

FREE UNIVERSITY OF BOZEN-BOLZANO

SELECTION PROCEDURES

for the conferral of

8

fixed-time RESEARCH ASSISTANT CONTRACT

for

COLLABORATION at RESEARCH ACTIVITY

Vice Rector's Decree

of 10.07.2019

no. 48/2019

FREE UNIVERSITY OF BOZEN-BOLZANO

VICE RECTOR'S DECREE

no. 48/2019

Selection procedures for the awarding of 8 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 26.06.2019, no. 149/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/03 (Arboriculture);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 150/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/03 (Arboriculture);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 148/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/13 (Agricultural Chemistry);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 152/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydraulic structures, maritime engineering and hydrology);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 151/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydraulic structures, maritime engineering and hydrology);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 153/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-IND/13 (Applied Mechanics);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 146/2019, 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);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 26.06.2019, no. 147/2019, 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 8 selection procedures for the awarding of 8 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: 150633 (TN2332-C)

CUP: I52F17000050007

Supervisor: Prof. Massimo Tagliavini

Disciplinary-scientific sector: AGR/03 (Arboriculture) – Pos. 1

Competition sector: 07/B2 (Science and technology of trees and forest ecosystems)

Title of research project: Quality Indicators and Sustainable Irrigation in apple production (IQUIS)

Description of the research activity: The full-time activity of the successful candidate will consist in 1) contributing to the management of an experimental field where different irrigation methods, irrigation frequencies and the efficacy of evaporative cooling irrigation will be compared; 2) performing physiological and biometric measures on trees and fruits; 3) quantifying the nitrate leached out as a result of the different irrigation techniques. In addition, the successful candidate will perform bibliographic research, statistical analysis of data, preparation of tables, figures and reports to use as background for a future scientific publication.

Additional research activities in the context of other research projects on similar topics to be defined in due course with mutual agreement and the previous consent of the supervisor of the main research project. If the supervision of the related project is done in detail by another researcher/professor, the main supervisor, prof. Tagliavini, has to countersign explicitly the part of the report regarding the activity on related research projects.

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 environmental sciences, or Forest Sciences, obtained in Italy or other countries. Adequate knowledge about the research topics.

Preferential title: PhD or equivalent foreign study title

Type of selection: Selection by qualifications and test (oral interview)

Assessment criteria:

To be defined by the examining Commission in its first relating meeting

Maximum number of publications, that will be evaluated: 10

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

To be defined by the examining Commission in its first relating meeting

Criteria for the evaluation for the interview:

To be defined by the examining Commission in its first relating meeting

Language of the exam: English

Duration of the exam: To be defined by the examining Commission in its first relating meeting

Object of the exam:

The exam will cover:

Interview to test candidates' knowledge of the curricular expertise required

Total minimum score necessary for admission to the oral exams:

To be defined by the examining Commission in its first relating meeting

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

To be defined by the examining Commission in its first relating meeting

Place of work: Bolzano/Bozen

The gross annual remuneration: 22.000,00 Euro

Duration of the contract: 1 year

2. Faculty of Science and Technology

Number of places: 1

PIS: 150615 (TN2256)

CUP: I54I18000080002

Supervisor: Prof. Massimo Tagliavini

Disciplinary-scientific sector: AGR/03 (Arboriculture) – Pos. 2

Competition sector: 07/B2 (Science and technology of trees and forest ecosystems)

Title of research project: Atmospheric boundary-layer modeling over complex terrain (ASTER)

Description of the research activity: The full-time activity of the successful candidate will consist in:

- 1) actively contribute to the set up an experimental system of measurement of gas exchanges between the soil/vegetation and the atmosphere named "Eddy covariance" in one of the main tree crops present in South Tyrol;
- 2) Running the equipment, record the data and organize them in spread sheets;
- 3) Study the interactions between the crop, the aerodynamic conditions of the atmosphere and the exchange of CO₂ and water vapor. In the second year it is required that he/she will be able to validate models using the "Bayesian Technique" and programming languages like R;
- 4) Contribute to the writing of scientific reports and to a scientific publication for an international Journal. It is also expected that he/she will be able to successfully interact with the other units of the project.

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 Agricultural, or in Forest, or in Environmental sciences or in a related scientific area, obtained in Italy or other countries.

