

**IN VIEW OF** the Ministerial Decree 9th March 2011, no. 102, determining the gross minimum amount of the research assistant contract advertised according to Art. 22 of the law 30th December 2010, no. 240;

**IN VIEW OF** the 'Regulation of the research assistant contracts according to Art. 22 of the law 240/2010, in force;

**IN VIEW OF** the 'Regulation concerning the remuneration of researcher and holder of research assistant contracts, in force;

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 20/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/09 (Agricultural machinery and mechanization);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 21/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/11 (General and Applied Entomology);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 22/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/16 (Agricultural Microbiology);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 23/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/16 (Agricultural Microbiology);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 05.12.2018, no. 259/2018, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector CHIM/06 (Organic chemistry);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 24/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydrology, Hydraulic and Maritime Constructions);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 25/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydrology, Hydraulic and Maritime Constructions);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 26/2019, requesting the awarding of 1 fixed-time research assistant contract for

collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydrology, Hydraulic and Maritime Constructions);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 27/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydrology, Hydraulic and Maritime Constructions);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 05.12.2018, no. 260/2018, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-IND/11 (Building Physics and Building Energy Systems);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 28/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-IND/17 (Mechanical Industrial Plants);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 05.12.2018, no. 261/2018, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-INF/01 (Electronic Engineering);

**IN VIEW OF** the deliberation of the Faculty Council of the Faculty of Science and Technology from 30.01.2019, no. 29/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-INF/04 (Systems and control engineering);

**VERIFIED** that the fixed-time research assistant contracts for collaboration at research activity requested by the Faculty enjoy the necessary financial backing;

## DECREES

### Art. 1

#### *Object of the selection procedure*

The Free University of Bolzano, hereinafter referred to as University, announces 13 selection procedures for the awarding of 13 fixed-time research assistant contract for collaboration at research activity for the faculty and disciplinary-scientific sector hereafter indicated.

### 1. Faculty of Science and Technology

**Number of places:** 1

**PIS:** 143877 (TN200F)

**CUP:** I56C18000880005

Acronimo progetto "BIO-TRACT-EFFICIENCY" Codice progetto "3002"  
CRC call 2018

**Supervisor:** Dr. Marco Bietresato

**Disciplinary-scientific sector:** AGR/09 (Agricultural machinery and mechanization)

**Competition sector:** 07/C1 (Agricultural, forest and biosystems engineering)

**Title of research project:** BIO-TRACT-EFFICIENCY Experimental investigation on the efficiency of agricultural machines powered with different fuels

**Description of the research activity:** This project has the aim of giving a comprehensive insight on the use of liquid biofuels in internal combustion engines for agricultural machines and/or cogeneration devices for forestry and agricultural appliances, by: (1) verifying the characteristics and the potential technical limitations of alternative biofuels from agricultural wastes or by-products that can be potentially used in these engines, (2) evaluating experimentally the performances of agricultural internal combustion engines (small-scale and real-scale engines) to profitably and sustainably produce transform/consume energy, heat and electricity and inquiring the characteristic curves in many operative conditions with a dynamometric brake, (3) developing proper equipment to assess the efficiency of tractor's transmissions and using this equipment to optimize the operation of the engine with respect to the transmission, considering the system for power generation-and-delivery on its whole.

The experimentation phase will involve both some small-scale engines and some tractors (used also for the whole powertrain evaluation). The operative part of the project will start with the design, building and setup of a tractor test-bench to assess the tractor performance also at the wheel.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:** The candidate for this position of research fellow must hold a Master Degree in Mechanical Engineering or Energy and Nuclear Engineering or a neighbouring field in case of an equivalent foreign study title.

The candidate must have a good mastery in the use of generic experimental equipment (sensors, data loggers). Furthermore, a good experience in performing laboratory tests is required.

**Preferential title:** PhD in Mechanical or Energy Engineering, or in Agricultural Engineering, or equivalent foreign study title.

**Type of selection:** Qualifications and exam

**The assessment criteria (max. 100 points):** They will be established during the first meeting.

**Criteria for determining the part of the candidate in publications with more than one author:**

In order of priority, it will refer to:

- a) the objective possibility of identifying the personal contribution of the candidate on the basis of unequivocal indications contained in the publications;
- b) consistency with the rest of the scientific activity;
- c) the reputation enjoyed by the candidate in the academic world as a specific subject;
- d) the name order: guide, corresponding, coordinator.

**Criteria for the evaluation for the interview:**

In the oral test the followings will be evaluated:

- the applicant's ability to motivate and justify the choice and contents of the research topics that will explain;
- the methodological rigor;
- the clarity of presentation;
- the degree of knowledge of the subject required by the call;
- the degree of mastery of research topics;
- the updated level of knowledge of the scientific disciplinary sector for which the call was open;
- knowledge of the languages foreseen by the call.

**Language of the exam:** Italian and English

**Duration of the exam:** 45 min

**Object of the exam:**

- Discussion on CV
- Past experiences on professional and research activities, with a focus on aspects that are relevant for this call
- Personal motivations and self-evaluation to the own capabilities to contribute to the realization of the objectives of the call.

**Total minimum score necessary for admission to the oral exams:** 20/100 points

**Total minimum score in order to declare the candidate suitable for the position:** 30/100 points

**Maximum number of publications:** 10

**Place of work:** Bolzano-Bozen

**The gross annual remuneration:** 21.800,00 Euro

**Duration of the contract:** 12 months

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## **2. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 144205 (TN2220)

**CUP:** H32F16000420009

Acronimo progetto "Dromytal", Codice progetto "FESR1021"  
Programma EFRE-FESR 2014-2020

**Project responsible:** Dr. Sergio Angeli

**Disciplinary-scientific sector:** AGR/11 (General and Applied Entomology)

**Competition sector:** 07/D1 (Plant pathology and Entomology)

**Title of research project:** DROMYTAL - *Drosophila suzukii* management through yeast-based trapping lures

**Description of the research activity:** The main goal of the project is to develop an effective pest control strategy based on the behavioural manipulation of the insect in order to reduce the load or eliminate the residues of chemical insecticides on the fruits. It is expected to develop a trap system, which is able to attract both sexes of *D. suzukii* and to selectively control the pest. The project outputs include: (i) the formulation of a lure with an attractive and a feeding stimulant component based on yeast cultures and (ii) the elaboration of suitable application methods for different cultivation systems and cultural species. The methods should allow the transition from basic research to the field application of the final product. The co-worker will focus on the implementation of the attractive lure through the collaboration between different working groups in order to obtain the interdisciplinary approach necessary for the development of this product. Knowledge gaps about the *D. suzukii* biology and behaviour towards yeasts will be filled. Chemical characterisation of volatile compounds released yeast strains and by yeast treated plant will be achieved. The biologically-active volatile compounds will be characterised with an electroantennographic approach, and behavioural experiments with pure compounds as well as with specific blend will allow to identify their ecological rules, prior to perform open field experiments. For this purpose, the experiments will be located in vineyards and orchards (of berries and cherries) located in different environments of South Tyrol. The efficacy of the "attract & kill" system will be done by means of localized treatments on vegetative parts of plants (but not on fruits), and compare it to a conventional control strategy where insecticides are used. The experiments will be done in collaboration with Laimburg Research Centre as leading partner of the project and the private company Agrifutur srl, interested in developing innovative and sustainable measures for agricultural production and eventually in developing a commercial product, ensuring the result's sustainability.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

- The applicant should have a Master degree in Entomology, Agriculture, Biology or equivalent title of the old regulation or equivalent foreign title
- Experiences in interdisciplinary research
- very good knowledge in English (proven by language certificate)

**Preferential title:** PhD or equivalent foreign study title in Entomology, Agriculture, Biology or a neighboring field

**Type of selection:** By titles

**Assessment criteria (max. 100 points):**

Academic degrees (max. 40 points):

Doctoral research (PhD) on a topic related to the position: up to **30 points**;

Presentations at conferences: **max 10 points**.

Publications (max. 20 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector and with the research activity;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research experience (max. 40 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships in Research Institution and assignments in domestic corporations, international or foreign corporations, as long as the beginning and the duration of the collaboration is evidenced

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the commission will evaluate the position of the candidate among the list of co-author (first, last or corresponding) and the number of co-authors.

**Total minimum score in order to declare the candidate suitable for the position:** points 60/100

**Maximum number of publications:** 10

**Place of work:** UNIBZ - Bolzano-Bozen

**The gross annual remuneration:** 26.130,00 Euro

**Duration of the contract:** 12 months, possibly extendable until 31.10.2020, premise a positive evaluation of the activity carried out and the verification of the effective availability of the budget funds.

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### **3. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143917 (TN200K)

**CUP:** I56C18000910005

**Supervisor:** Prof. Raffaella Di Cagno

**Disciplinary-scientific sector:** AGR/16 (Agricultural Microbiology)

**Competition sector:** 07/F2 (Agricultural Microbiology)

**Title of research project:** PRO4HEALTHFOOD - Processing for sustainable and healthy sauerkraut: a traditional South Tyrol fermented food

**Description of the research activity:** PRO4HEALTHFOOD aims at developing a new conceptual/ecological mechanistic view on how the ecological factors affect the shaping and assembly of microbiomes during cabbage fermentation.

In particular, the following activities will be carried out:

- application of culture-independent approaches for the assessment of the microbiota structure in sauerkraut samples;
- evaluation of the functions of microbial populations using advanced methods of metagenomics and analysis of complex data sets;
- analyses of the main microbial metabolites and profiles of phenolic compounds and glucosinolates occurring during cabbage fermentation.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher with PhD: PhD or equivalent foreign study title in Food Science and Technology or a neighboring field

**Type of selection:** Qualifications and exam.

**Assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- Master's Degree in Food Sciences or equivalent foreign study title: max. **11 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **11 points**;
- Doctoral research (PhD) in Food Science and Technology up to a maximum of **20 points**;

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 12 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics

- the level of knowledge update of the specific disciplinary sector for which the research grant has been tendered
- the knowledge of the language(s) mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 30 minutes

**Object of the exam (max. 10 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 40/90

**Total minimum score in order to declare the candidate suitable for the position:** 45/100

**Maximum number of publications:** 10

**Place of work:** NOI TechPark – Free University of Bolzano

**The gross annual remuneration:** 23.300,00 €

**Duration of the contract:** 1 year without renewal

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#### **4. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143959 (TN2239)

**CUP:** I53C18000020009

Acronimo progetto "Micro4Food", Codice progetto "FESR1065"  
Programma EFRE-FESR 2014-2020

**Supervisor:** Prof. Marco Gobetti

**Disciplinary-scientific sector:** AGR/16 (Agricultural Microbiology)

**Competition sector:** 07/F2 (Agricultural Microbiology)

**Title of research project:** MICRO4FOOD - Microbe and food proteomics: a platform for process and product innovation, sustainability and authenticity

**Description of the research activity:** Among the "omics", proteomics is certainly the most versatile and effective, offering a holistic approach to the selection and assembly of microbial communities responsible for food production, the conditioning of the gastrointestinal microbiome in response to diet, and the improvement of food quality, with reference to nutritional, functional attributes. The approach that will be used is that of a biotechnological "chain" with a multi-purpose application. In particular, the following activities will be carried out:

- application of culture-independent approaches for the assessment of the microbiota structure in fermented foods;
- evaluation of the functions of microbial populations using advanced methods of proteomics and analysis of complex data sets;



- analyses of the main microbial metabolites occurring during food fermentation.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher with PhD: PhD or equivalent foreign study title in Food Science and Technology or a neighboring field

**Type of selection:** Qualifications and exam

**Assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- Master's Degree in Food Sciences or equivalent foreign study title: max. **11 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **11 points**;
- Doctoral research (PhD) in Food Science and Technology up to a maximum of **20 points**;

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 12 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge update of the specific disciplinary sector for which the research grant has been tendered
- the knowledge of the language(s) mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 30 minutes

**Object of the exam (max. 10 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 40/90

**Total minimum score in order to declare the candidate suitable for the position:** 45/100

**Maximum number of publications:** 10

**Place of work:** NOI TechPark – Free University of Bolzano

**The gross annual remuneration:** 24.200,00 €

**Duration of the contract:** 1 year without renewal

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## 5. Faculty of Science and Technology

**Number of places:** 1

**PIS:** 141927 (TN200H)

**CUP:** I56C18000940005

**Supervisor:** Dr. Stefano Benini

**Disciplinary-scientific sector:** CHIM/06 (Organic chemistry)

**Competition sector:** 03/C1 (Organic chemistry)

**Title of research project:** TowEr - Towards the understanding of *Erwinia amylovora* exopolysaccharide biosynthesis

**Description of the research activity:** Structural and functional characterization of enzymes including gene cloning, protein purification and crystallization

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher without PhD: master's degree in chemistry, physics, biology, agricultural science, pharmacy, crystallography or equivalent foreign study title and have a proven track record in research activities or work experience in the field of gene cloning and protein purification.

In particular, the candidate must show a good expertise in using molecular biology.

**Preferential title:** PhD or equivalent foreign study title in chemistry, physics, biology, agricultural science, pharmacy, crystallography or a relating scientific field.

**Type of selection:** qualifications and interview

**Assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- Master's Degree in chemistry, physics, biology, agricultural science, pharmacy, crystallography or equivalent foreign study title: max. **18 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **4 points**;
- Doctoral research (PhD) in chemistry, physics, biology, agricultural science, pharmacy, crystallography up to a maximum of **20 points**;

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

**Research and practical experience (max. 12 points):**

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge update of the specific disciplinary sector for which the research grant has been tendered
- the knowledge of the language(s) mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 30 minutes

**Object of the exam (max. 10 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 60/90

**Total minimum score in order to declare the candidate suitable for the position: /**

**Maximum number of publications:** 10

**Place of work:** Bolzano-Bozen

**The gross annual remuneration:** Euro 20.100,00

**Duration of the contract:** 12 months, renewable for other 12 months, given both the positive evaluation of the activity and the availability of the project budget.

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## **6. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143991 - POS 1 - (TN2221)

**CUP:** I52F16000810005

Acronimo progetto "Sediplan-r", Codice progetto "FESR1002"  
Programma EFRE-FESR 2014-2020

**Project responsible:** Prof. Francesco Comiti (PI)  
**Project supervisor:** Prof. Maurizio Righetti (CO-I)

**Disciplinary-scientific sector:** ICAR/02 (Hydrology, Hydraulic and Maritime Constructions) – Pos. 1

**Competition Sector:** 08/A1 (Hydraulics, Hydrology, Hydraulic and Maritime Constructions)

**Title of research project:** SEDIPLAN-r Sediment budgeting and planning for rivers in South-Tyrol: from hazard mitigation to environmental restoration

**Description of the research activity:** Integrated modeling of fluvial eco-systems for environmental analysis, river restoration and rehabilitation and mitigation strategies.

The research activity requires skills in ecology and river hydraulics. It will be focused on the calibration and determination of the parameters necessary for the hydraulic and ecological modeling of rivers through hydraulic-ecological relationships (for example, preference curves) with particular reference to the interaction of fine sediment - habitat, and also hydropeaking and flushing from reservoirs. The activities will concern field and laboratory ecological and hydraulic measurements to acquire the data necessary for the proposal of an approach or preference curves for the quantification of the effects of concentrations of fine sediments (at the bottom and in suspension) with regard to the habitat for target species to be defined, such as benthos and / or fish.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Master's Degree in Engineering for the Environment and the Territory, Ecology or Biological Sciences or equivalent foreign study title.

Proven research experience and appropriate knowledge in the field of habitat modeling and field and laboratory experiments in Alpine watercourses, which is a prerequisite for carrying out the research activity that is the subject of the call.

**Preferential title:** PhD or equivalent foreign study title in Environmental Engineering or Environmental Sciences or a neighboring field.