Adequate knowledge about the research topics with special reference to water and cycles, and to the interaction between vegetation and lower atmosphere.

Preferential title: PhD or equivalent foreign study title in Agricultural, or in Forest or in Environmental sciences.

Type of selection: Selection by qualifications and test (oral interview)

Assessment criteria:

To be defined by the examining Commission in its first relating meeting

Maximum number of publications, that will be evaluated: 10

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

To be defined by the examining Commission in its first relating meeting

Criteria for the evaluation for the interview:

To be defined by the examining Commission in its first relating meeting

Language of the exam: English

Duration of the exam: 30 min

Object of the exam (max. 10 points):

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) the testing of candidates' knowledge of the curricular expertise required

Total minimum score necessary for admission to the oral exams: 50/90

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

Place of work: Bolzano/Bozen

The gross annual remuneration: 24.100,00 Euro

Duration of the contract: 12 months. The contract may be extended for max. 12 months, whereas such an extension of the contract is necessary to complete the project and is subject to a positive assessment of the activity performed, as well as the availability of financial resources.

3. Faculty of Science and Technology

Number of places: 1

PIS: 150682 (TN2081)

CUP: I52F16000560005

Supervisor: Prof. Tanja Mimmo

Disciplinary-scientific sector: AGR/13 (Agricultural Chemistry)

Competition sector: 07/E1 (Agricultural Chemistry, Agricultural Genetics and Pedology)

Title of research project: Rhizosphere processes affect copper bioavailability in vineyard soils – RHIZOPRO

Description of the research activity: The main aim of the project is to comprehend the rhizosphere processes involved in plant Cu tolerance responses since they are the starting point to setup new sustainable agronomical practices aiming at counteracting the detrimental effects of Cu accumulation in agricultural and vineyard soils. The project will focus on the biological processes altered in response to Cu to properly manage soil Cu contamination, since it is essential to move beyond mere physiological or phenotype effects.

The following activities are foreseen:

- Assessment of the quali-quantitative composition of root exudates of selected plants in response to different levels of Cu in controlled conditions (hydroponics and soil conditions)
- Assessment of the microbial community in the rhizosphere and bulk soil of cu-contaminated soil grown plants (particular focus will be set on grapevines).
- Characterization of the biochemical mechanisms triggered by Cu toxicity in plants.

Additional research activities in the context of other research projects on similar topics to be defined in due course with mutual agreement and the previous consent of the supervisor of the main research project. If the supervision of the related project is done in detail by another researcher/professor, the main supervisor, prof. Mimmo, has to countersign explicitly the part of the report regarding the activity on related research projects.

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 Agricultural Sciences or Agricultural Biotechnology or equivalent foreign study title;
- The candidate must demonstrate adequate knowledge, as demonstrated by research activity as described above, both on the theoretical and technical-methodological level.

Preferential title: PhD in Agricultural Sciences or equivalent foreign study title.

Type of selection: titles

The assessment criteria (max. 100 points):

ACADEMIC TITLES (max. 60 points):

- master's degree in Agricultural Sciences or Agricultural Biotechnology or equivalent foreign study title (max. 20 points);
- PhD in the sector of Agricultural Sciences (max. 10 points);
- Documented training or research at qualified Italian or foreign institutions (max. 30 points);

PUBLICATIONS (max. number of publications to be evaluated: n 8) (max. 40 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 (max. 30 points).

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

Number of authors and author position in the publication.

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

Place of work: Bozen-Bolzano

The gross annual remuneration: 21.550 €

Duration of the contract: 12 months

4. Faculty of Science and Technology

Number of places: 1

PIS: 150679 (11 mesi) TN2082 HM + **PIS:** 150680 (1 mese) WW2096

CUP: I52F16000940005 (11 mesi) + **CUP:** I52F17001260005 (1 mese)

Supervisor: Prof. Maurizio Righetti

Disciplinary-scient. sector: ICAR/02 (Hydraulic structures, maritime engineering and hydrology) – Pos. 1

Competition sector: 08/A1 (Hydraulics, Hydrology, Hydraulic and Maritime Structures)

Title of research project: HM - Sustainable management of hydroelectric production, Hydropeaking Mitigation: morphological mitigation measures assessment through development of a 3D fluid dynamic model coupled with physical habitat suitability model.