**Type of selection:** Titles and oral exam

**The assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- Master's Degree in Environmental Engineering, Engineering for the Environment and the Territory, Ecology or Biological Sciences or equivalent foreign study title: max. **18 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **4 points**;
- Doctoral research (PhD) in Environmental Engineering, Environmental Sciences, Ecology, or equivalent foreign study, up to a maximum of **20 points**;

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 12 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge update of the specific disciplinary sector for which the research grant has been tendered
- the knowledge of the language mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 30 minutes

**Object of the exam (max. 10 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 45/90

**Total minimum score in order to declare the candidate suitable for the position:** 50/100

**Maximum number of publications:** 10

**Place of work:** Bolzano

**The gross annual remuneration:** 23.000,00 Euro

**Duration of the contract:** 12 months, renewable for other 6 months, given both the positive evaluation of the activity and the availability of the project budget.

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## **7. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143992 - POS 2 - (TN2221)

**CUP:** I52F16000810005

Acronimo progetto "Sediplan-r", Codice progetto "FESR1002"  
Programma EFRE-FESR 2014-2020

**Project responsible:** Prof. Francesco Comiti (PI)

**Project supervisor:** Prof. Maurizio Righetti (CO-I)

**Disciplinary-scientific sector:** ICAR/02 (Hydrology, Hydraulic and Maritime Constructions) – Pos. 2

**Competition Sector:** 08/A1 (Hydraulics, Hydrology, Hydraulic and Maritime Constructions)

**Title of research project:** SEDIPLAN-r Sediment budgeting and planning for rivers in South-Tyrol: from hazard mitigation to environmental restoration

**Description of the research activity:** The study of fine sediment transport in mountain rivers, such as those found in South Tyrol, is of primary importance for understanding the morphological dynamics and estimating the effects they have in the water basins. The presence of storage hydropower plants and run-of-the-river plants determines a general reduction in sediment transport downstream of the structure. On the other hand, periodically, safety and cleaning operations (flushing) must be carried out that can cause fine sediment waves with high concentrations downstream of the structure.

The research activity will focus on the implementation of fluid-dynamic models in order to simulate the hydraulic dynamics and sediment transport (silting and flushing) in a hydropower basin. Furthermore, it will be necessary to take into account the need to implement the CFD code which has the possibility to simulate the lake hydrodynamics also in presence of high sediment concentration currents.

Finally, the candidate can perform experimental measurements in the field and in the laboratory for the calibration of the CFD model.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Master Degree in Engineering for the Environment and the Territory, Energy Engineering, Mechanical or Aerospace Engineering, Mathematical or equivalent foreign study title.

Proven research experience and appropriate knowledge in the field of computational fluid dynamics, which is a prerequisite for carrying out the research activity that is the subject of the call.

**Preferential title:** PhD or equivalent foreign study title in Environmental Engineering, Industrial Engineering or Mathematics and Fluid Dynamics or a neighboring field.

**Type of selection:** Titles and oral exam

**The assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- Master's Degree in Engineering for the Environment and the Territory, Energy Engineering, Mechanical or Aerospace Engineering, Mathematical or equivalent foreign study: max. **18 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **4 points**;
- Doctoral research (PhD) in Environmental Engineering, Industrial Engineering or Mathematics and Fluid Dynamics or equivalent foreign study title, up to a maximum of **20 points**;

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 12 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge update of the specific disciplinary sector for which the research grant has been tendered
- the knowledge of the language mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 30 minutes

**Object of the exam (max. 10 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 45/90

**Total minimum score in order to declare the candidate suitable for the position:** 50/100

**Maximum number of publications:** 10

**Place of work:** Bolzano-Bozen

**The gross annual remuneration:** 24.000,00 Euro

**Duration of the contract:** 12 months, renewable for other 6 months, given both the positive evaluation of the activity and the availability of the project budget.

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## **8. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143993 - POS 3 - (TN2221)

**CUP:** I52F16000810005

Acronimo progetto "Sediplan-r", Codice progetto "FESR1002"  
Programma EFRE-FESR 2014-2020

**Project responsible:** Prof. Francesco Comiti (PI)

**Project supervisor:** Prof. Maurizio Righetti (CO-I)

**Disciplinary-scientific sector:** ICAR/02 (Hydrology, Hydraulic and Maritime Constructions) – Pos. 3

**Competition Sector:** 08/A1 (Hydraulics, Hydrology, Hydraulic and Maritime Constructions)

**Title of research project:** SEDIPLAN-r Sediment budgeting and planning for rivers in South-Tyrol: from hazard mitigation to environmental restoration

**Description of the research activity:** Estimation of soil erosion at the basin scale is of vitally importance in order to estimate the sediment yields that reach the main streams of a basin. Even today, sediments are the worst enemy of dams due to their excessive aggregation resulting in the reduction of the net volume of the hydropower reservoir (silting problem). There are numerous cases where dams are decommissioned or

even abandoned due to failed prediction of soil erosion prior to their construction. Therefore, the as accurate as possible prediction of soil erosion is necessary to evaluate the upstream boundary conditions to perform hydraulics and sediment transport simulations in the reservoir.

The research activity will first focus on the collection of the necessary data for the application of soil erosion modeling, namely the definition of the physiographic parameters of the basin, soil texture data, meteorological data, etc. Subsequently, the candidate has to perform soil erosion modeling, for the calculation of sediment budgets at the basin scale, using different soil erosion models.

Finally, the candidate can perform experimental measurements in the field and in the laboratory for the calibration of the soil erosion models.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

PhD or equivalent foreign study title in Environmental Engineering or Environmental Sciences or a neighboring field.

Proven research experience and adequate knowledge in the estimation of sediment balance at basin scale and field and laboratory data acquisition, preliminary to the carrying out of the research activity object of the call.

**Type of selection:** Titles

**The assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- PhD or equivalent foreign study title in Environmental Engineering or Environmental Sciences or a neighboring field up to a maximum of **20 points**;
- Master's Degree in Engineering for the Environment and the Territory or a neighboring field: max. **18 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **4 points**.

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 12 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Total minimum score in order to declare the candidate suitable for the position:** 55/90

**Maximum number of publications:** 10

**Place of work:** Bolzano-Bozen

**The gross annual remuneration:** 24.000,00 Euro



**Duration of the contract:** 12 months, renewable for other 6 months, given both the positive evaluation of the activity and the availability of the project budget.

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## **9. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143870 (TN2244)

**CUP:** I56C18000040009

Acronimo progetto "TURB\_HYDRO", Codice progetto "FESR1085"  
Programma EFRE-FESR 2014-2020

**Supervisor:** Prof. Maurizio Righetti

**Disciplinary-scientific sector:** ICAR/02 (Hydrology, Hydraulic and Maritime Constructions) – Pos. 4

**Competition Sector:** 08/A1 (Hydraulics, Hydrology, Hydraulic and Maritime Constructions)

**Title of research project:** TURB\_HYDRO - Hydro Turbines optimization for a sustainable production

**Description of the research activity:** The research activity will be focused on the development and improvement, in strict contact with companies working on hydro turbines production, of conventional and original hydro power turbines (mini-hydro). The research activities will include both Computational Fluid Dynamics studies and analyses on physical models of innovative solutions for mini hydro, such as particular types of Pelton turbines (problem of efficient production at very low flow rate ranges, new axial and Archimede screw turbines to be used on check dams, and its interaction with sediments). The research activities will include the numerical simulation of some crucial aspects of the turbines and also experimental activity consisting in the design of proper hydraulic models for physical modelling and testing. The research results that will be obtained during the research, will not be solely submitted for publishing on scientific journals, but also "engineered" and applied to partner manufacturing machines.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher without PhD: Master's Degree or equivalent foreign qualification in Civil and Environmental Engineering, in Industrial Engineering or in Energy Engineering.

Proven research experience and appropriate knowledge in the field of fluid-dynamic modeling of pressure free-surface flows, with particular reference to fluid machines, which is a prerequisite for carrying out the research activity that is the subject of the call.

**Preferential title:** PhD in Hydraulic Engineering, in Environmental Engineering, in Energy Engineering or equivalent foreign study title.

**Type of selection:** By qualifications and oral exam

**The assessment criteria (max. 90 points):**

Academic degrees (max. 42 points):

- Master's Degree in engineering or equivalent foreign study title: max. **14 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **10 points**;
- Doctoral research (PhD) in Hydraulic Engineering, in Environmental Engineering, in Energy Engineering or equivalent foreign study title up to a maximum of **18 points**;

Publications (max. 25 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

**Research and practical experience (max. 23 points):**

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate

**Criteria for determining the part of the candidate in publications with more than one author:**

If not explicitly declared, the contribution of the candidate will be evaluated on the base of the number and order of authors.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge update of the specific disciplinary sector for which the research grant has been tendered
- the knowledge of the language(s) mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 30 minutes

**Object of the exam (max. 10 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 35/90

**Total minimum score in order to declare the candidate suitable for the position:** 45/100

**Maximum number of publications:** 10

**Place of work:** Bolzano-Bozen

**The gross annual remuneration:** 24.500,00 Euro

**Duration of the contract:** 12 months, renewable for other 12 months, given both the positive evaluation of the activity and the availability of the project budget.

**10. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 142393 (TN2245)

**CUP:** D56C18000180009

Acronimo progetto "E21@NOI" Codice progetto "FESR1095"  
Programma EFRE-FESR 2014-2020

**Project responsible:** Prof. Andrea Gasparella

**Project supervisor:** Dr. Giovanni Pernigotto

**Disciplinary-scientific sector:** ING-IND/11 (Building Physics and Building Energy Systems)

**Competition sector:** 09/C2 (Thermal sciences, energy technology and building physics)

**Title of research project:** E2I@NOI - Definition of a Laboratory Systems for development, characterization and technological transfer for Energy Smart Buildings

**Description of the research activity:** The study of energy efficiency and non-energy performance of buildings aims at developing the knowledge on the evaluation, experimental and numerical, of the materials, components and systems and physical phenomena, on the optimization of the design and management of buildings in order to maintain and improve the environment for the occupants – in particular regarding thermal hygrometric, visual and acoustic comfort - and the same time reducing the energy and environmental impact of buildings. The research aims to contribute to innovation and technology transfer to companies operating in the building and heating technology.

Sound scientific competences are needed in the area of environmental technical physics and in particular in the techniques of laboratory and onsite measurements of thermo-physical properties, in energy and multiphysics modeling of components and systems, up to the scale of building, in the optimization either single and multiobjective, and in the analysis of the results, through statistical approaches and techniques. The research activities will be conducted in collaboration with local partners and international organizations.

Activity: (1) Design and settling of experimental systems for measurements on site and in the laboratory; (2) Collection and analysis of experimental data in the laboratory and on site, related to psychrometric measurements, thermophysical properties of fluids and materials, energy and non-energy performance of components and systems, up to the scale of building, including quantities regarding environmental comfort; (3) Energy and multiphysics modeling of phenomena, components, systems up to the building scale; (4) Analysis of results with statistical techniques; (5) Reporting, presentation and publication of the results for internal use or for external use, either for a scientific or non-scientific public.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher without PhD: Master degree in engineering or equivalent Italian or foreign study title and have a proven track record in research activities or work experience in the research field of building energy performance and occupants' comfort in the built environment.

**Preferential title:** PhD or equivalent foreign study title in ING-IND/11 or a relating scientific field.

**Type of selection:** Based on qualifications

**Assessment criteria (max. 100 points):**

Academic degrees (max. 40 points):

Mark of the final exam of Master Degree: max. **10 points**;

Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **15 points**;

Doctoral research (PhD) thesis in ING-IND/11: **15 points**;

Publications (max. 36 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 24 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Total minimum score in order to declare the candidate suitable for the position: 40/100**

**Maximum number of publications: 10**

**Place of work: Bolzano-Bozen**

**The gross annual remuneration: 24.000,00 EUR**

**Duration of the contract: 12 months, possibly extendable for max. 12 months if necessary for the conclusion of the project, premise a positive evaluation of the activity carried out and the verification of the effective availability of the budget funds.**

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## **11. Faculty of Science and Technology**

**Number of places: 1**

**PIS: 143600 (IN2204)**

**CUP: I52F16000670006**

Acronimo progetto "COCKPIT", Codice progetto "FESR1008"  
Programma EFRE-FESR 2014-2020

**Project responsible: Prof. Werner Nutt**

**Project supervisor: Prof. Dominik T. Matt**

**Disciplinary-scientific sector: ING-IND/17 (Mechanical Industrial Plants)**

**Competition sector: 09/B2 (Mechanical Industrial Plants)**

**Title of research project: COCKPIT – Collaborative Construction Process Management**

**Description of the research activity:** Development of techniques to support the management of construction processes, in particular for supporting modelling, scheduling and monitoring of such processes. Conceptual development and implementation of software tools supporting these techniques. Development of methodologies, in research activities in general, and in the publication of the results in scientific papers.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Good knowledge of English

Scientific and professional profile:

Knowledge of programming techniques and languages for the development of software tools.

Master's degree in computer science or engineering or equivalent foreign qualification.

**Preferential title:** PhD or equivalent foreign study title

**Type of selection:** Based on qualification and exam

**The assessment criteria (max. 70 points):**

1. Experience in the development and implementation of software tools (max. 35 points)
2. Working and research experience, evaluated with regard to the relevance for the project objectives, in particular on data management, decision support and cloud computing (max. 25 points)
3. Breadth and quality of the scientific publications (max. 10 points)

**Criteria for determining the part of the candidate in publications with more than one author:**

It is assumed that candidates contributed equally if nothing else is specified by the applicant.

**Criteria for the evaluation for the interview:**

1. Knowledge of design techniques and languages for the development of software tools.
2. Knowledge of English.

**Language of the exam:** English

**Duration of the exam:** 60 minutes

**Object of the exam (max. 30 points):**

Evaluation of the knowledge of English and of the ability to develop software tools from the conceptual and implementation point of view.

**Total minimum score necessary for admission to the oral exams:** 50

**Total minimum score in order to declare the candidate suitable for the position:** 70

**Maximum number of publications:** 10

**Place of work:** Bolzano-Bozen

**The gross annual remuneration:** EUR 25.000,00

**Duration of the contract:** 12 months: the duration may be extended, if necessary, until the end of the research project if there is a need for it to conclude the project, depending on a positive evaluation of the work delivered and on the verified availability of the necessary funds.

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## **12. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 142518 (TN3002)

**Supervisor:** Prof. Paolo Lugli

**Disciplinary-scientific sector:** ING-INF/01 (Electronic Engineering)

**Competition sector:** 09/E3 (Electronic Engineering)

**Title of research project:** Printing technologies for sensor systems based on nanostructures

**Description of the research activity:** The general objective of the project is to develop printing techniques for the realization of electronic components on various substrates such as glass and plastic. The research activities will focus on the fabrication and characterization of the components in function of the active material and the substrate used. In particular there are planned the following activities: a) preparation of conductive inks based on carbon nanotubes and nanowires of silver; b) realization of sensors (gas, temperature and humidity) and their characterization; c) realization of thermocouples or other components that enable energy harvesting to ensure complete autonomy of sensors in real application environments.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher without PhD: master's degree in Electronics or Engineering physics with specialization on electronic devices, and/or Solid-state physics or Engineering or equivalent foreign study title and have a proven track record in research activities or work experience in the field of Printing technologies for electronic components based on nanostructures.

In particular, the candidate must show a good expertise in the research activities described above, both on the theoretical and technical-methodological level attested by a sufficient number of scientific publications.

**Preferential title:** PhD or equivalent foreign study title in Electronic Engineering or Physics or a related scientific field.

**Type of selection:** by qualifications

**Assessment criteria (max. 100 points):**

Academic degrees (max. 30 points):

- Master's Degree in Electronics or Engineering physics with specialization on electronic devices, and/or Solid-state physics or Engineering or equivalent foreign study title: max. **10 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **10 points**;
- Doctoral research (PhD) in Electronic Engineering or Physics or a related scientific field, up to a maximum of **10 points**;

Publications (max. 45 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

Research and practical experience (max. 25 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Total minimum score in order to declare the candidate suitable for the position: 60**

**Maximum number of publications: 10**

**Place of work:** Bozen-Bolzano

**The gross annual remuneration: 29.000,00 Euro**

**Duration of the contract:** 12 months, renewable for other 24 months, given both the positive evaluation of the activity and the availability of the project budget.