Description of the research activity: One way to study the hydraulic-ecological implications induced by hydropeaking events, is represented by the coupling of hydrodynamic models with models of environmental suitability (suitability habitats) or with risk-drowning models for people in the riverbed during hydropeaking events.

The research activity will focus on fluid dynamics modeling with 2D / 3D models of different scenarios of morphological interventions in the river bed, to be coupled with the results of measurements both at laboratory scale and in the field for habitat suitability and / or risk drowning. The optimization processes relating to the production of hydroelectric energy will also be tackled with optimization techniques, trying to identify trade-offs between production needs and environmental/safety mitigation.

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 Civil and Environmental Engineering.

Proven research experience and appropriate knowledge in the field of hydraulic modeling and human safety assessment

Preferential title: PhD or equivalent foreign study title

Type of selection: Titles and oral exam

The assessment criteria (max. 80 points):

Academic titles:

Master Degree: max. 15 points thus determined:

- 110 and praise / 110 = 15 points
- 110/110 = 12 points
- between 107 and 109 = 10 points

PhD PhD in Hydrodynamics, Hydraulics or Environmental Engineering or similar disciplines, however consistent with the sector for which call is activated: **max. 15 points**

Evaluation criteria:

- Relevance of the title with the research topic: 10 points
- Relevance of the title with the research sector: 5 points

Qualifications for activities related to the research area declared in the call, pursuant to contracts, PhD studies, scholarships, research collaborations and assignments in national, foreign or international research organizations, or at private institutions or consortia performing duly certified research activities. The date

and duration of activity, as well as other titles, have to be duly documented and suitable to qualify the candidate's professionalism: **max 25 points**

Evaluation criteria:

- research grant related to the research area declared in the call and/or to the scientific sector stated in the notice: up to 2 points;
- collaboration contract with universities or research organizations for activities related to the research area declared in the call and/or to the scientific sector stated in the call: up to 2 points;
- PhD scholarships at universities or research institutes for activities related to the research area declared in the call and/or to the scientific sector stated in the notice: up to 6 points;
- research collaborations (stages, training /research activities) at universities or research institutes for activities related to the research area declared in the call and / or the scientific sector stated in the call: up to 3 points.
- training courses on topics related to the research area: max 3 points.

Publications (up to 25 points)

- articles in international journals with IF (impact factor);
- articles in international journals without IF with referee;
- articles in national journals or Conference Proceedings, in Italian or in other languages, with referee;
- international monographs;
- national monographs (in Italian or in other languages);
- chapters of books in international books;
- chapters of books in national books (in Italian or in other languages).

Maximum number of publications, that will be evaluated: 10

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

- a) the order of names: guide, drafter, coordinator;
- b) consistency with the rest of the scientific activity;
- c) the objective possibility of identifying the applicant's personal contribution by means of unambiguous indications contained in the publications.

Criteria for the evaluation for the interview (max 20 points):

it will be evaluated:

- the candidate's ability to motivate and justify the choices and content of the research topics he will illustrate;
- the methodological rigour;
- the clarity in the discussion;
- the degree of knowledge of the subject matter of examination;
- the degree of mastery of the research topics;
- the level of updating of knowledge in the topic for which the call has been opened;
- knowledge of English.

Language of the exam: English

Duration of the exam: 30 min

Object of the exam:

The exam will cover:

- a) the discussion of titles and publications,
- b) the general and specific topics in the scientific and disciplinary field for which the research call has been opened,
- c) the deepening of the scientific and professional experience of the candidate, with particular reference to the research activities mentioned in the call.

Total minimum score necessary for admission to the oral exam: 25

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

Place of work: Bozen-Bolzano

The gross annual remuneration: 26.650,00 Euro

Duration of the contract: 12 months

5. Faculty of Science and Technology

Number of places: 1

PIS: 150694 (WW2096)

CUP: I52F17001260005

Supervisor: Prof. Maurizio Righetti

Disciplinary-scient. sector: ICAR/02 (Hydraulic structures, maritime engineering and hydrology) – Pos. 2

Competition sector: 08/A1 (Hydraulics, Hydrology, Hydraulic and Maritime Structures)

Title of research project: MOIEREF-Methods for optimization and integration given energy prices and renewable resources forecasts

Description of the research activity: Water availability forecasting is fundamental, for the optimization of hydroelectric production from reservoir hydropower system.