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### **13. Faculty of Science and Technology**

**Number of places:** 1

**PIS:** 143789 (TN2811)

**Project responsible:** Prof. Angelika Peer

**Disciplinary-scientific sector:** ING-INF/04 (Systems and control engineering)

**Competition sector:** 09/G1 (Systems and control engineering)

**Title of research project:** HuRoP - Generic and reconfigurable human-in-the-loop robotic platform

**Description of the research activity:** While in the past robotic systems were strictly separated from humans, nowadays they not only share their working space with humans, but also more and more interact and collaborate with them. In this project, we aim at developing an intelligent and integrated platform that flexibly interfaces the robotic system Tiago with a series of further sensing systems and human-system interfaces. Ultimate goal will be to realize a generic and easily reconfigurable platform that allows performing a large variety of human-in-the-loop robotic experiments and thus, supports the research and development of new algorithms and methods on action, plan, and intention recognition, action sharing and complementation as well as algorithms on bilateral, shared and supervisory control and safety enhancement.

**Minimum curricular requirements necessary in order to carry out the research with details of the scientific and professional profile required for the research activity:**

Researcher without PhD: Master's degree in Electrical Engineering, Mechanical Engineering, Computer Science, Bioengineering, Physics, Robotics or Human-Machine Interaction or equivalent foreign study title.

**Preferential title:** PhD or equivalent foreign study title in robotics, control, human-machine interaction, mechanical engineering, electrical engineering, computer science, bioengineering, physics or a relating scientific field.

**Type of selection:** based on qualification and exam

**Assessment criteria (max. 80 points):**

Academic degrees (max. 20 points):

- Doctoral research (PhD) in a field consistent with this announcement up to a maximum of **10 points**;
- Master's Degree in a field consistent with this announcement or equivalent foreign study title: **max. 5 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, **max. 5 points**;

Publications (max. 10 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;
- Congruence of each publication with the competition sector;
- Scientific relevance of each publication's editorial classification and their diffusion among the scientific community;
- Contribution of the candidate in publications with more than one author.

General research and practical experience (max. 30 points):

Research experience acquired through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested

research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

**Project-specific research and practical experience (max. 20 points):**

- Track record of publications and projects that demonstrate expertise in the integration of software and hardware components (max. 15 points).
- Track record of publications and projects or certificates that demonstrate expertise with real-time operating systems as well as programming skills in C/C++, Python, Matlab/Simulink, and ROS (max. 5 points).

**Criteria for determining the part of the candidate in publications with more than one author:**

For publications with multiple authors, the individual contribution of the candidate, if not obvious from the text, is determined based on a duly signed statement of the authors of the work on the contribution of the individual. In the absence of such a declaration, the contribution among the various authors is considered equally weighted.

**Criteria for the evaluation for the interview:**

The evaluation of the oral test comprehends:

- the ability of the candidate to substantiate, support and critically reflect on selected solutions and chosen methods
- the clarity of the explanations
- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge of the specific disciplinary sector for which the research grant has been tendered and their actuality
- the knowledge of the language(s) mentioned in the call.

**Language of the exam:** English

**Duration of the exam:** 1 hour

**Object of the exam (max. 20 points):**

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.

**Total minimum score necessary for admission to the oral exams:** 40

**Total minimum score in order to declare the candidate suitable for the position:** 50

**Maximum number of publications:** 10

**Place of work:** Bozen/Bolzano

**The gross annual remuneration:** 20.000,00 Euro

**Duration of the contract:** 12 months

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**Art. 2**

*Requirements for admission*

- 1) Candidates must have completed the requirements at the expiry date for submission of the applications for admission to the selection procedure.



The Commission of selection, for the sole purpose of the aims of the present selection procedure, will evaluate the equipollence of the candidate's qualification title conferred abroad.

Italian citizenship is not required.

### **Art. 3**

#### *Accumulation prohibition*

- 1) The research assistant contract may not be combined with awarded study grants, except those awarded by national or foreign institutions to integrate the research activity for stays abroad, and with other research assistant contracts awarded by other institutions.

### **Art. 4**

#### *Incompatibility and compatibility*

- 1) The following cannot be holder of research assistant contracts:
  - a) the personnel of the University, of public research and experimentation institutions and bodies, of the Agency for the New Technologies, Energy and Sustainable Economic Development (ENEA) and of the Italian Space Agency (ASI), as well as of institutions whose degree of scientific specialization has been recognized as equipollent to the qualification of research doctor following Art. 74, paragraph 4, of the DPR no. 382/1980;
  - b) the personnel in service by public administrations other than those indicated in letter a), except in case of unpaid leave by that administration, for the period of length of the research assistant contract;
  - c) those having family or kinship relation, up to the fourth degree, with a professor of the Department awarding the research assistant contract, with the Rector, the General Director or with a member of the University Council;
  - d) those attending university courses (triennial university degree or university degree pre-reform regime), a specialist or magister degree, a research doctorate with grant or medical specialization, in Italy or abroad.
- 2) The research assistant contract is furthermore incompatible with other contracts for research activities conferred by the Free University of Bozen-Bolzano.
- 3) The conferral of a research assistant contract is compatible with a collaboration contract or an intellectual work contract for research activities awarded by other universities and institutes in Italy and abroad, by approval of the supervisor.
- 4) When the research assistant signs the contract he has to submit a declaration as per D.P.R. 445/2000 which lists the previous research assistant contracts and states that he is not in a situation of incompatibility.

### **Art. 5**

#### *Conditions for presenting the application for participation and publications*

- 1) To participate in the present selection procedure candidates must fill in an application form in unstamped paper, according to the model of attachment 'A' and available on the web page of the University: <https://www.unibz.it/en/home/position-calls/positions-for-academic-staff/?group=18&year=2019>  
within the **18.03.2019**.
- 2) The application, duly dated and handwritten signed at the last page, must be addressed to:  
Free University of Bozen – Bolzano  
Personnel Office Academic Staff (call)  
*Piazza Università, 1 - C. P. 276*  
*39100 Bozen-Bolzano*

The application for participation in the selection procedures may also be directly handed in (opening hours: from Monday to Friday from 8:30 a.m. to 12:30 a.m. and on Monday, Tuesday and Thursday from 2 p.m. to 5 p.m.) or sent by post with registered letter with notification of reception or any other form appropriate to certify the reception (**personnel\_academic@pec.unibz.it, only if sent from a pec - posta elettronica certificata - account**) within the above mentioned final date. Therefore shall be considered proof the date stamp of the accepting post office according to the D.P.R. 28th December 1970, no. 1077.

The University disclaims liability for possible postal mis-deliveries.

Applications sent by e-mail won't be considered.

**The candidate is obligated to add to the application in paper form, a data carrier (memory-stick or cd) which contains a digital copy of all documents produced (the same holds true for the publications).**

- 3) On the package the candidate, in addition to the requirements mentioned in paragraph 2, must affix the inscription: "Application: selection procedure for the awarding of a fixed-time research assistant contract for collaboration at research activity" and accurately indicate the faculty, the initials and the denomination of the disciplinary-scientific sector, the title of the research project and the candidate's name, surname and address for the present selection procedure (the address for the present selection procedure is the candidate's elected domicile for the receipt of the communications relating to this procedure).
- 4) On the application (see attachment 'A') the candidate must clearly indicate her/his name and surname and must declare, under own responsibility:
  - a) the date and place of birth;
  - b) the code of personal identification (fiscal code);
  - c) the residence, with the indication of the street, the street number, the town, the province, the postcode;
  - d) the possessed citizenship;
  - e) the municipality on whose electoral lists she/he is registered or the reasons for the non-registration or cancellation from such lists.  
Foreign nationals must declare to enjoy civil and political rights in the country on which they belong;
  - f) not having been convicted of criminal offences;
  - g) not having pending criminal suits or received criminal sentences and not currently undergoing criminal proceedings (otherwise to indicate);
  - h) to have viewed the advertisement to which this selection procedure refers and accepts all its provisions;
  - i) that the content of the digital copies of all documents produced correspond to the content of the copies produced on paper;
  - j) that the publications on the data carrier conform to the original
  - k) not to be a university professor of the first and second rank or a researcher employed with open-ended contract, even if ceased from service in Italy;
  - l) to be employee at the following public administration....
  - m) that everything in the curriculum vitae (CV) that has been attached to this application is true and s/he gives the person in charge of the selection procedure the permission to undertake any checks on any substitute declarations that have been presented by the undersigned for the purposes of this selection procedure;
  - n) not to exceed the superior limit of twelve years, also non continuous periods, therefore considering the total duration of the contracts under Art. 22 (Research grants) and Art. 24 (Fixed-time researchers) of the law 30th December 2010, no. 240, also between different universities, public, non public or telematic ones, and with bodies as provided in Art. 22, paragraph 1 of the law no. 240/2010, as well as the duration of the contract according to the present call;
  - o) not to exceed the total duration of 6 years of the contracts under Art. 22 of the law 30th December 2010, no. 240 as amended (Research assistant contracts) including renewals and contracts between

different universities/bodies, as well as the duration of the contract of the present call (the period of a Research assistant contract during a PhD study place with grant does not count within the regular study period);

- p) not having family or kinship relation, up to the fourth degree, with a professor of the Department making the proposal of the activation of the contract, with the Rector, the General Director or with a member of the University Council;
  - q) not having been dispensed or dismissed from the employment by a Public Administration for persistent insufficient performance, not having been declared lost from other public employment according to art. 127, paragraph 1, letter d) of the T.U. regarding provisions concerning the charter of civil servants, approved with D.P.R. 10th January 1957, no. 3, not having gained the employment through production of faked documents or vitiated by not amendable invalidity, and not having had an employment relationship by a Public Administration which has been terminated for disciplinary reasons, included those provided in art. 21 of the legislative decree 29/1993;
  - r) the position concerning the fulfillment of the military duties;
  - s) the address chosen for the receipt of communications relating to the selection procedure she/he has applied for (address with postcode, telephone number, possible e-mail-address or fax number) and the commitment to inform the University in case of possible subsequent variations of those data;
  - t) to have received the data protection instructions as per art. 13 GDPR (2016/679) and to know that the supplied data, as well special categories of data (sensitive and judicial data) will be used exclusively for this selection procedure and the possible conclusion of the contract as per GDPR.
- 5) Candidates with recognized disabilities must expressly specify in their application any aid needed in relation to their handicap and the possible necessity of further time for the performance of the exams, according to art. 20 of the law 5th February 1992, no. 104.
- 6) Any variation of the candidate's data according to paragraph 4 of the present article must be immediately communicated in writing to this Administration.
- 7) The University accepts no responsibility for cases in which candidates are untraceable or when the communications are undeliverable due to imprecise indication of the address, or belated or lack of notification on the part of the candidate regarding a change of the address declared in the application. The University also disclaims liability for mail going astray, whether third parties are to blame, or whether it is attributable to mishaps, or to *force majeure* and which, in any case, is in no wise ascribable to the University. It accepts no blame when the return delivery slip indicating receipt of the application, of documents or of communications relating to the selection procedures fails to arrive. If the candidate's address differs from that of her/his place of residence, again the University is exempt from responsibility should a registered letter with notification of receipt arriving at the place which the candidate had specified as his address during the period of selection, fail to reach her/him.

## **Art. 6**

### *Presentation of qualifications*

- 1) Considered that, in accordance to the present call, by 'qualifications' are intended those scientific, didactic and artistic ones and the publications, and for 'certificates' any document proving the possession of a certain qualification, the candidate must enclose at the application for participation in the selection procedure in unstamped paper:
- a) 1 copy of a valid identity document and the fiscal code;
  - b) 1 photocopy of the curriculum vitae regarding the didactic and scientific activity and drawn up according to the model of attachment 'C';
  - c) didactic and scientific qualifications believed useful for the comparative assessment;
  - d) 1 photocopy of the numbered list of the publications believed useful for the comparative assessment and drawn up in accordance with article 7 paragraph 3 of this call;
  - e) 1 photocopy of the list of all documents enclosed at the application [generic list of those materially inserted in the envelope, or the documents required by letters a), b), c) and d) of the present paragraph].
- 2) The qualifications indicated in paragraph 1, letter c), of the present article, if issued by Italian Public

Administration, must be produced in one of the following forms:

- a) in copy corresponding to the original as certified by substitutive declaration of the deed of notoriety according to art. 47 of the D.P.R. 28th December 2000, no. 445. In that case the candidate must produce:
  - 1 copy of each qualification;
  - 1 declaration drawn up according to the model of attachment 'B', signed and dated at the last page, where the candidate, under own responsibility, declares that the copies of the enclosed qualifications, exactly described, and in particular with regard to the date of attainment, place and Administration issuing the qualification, correspond to the original. That declaration at the same time serves as list of the qualifications, in which case the latter ones do not have to be produced;
  - 1 copy of an identity document;
- b) in form of a self-declaration according to the model of attachment 'B' (substitutive declaration of certification according to art. 46 of the D.P.R. 28th December 2000, no. 445), where the candidate, under own responsibility, declares to possess the qualifications, exactly described, in particular with regard to the date of issue, place and Administration issuing the qualification. In that case the candidate must produce:
  - 1 copy of the attachment 'B', signed and dated at the last page, which at the same time serves as list of the qualifications, in which case the latter ones must not be produced;
  - 1 copy of an identity document.

**The University cannot request nor accept certificates issued by other Italian public offices.**

**If the above-mentioned certificates should be enclosed at the application for participation in the selection procedure, they will not be considered by the Commission of selection.**

The qualifications issued by private corporation or abroad can be produced in one of the following forms:

- a) in original;
- b) in certified copy;
- c) in copy corresponding to the original as certified by substitutive declaration of the deed of notoriety or in form of a self-declaration according to the above-mentioned model of attachment 'B'.

The above mentioned declarations drawn up according to the model of attachment 'B' may be used by Italian citizens and also by citizens of the EU.

The declarations according to the above-mentioned articles of the D.P.R. 28th December 2000, no. 445, may be used by non-EU citizens, if it is necessary to proof conditions, facts and personal qualities certifiable or attestable by public or private Italian bodies or bodies of the EU, without prejudice of special provisions in laws and regulations concerning immigration matters and the condition of foreigners. If the declarations according to the above-mentioned articles of the D.P.R. 28th December 2000, no. 445 are used in other cases than the above mentioned, the winner of the procedure has to submit, before the employment, the certificates as per paragraph 7.

- 3) The curricula and the lists mentioned in letters d) and e) of paragraph 1 of the present article must be signed and dated in the last page.
- 4) No qualification sent to this Administration will be returned.
- 5) The sending of the publications does not enable to correct the missed or late submission or mailing of the application for participation in the selection.
- 6) Without prejudice to the exceptions expressly provided by law, the above-mentioned attachment 'B' may further be used by the candidate to declare standings, facts and personal qualities of her/his direct knowledge, not expressly indicated in art. 46 of the D.P.R. 28th December 2000, no. 445.
- 7) With regard to non-EU citizens, the certificates issued by the competent Authorities of the country the person belongs to, must be in accordance with the provisions in force in those countries and must also be legalized by the competent Italian consular authorities.

- 8) With regard to conditions, facts and personal qualities self-certificated by the candidates for the present selection procedures the University has the possibility to exercise appropriate checks, also random ones, regarding their truthfulness.

In case of mendacious declaration the candidate, further than being excluded from the selection procedure, will be denounced according to the Criminal Code and the special laws regarding the matter, according to the provisions cited in art. 76 of the D.P.R. 28th December 2000, no. 445.

- 9) The qualifications may be produced in their original language if it is one of the following: Italian, French, English, German and Spanish.

It is in the authority of the Commission of selection to request the candidates integrations of the qualifications submitted in French, English, German or Spanish language, by forwarding the correspondent translation in Italian.