Forecasting is performed through the proper hydrological modeling of the water inflow due to meteorological forcing, taking into account the physical characteristics of the basin itself.

The proper prediction of the flow rate entering a reservoir allows one to apply suitable optimization methods to maximize the economic yield of the hydropower system.

The research activity will focus on the development of a forecast hydro-meteorological chain as a support tool for the production forecasting and the management optimization of the hydropower plants with reservoir and run-of-the-river, in mountain region and in the presence of glaciers. The hydrological modeling can be short-term (a few days) and long-term. The hydrological modeling will have to duly consider and model also the contribution to the outflow given by the snow-glacial melt/ablation and the long-term effect of climate change. Advanced hydrological models will have to be applied and developed, including the ARFFS hydrological model. The hydrological models must be flexible enough to allow the use of spatio-temporal data bases for the proper physical representation of the catchment to be simulated. They must be calibrated according to the latest calibration techniques, now-testing, back-testing and forecasting. Part of the research activity will be aimed at updating the ICHYMOD hydrological model, to improve its performance and compatibility with different spatial-temporal weather data bases.

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 Civil and Environmental Engineering or foreign equivalent study title.

Proven research experience and appropriate knowledge in the field of hydrological modeling

Preferential title: PhD or equivalent foreign study title

Type of selection: Titles and oral exam

The assessment criteria (max. 80 points):

Academic titles:

Master Degree: max. 15 points thus determined:

- 110 and praise / 110 = 15 points
- 110/110 = 12 points

- between 107 and 109 = 10 points

PhD: PhD in Hydrodynamics, Hydraulics or Environmental Engineering or similar disciplines, however consistent with the sector for which call is activated: **max. 15 points**

Evaluation criteria:

- Relevance of the title with the research topic: 10 points
- Relevance of the title with the research sector: 5 points

Qualifications: for activities related to the research area declared in the call, pursuant to contracts, PhD studies, scholarships, research collaborations and assignments in national, foreign or international research organizations, or at private institutions or consortia performing duly certified research activities. The date and duration of activity, as well as other titles, have to be duly documented and suitable to qualify the candidate's professionalism: **max 25 points**

Evaluation criteria:

- research grant related to the research area declared in the call and/or to the scientific sector stated in the notice: up to 2 points;
- collaboration contract with universities or research organizations for activities related to the research area declared in the call and/or to the scientific sector stated in the call: up to 2 points;
- PhD scholarships at universities or research institutes for activities related to the research area declared in the call and/or to the scientific sector stated in the notice: up to 6 points;
- research collaborations (stages, training /research activities) at universities or research institutes for activities related to the research area declared in the call and / or the scientific sector stated in the call: up to 3 points.
- training courses on topics related to the research area: max 3 points.

Publications (up to 25 points)

- articles in international journals with IF (impact factor);
- articles in international journals without IF with referee;
- articles in national journals or Conference Proceedings, in Italian or in other languages, with referee;
- international monographs;
- national monographs (in Italian or in other languages);
- chapters of books in international books;
- chapters of books in national books (in Italian or in other languages).

Maximum number of publications, that will be evaluated: 10

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

- a) the order of names: guide, drafter, coordinator;
- b) consistency with the rest of the scientific activity;
- c) the objective possibility of identifying the applicant's personal contribution by means of unambiguous indications contained in the publications.

Criteria for the evaluation for the interview (max 20 points):

it will be evaluated:

- the candidate's ability to motivate and justify the choices and content of the research topics he will illustrate;
- the methodological rigour;
- the clarity in the discussion;
- the degree of knowledge of the subject matter of examination;
- the degree of mastery of the research topics;
- the level of updating of knowledge in the topic for which the call has been opened;
- knowledge of English.

Language of the exam: English

Duration of the exam: 30 min

Object of the exam:

The exam will cover:

- a) the discussion of titles and publications,
- b) the general and specific topics in the scientific and disciplinary field for which the research call has been opened,
- c) the deepening of the scientific and professional experience of the candidate, with particular reference to the research activities mentioned in the call

Total minimum score necessary for admission to the oral exam: 25

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

Place of work: Bozen-Bolzano

The gross annual remuneration: 26.650,00 Euro

Duration of the contract: 12 months

6. Faculty of Science and Technology

Number of places: 1

PIS: 150683 (TN200L)

CUP: I56C18002010005

Supervisor: Prof. Renato Vidoni

Disciplinary-scientific sector: ING-IND/13 (Applied Mechanics)

Competition sector: 09/A2 (Applied Mechanics)

Title of research project: Smart PRUning and Climbing treEs ROBOT

Description of the research activity: The research activity deals with the study, development and design of field robotic technologies and techniques that can assist the forestry industry to produce timber more efficiently, more safely and with less waste.

In particular, the research activity of the hired candidate will focus on the design and development of a modular and adaptable robotic tree climbing prototype able to (1) climb a tree-trunk with minimal bark damage, (2) recognize/sense and (3) cut branches.

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 in mechanical engineering or Mechatronic Engineering.

Experience in the field of (industrial and field) robotics and (functional) mechanical design.

Preferential title: PhD in Mechanical/Mechatronic Engineering or equivalent foreign study title.

Type of selection: Qualification and test.

Assessment criteria (max. 75 points):

Academic degrees (max. 35 points):

- Master's Degree in mechanical engineering or industrial engineering or equivalent foreign study title: max. **15 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) in mechanical engineering or industrial engineering up to a maximum of **5 points**.

Publications (max. 24 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. 16 points):

Research experience acquired on the specific or related topics 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.

Maximum number of publications, that will be evaluated: 10

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 following languages: English.

Language of the exam: Italian and English

Duration of the exam: 30 min

Object of the exam (max. 25 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 points

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

Place of work: Bozen-Bolzano

The gross annual remuneration: 25.700,00 Euro

Duration of the contract: 12 months (The contract may be extended until the 14.01.2022, whereas such an extension of the contract is necessary to complete the project and is subject to a positive assessment of the activity performed, as well as the availability of financial resources)

7. Faculty of Science and Technology

Number of places: 1

PIS: 151420 (ex 138966) (TN3002)

CUP: N/A

Supervisor: 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: Stability in human-machine interaction and collaboration

Research activity: Recent trends in robotics aim at developing robotic systems that are capable of sharing their workspace with humans and assisting them in performing tasks. Different kind of control algorithms with varying degrees of robot autonomy including schemes of bilateral, shared and supervisory control have been proposed in this context. Most of them either mimic human-human cooperation behavior or aim at optimizing predefined, task-related performance criteria, putting less emphasis on the stability analysis. Thus, in the context of this work control schemes for human-robot interaction and collaboration for serial and parallel actions should be investigated, allowing to either mimic human collaboration behavior or optimizing desired performance criteria, but at the same time guaranteeing stability of the implemented algorithms.

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 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

The assessment criteria (max. 75 points):

Academic degrees (max. 15 points):

- Doctoral research (PhD) in a field consistent with this announcement up to a maximum of **5 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 project 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 (max. 10 points).
- Proof of projects carried out in a team as well as evidence of existing professional networks in science, industry and public life (max. 5 points).

- Proof of project responsibility with respect to the management of own workload and those of others as well as the management of research resources (max. 5 points).
- Proof of activities of documentation, communication and dissemination of research results in the scientific world, industry, and the public (number and variety of activities, e.g. (invited) lectures at conferences/workshops, reporting activities in the framework of research projects, organization of workshops, special issues, editorships of books, organization of exhibitions and events such as open house, industrial workshops etc.) (max. 5 points).
- Proof of supervised student work and courses held on research methods and the use of research equipment (max. 5 points).

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

- Track record of publications and projects that demonstrate expertise in the areas of control theory, system modelling, machine learning as well as experience with designing, implementing, and performing human-human as well as human-robot experiments (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).