The translation in Italian language must be accompanied by a substitutive declaration of the deed of notoriety where the candidate, according to art. 47 of the D.P.R. 28th December 2000, no. 445, certifies the conformity of the translated text with the original (see attachment 'B').

- 10) Any certificate or diploma drawn up in a language different than Italian, French, English, German and Spanish, submitted by Italian, EU or non-EU citizens, must be enclosed, according to paragraph 3 of Art. 33 of the D.P.R. 28th December 2000, no. 445, the correspondent Italian translation, which is certified conform to the original text by the competent diplomatic or consular representation or by a official translator. The certificates or diplomas drawn up in a different language than those above mentioned, in case of lacking translation, will not be assessed by the Commission of selection.

#### **Art. 7**

##### *Sending of the publications*

- 1) The publications must be submitted together with the application.
- 2) Publications will only be evaluated when they can be traced in public catalogues as publications.  
If the applicant forward more publications as foreseen in the art. 1, the Commission of selection assess only the maximum number in the order indicated by the applicant.
- 3) Together with the publications, there must be enclosed a correspondent numbered list, signed and dated at the last page. The Publications must be mentioned in chronological order within each category following the International Standard for bibliographic references with DOI whenever possible. With multiple authorship, if one is the main author, that author's name appears in *Italics*. In addition, in the left-hand margin please star (\*) what you consider were especially significant publications. Where relevant, citation index and impact of journal.
- 4) Publications handed in or sent after the final term as indicated in paragraph 1 of the present article cannot be considered by the Commission of selection.
- 5) For the present selection procedure are considered assessable the print extracts and the works which, at the moment of the deadline of the call, have been subject to legal deposit according to the provisions of the law 15th April 2004, no. 106, put into effect with D.P.R. 3rd May 2006, no. 252.
- 6) The publications, with 1 copy of the correspondent list attached, may be sent:
  - a) in original;
  - b) in certified copy;
  - c) in photocopy or digital copy. In that case a substitutive declaration of the deed of notoriety (to be drawn up according to the model of attachment 'B' and signed at the last page, with the production of a photocopy of an ID) must be attached, where the candidate, according to art. 47 of the D.P.R. 28th December 2000, no. 445, certifies the conformity of those produced with the original and indicates the author, the title of the work, the place and date of publication and the number of the work.
- 7) In case the candidate produces copies or digital copies of the publications they must be declared conform to the originals:

- a) for works printed in Italy it is also necessary to attest the date of deposit of the printing according to the law 15th April 2004, no. 106, put into effect with D.P.R. 3rd May 2006, no. 252;
- b) for works printed abroad the date and place of publication must be indicated.

- 8) The publications may be produced in their original language if it is one of the following: Italian, French, English, German and Spanish.

It is in the authority of the Commission of selection to request the candidates integrations of the publications submitted in French, English, German or Spanish language, by forwarding the correspondent translation in Italian.

The translated texts must be produced in typewritten copies with the text printed in the original language and must be accompanied by a substitutive declaration of the deed of notoriety where the candidate, according to art. 47 of the D.P.R. 28th December 2000, no. 445, certifies the conformity of the translated text with the original (see attachment 'B').

- 9) The publications whose original language is different than Italian, French, English, German and Spanish must be translated in one of the above-mentioned languages.

It is in the authority of the Commission of selection to request the candidates integrations of the translations submitted in another language than Italian, by forwarding of a translation in Italian of the text already translated.

The translated texts must be produced in typewritten copies with the text printed in the original language and must be accompanied by a substitutive declaration of the deed of notoriety where the candidate, according to art. 47 of the D.P.R. 28th December 2000, no. 445, certifies the conformity of the translated text with the original (see attachment 'B').

- 10) For selection procedures concerning linguistic matters publications may be produced in the language or languages the selection procedure relates, even if different of those indicated in paragraph 9 of the present article.

- 11) The publication must be produced in any case, even in case they have already been submitted by this or other Administrations for participation at other selection procedures.

- 12) The missed sending of the publications within the provided date is not considered as renunciation of participating in the selection procedure. Nevertheless, the Commission of selection assesses the candidate only on the basis of the curricula and can therefore not assess the scientific works even if they are personally known by its members.

The Commission of selection does not take into consideration publications not conforming to the required format or in different edition as those indicated in the application for participation in the selection procedure.

- 13) No scientific work sent to this Administration will be returned. Nevertheless, the candidates may require its possess, except in case of pending controversy and according to the provision of the subsequent article 22, by going, personally or on behalf of a delegate, to the Personnel Office Academic Staff within the term of six months starting from the date of the Rectoral decree of confirmation of the regularity of the records. After this term has passed it is in the power of the University to dispose freely of the material not withdrawn.

### **Art. 8**

#### *Exclusion from participation at the selection procedure*

- 1) The candidates are admitted conditionally at the selection procedures. Therefore exclusion through failing to meet the prescribed requirements is provided for with due decree of the Rector of the University at whatever stage of the procedure.
- 2) In particular, are excluded those:
  - a) presenting an application which is not signed;
  - b) presenting applications which, for any reasons, are not sent by post or consigned by the final deadline indicated in art. 5, paragraph 1 of the present call.

## **Art. 9**

### *Renunciation of participation*

- 1) The renunciation of participation at the selection procedure (to be drawn up according to the model of attachment 'C') must be sent to the President of the Commission of selection and, for information, to the person in charge of the procedure (e-mail: [personnel\\_academic@unibz.it](mailto:personnel_academic@unibz.it)).  
Renunciations preceding the formation of the Commission of selection must be subsequently sent to the person in charge of the procedure (e-mail: [personnel\\_academic@unibz.it](mailto:personnel_academic@unibz.it)).
- 2) Renunciation takes effect from the Commission's first meeting following the date of its receipt.
- 3) The absence of the candidate at the interview is considered implied renunciation to the selection procedure.

## **Art. 10**

### *Commission of Selection*

- 1) The commission of selection is composed of three members, who are professors or researchers at Universities in Italy or abroad. One member must be a full or associate professor and only one member can be a fixed-time researcher.

The members of the Commission of selection must be active in the relevant research area or in the disciplinary area the research project or the research activity refers.

- 2) The members of the Commissions of selection are appointed by the Department requesting the selection procedure.
- 3) The Commission of selection is appointed by special provision to be published also on the University's web page.
- 4) The Commission of selection remains in charge for six months and may be renewed only once and for not more than four months.

In case the work has not been completed within the extended period, the Rector, with due provision, will start procedure for the replacement of the Commission or the members responsible for the delay, establishing at the same time a new term for the conclusion of the work.

- 5) In case of selection procedures based on only qualifications the Commission of selection, for carrying out its meetings, may make use of telematics tools for collective work, on condition that all documentation submitted for the selection procedure is available in digital form.

## **Art. 11**

### *Selection of the candidates*

- 1) The comparative assessment is based on qualifications and, if provided by the call, examination/s.  
The commission of selection evaluates up to a maximum of 10 publications.
- 2) The interview may be performed also by videoconference, if the commission of selection approves it and the public session is guaranteed.
- 3) In case one or more examinations are provided, the dates will be notified to the candidates not less than 10 days before taking place, with indication of the time and place they are being held.

To sit the examination/s, the candidate must be equipped, with the exclusion of others, of one of the following currently valid documents of recognition provided in art. 35, paragraph 2 of the D.P.R. 28th December 2000, no. 445: identity card, passport, driving licence, railway record-book, postal card, firearms licence. The mentioned documents must contain a recent photograph of the candidate and her/his signature be authenticated by a mayor or a public notary.

- 4) At the end of its work, the Commission of selection, on the basis of the scores assigned for the qualifications, publications and the examinations, if provided, compiles the merit ranking of the suitable

candidates. Minority positions should be recorded, indicating, in relation to the number of research assistant contracts to confer, the candidates which the research contracts are conferred.

#### **Art. 12**

##### *Publicity and transparency of the selection procedure*

- 1) The Commission of selection gives communication of the record containing the final merit ranking to the person in charge of the procedure for the subsequent measures.
- 2) In case procedural errors are discovered, the records are returned with due provision to the Commission of selection for regularization within the term indicated in the provision.
- 3) The results of the assessment will be published also on the University's web page.