Maximum number of publications, that will be evaluated: 10

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 the selected solutions and the chosen research methods and research topics
- 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 scientific disciplinary sector for which the research grant has been tendered and their actuality
- existing soft skills in terms of communication and working in teams as well as networking ability
- existing organizational and management skills
- the interest for the following subjects:
 - Control theory
 - Work with human subjects
 - Interdisciplinary research
- 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. 25 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: 60

Place of work: Bozen/Bolzano

The gross annual remuneration: 29.000,00 Euro

Duration of the contract: One year contract (extension for another max. 2 years given a positive evaluation of the performed activity and the verification of the effective availability of the budget funds)

8. Faculty of Science and Technology

Number of places: 1

PIS: 150691 (TN2241)

CUP: I53C18000010009

Supervisor: Prof. Karl von Ellenrieder

Disciplinary-scientific sector: ING-INF/04 (Systems and Control Engineering)

Competition sector: 09/G1 (Systems and Control Engineering)

Title of research project: Field Robotics South-Tyrol Laboratory - FIRST Lab

Description of the research activity:

The effort will involve research in support of the overall goal of developing field robot platforms and systems:

- Dynamic modeling and simulation (e.g. in Matlab and Simulink)
- Low-level control
- Field testing

Publication of scholarly results and assistance with proposal writing on topics in robotics, in particular field robotics.

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 in:
 - 1) academic discipline ING-INF/04 (Systems and Control Engineering); or
 - 2) a related 09/A field, such as Mechanical Engineering, Aeronautical or Aerospace Engineering, Ocean/Marine Engineering coupled with a strong educational and research background in ING-INF/04 topics.
- Experience in Dynamic modeling and simulation
- Experience performing experimental robotics work

Type of selection: By qualifications and exam

Assessment criteria (max. 90 points):

Academic degrees (max. 42 points):

- Master's Degree in a discipline involving ING-INF/04 topics, or equivalent foreign study title: max. **12 points**;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **05 points**;
- Possession of a PhD degree (or equivalent, obtained in Italy, or abroad) in a field consistent with this announcement max. **25 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.

- Experience (professional or project) in the areas of robotics and automatic control;
- Research activities (e.g. research grants at the university level or research positions at major research institutions) in robotics/unmanned vehicle systems
- Participation as a speaker at national and international conferences

Maximum number of publications, that will be evaluated: 10

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 will be considered equally weighted.

Criteria for the evaluation for the interview:

In the oral exam the following points will be evaluated:

- The ability of the candidate to justify own solutions and results of the research activities
- The ability of the candidate to justify own solutions and results of the research activities
- The level of knowledge of the announced scientific-disciplinary sector
- Italian and English language skills

Language of the exam: English and Italian

Duration of the exam: 1 hour

Object of the exam (max. 10 points):

- a) Knowledge of Dynamic modeling and simulation techniques for robots and unmanned vehicles
- b) Knowledge of Automatic Control Techniques
- c) Knowledge of techniques for experimental robotics work
- d) Experience in lab organization and management

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

Total minimum score in order to declare the candidate suitable for the position: 65

Place of work: Bolzano-Bozen

The gross annual remuneration: 24.965,00 €

Duration of the contract: 12 months. The contract may be extended up to a maximum of 12 months, whereas such an extension of the contract is necessary to complete the project and is subject to a positive assessment of the activity performed, as well as the availability of financial resources.

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) relative or relative by marriage up to the fourth degree, with a professor of the Department awarding the research assistant contract, with the Rector, the Director or with a member of the University Council of the University;
 - 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 procedures 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 **August 9th, 2019.**

To participate in the selection procedures in the disciplinary-scientific sector **AGR/13 (Agricultural Chemistry) – Prof. Mimmo** and **ING-INF/04 (Systems and Control Engineering) – Prof. von Ellenrieder** 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](https://www.unibz.it/calls/positions-for-academic-staff/?group=18&year=2019)

within **July 25th, 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:
- the date and place of birth;
 - the code of personal identification (fiscal code);
 - the residence, with the indication of the street, the street number, the town, the province, the postcode;
 - the possessed citizenship;
 - 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;
 - not having been convicted of criminal offences;
 - not having pending criminal suits or received criminal sentences and not currently undergoing criminal proceedings (otherwise to indicate);
 - to have viewed the advertisement to which this selection procedure refers and accepts all its provisions;
 - that the content of the digital copies of all documents produced correspond to the content of the copies produced on paper;
 - that the publications on the data carrier conform to the original
 - 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;
 - to be employee at the following public administration....
 - 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 to be a relative or relative by marriage up to the fourth degree, with a professor of the Department awarding the research assistant contract, with the Rector, the Director or with a member of the University Council of the University;
 - 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 consolar 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).
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).
- 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 and/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 entrusted 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 contract 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.
- 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, 10.07.2019

Decree no. 48/2019

The Vice Rector

Prof. Stefania Baroncelli