#### **Art. 13**

##### *Validity of the ranking according to merits*

- 1) The merit ranking lasts up to 14 months before the conclusion of the research project.
- 2) In case of withdrawal from the contract, the same will be conferred to the next suitable candidate in the concerned ranking list.

#### **Art. 14**

##### *Formalization of the relationship*

- 1) The University stipulates with the first candidate in the merit ranking a contract, regulating the forms and modalities of the collaboration activity and the allotment of the research assistant contract.
- 2) The contract may be renewed within the maximum term of 3 months after its expiry.
- 3) The research assistant contracts are in no way considered a dependent employment relationship and do not confer rights for access to the University staff.
- 4) The winner of the present selection procedure must fulfill the duties provided by the University regulation for the conferral of research assistant contracts.

A copy of the regulation is delivered to the holder of the research assistant contract at the stipulation of the contract.

- 5) The research activity the winner has to complete must have the following features:
  - a) temporally defined;
  - b) connected with the fulfillment of a research program or a stage of it;
  - c) autonomous performance, under the direction of the supervisor, of the program, without predetermination of working hours.

#### **Art. 15**

##### *Rights and duties of the assistant researchers*

- 1) The holder of the research assistant contract undertakes research activities provided by the research programs adopted by the related Department. He/she may collaborate with students in research activities relating to his/her degree thesis, participate at examination commissions and perform formal and informal didactic exercises.
- 2) The holder of the research assistant contracts may participate at groups and at research projects of the University/the Departments. The performance of those research activities does not confer a right of payment of a separate compensation.
- 3) The holder of the research assistant contract upon authorisation of the supervisor is allowed to do didactic activities (lessons, exercises, laboratories, supplementary didactic activities) for a maximum of 60 hours per academic year at the Free University of Bozen-Bolzano and/or at other Universities/Institutions, provided that this activity does not interfere with the research activities.



The didactic activities at the University is decided by the Faculty upon consent of the holder of the research assistant contract and assigned directly. The didactic activity is remunerated by the University according to "*vigenti tariffari in materia di docenza a contratto e delle vigenti disposizioni in materia di collaboratori didattici*".

- 4) The research assistant contract holder, in order to carry out the research activity, may use the facilities of the Department he/she belongs and make use of the services available to the researchers according to the regulations in force.
- 5) The research activity is performed at the Faculty or elsewhere, if authorized by the supervisor.

The in advance authorized expenses for missions are refunded according to "*vigente regolamento in materia di viaggi di servizio*."

#### **Art. 16**

##### *Supervisor and entrustes tasks*

- 1) The Department the research assistant contract holder belongs nominates a professor or researcher or a fixed-time researcher (if the contract is longer than the contact of the research assistant) as supervisor for the research activities, guiding and directing the research activities undertaken by the research assistant contract holder.
- 2) The supervisor must collect and assess the concise and the final relation as per art. 17, paragraph 1. He/she further must report to the Responsible of the Department and to the Personnel Academic Staff the defaults of the contract holder, also in relation to possible suspensions of payments, except in case of grave default constituting cause of resolution by law of the contract.
- 3) In order to elaborate the contract the supervisor has to inform the Personnel Academic Staff about the commencement of the contract and has to send a detailed description ( in accordance to the call) of the research activity with indication of possible subgoals which have to be achieved at determined deadlines during the project.

#### **Art. 17**

##### *Control modalities, assessment of the activity performed by the research assistant contract holders and causes of resolution of the contract*

- 1) In addition to the achievement of the possible subgoals as per art. 9 paragraph 3 the holder of the research assistant contract must annually present a short paper about the research activity performed and the results attained, which, with the assessment of the supervisor attached, is sent to the presidency of the Department concerned.
- 2) The research assistant contract holder must also produce a detailed final relation explaining the performed activity and the results attained, which, with the assessment of the supervisor, is submitted, within 45 days preceding the end of the contract, to the presidency of the Department concerned.
- 3) The non-presentation of the reports within the provided terms causes the suspension of payment of the following installments.
- 4) In case the research assistant contract holder, after having started the research activity, does not continue it, regularly and continually, for the whole duration of the research assistant contract without justified reason or is responsible for grave and repeated misdemeanor, the procedure for resolution of the contract will be started.
- 5) The contract will be terminated in the cases provided by paragraph 6 with deliberation of the concerned Department.
- 6) The contract will be terminated in the following cases:
  - grave and proven misdemeanor of the research assistant contract holder, reported by the supervisor or by the responsible of the concerned Department;
  - unjustified missed beginning or unjustified delay of the activity;

- unjustified suspension of the research activity for a period which is prejudicial to the research program;
- grave violation of the incompatibility rules provided by the present Regulation.

#### **Art. 18**

##### *Loss and withdrawal*

- 1) Those not initiating the activity within the indicated terms lose the right for the research assistant contract.
- 2) Only delays due to grave health reasons or to *force majeure* duly proved are justified and admitted.
- 3) The holder of the research assistant contract may withdraw from the contract by observing a 30 (thirty) day notice. In case of written consent by the supervisor, the notice may not be considered.
- 4) Possible postponements of the date of beginning of the period of enjoyment of the research assistant contract may be awarded to winners proving to have to fulfill the military duties and to working mothers (legislative decree. no. 151/2001).

#### **Art. 19**

##### *Attendance of research doctorate courses*

- 1) The holder of the research assistant contract may attend research doctorate courses without scholarships even in supernumerary, without prejudice of getting through the admission tests.
- 2) The University Council, before the beginning of the academic year, after having heard the departments, determines, for each doctorate course, the maximum number of research assistant contract holders admitted to attend doctorate courses in supernumerary.

#### **Art. 20**

##### *Economic and fiscal treatment, social security*

- 1) The amount of the remuneration is determined by the University Council, in respect of the minimum limits determined with Ministerial Decree.
- 2) The remuneration is paid in monthly installments. The monthly gross amount is determined by dividing the annual gross remuneration with the number of months of the contract's duration plus one.
- 3) Mission expenses will be taken from the fund of the person responsible of the research project.
- 4) The research assistant contract for collaboration at research activities under the present call is free of income tax. In relation to fiscal matters the provisions of Art. 4 of the law 13th August 1984, no. 476 with subsequent modifications and integrations are applied.
- 5) The University provides for the insurance covering in relation to risks of accidents at work and civil responsibility, applying the fiscal and social security disciplines provided by Art. 22, paragraph 6, of the law no. 240/2010.

#### **Art. 21**

##### *Return of publications*

- 1) Candidates declared not eligible may withdraw, at their own expense, the publications submitted to this University within six months from the date of the Rector's decree of confirmation of the regularity of records. Once the term has passed the University keeps the material for its own necessities, disclaiming liability towards the candidates.

#### **Art. 22**

##### *Protection of personal data*

- 1) With reference to the provisions of the European Regulation 2016/679, the Free University of Bozen-Bolzano, as data controller of this selection procedure, informs that the data contained in the application documents will be used exclusively for the implementation of this selection procedure and the possible conclusion of the contract (see enclosed data protection instructions). The winner of the selection procedure will be appointed as an external data processing manager at the time of the appointment.

### **Art. 23**

#### *Person in charge of the procedure*

- 1) In accordance with the law 7th August 1990, no. 241, the person in charge of the procedure of the present selection is Dr. Paola Paolini – Head of the Personnel Office Academic Staff – Piazza Università, 1 - C.P. 276 – 39100 Bozen-Bolzano – tel. +39 0471 011310, e-mail: [personnel\\_academic@unibz.it](mailto:personnel_academic@unibz.it).
- 2) On the web page <https://www.unibz.it/en/home/position-calls/positions-for-academic-staff/?group=18&year=2019> expressly dedicated to the selection procedures are available all relating information about the progress report of the Commission of selection's works as well as the relating deadlines.

### **Art. 24**

#### *Referring provisions*

- 1) For anything that is not expressly considered in the present announcement, reference shall be made, where applicable, to the norms cited in the preamble of the present decree and any related laws in force.

Bozen-Bolzano, 13.02.2019

Decree no. 11/2019

The Vice Rector

Prof. Johann Gamper

  
