

FREE UNIVERSITY OF BOZEN-BOLZANO

SELECTION PROCEDURES

for the conferral of

12

fixed-time RESEARCH ASSISTANT CONTRACT

for

COLLABORATION at RESEARCH ACTIVITY

Rector's Decree

of 08.10.2018

no. 546/2018

FREE UNIVERSITY OF BOZEN-BOLZANO

RECTOR'S DECREE

no. 546/2018

Selection procedures for the awarding of 12 fixed-time research assistant contract for collaboration at research activity

THE 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 19.09.2018, no. 182/2018, 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 19.09.2018, no. 181/2018, 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 19.09.2018, no. 180/2018, 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 19.09.2018, no. 183/2018, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/15 (Food Science and Technology);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 19.09.2018, no. 184/2018, 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 19.09.2018, no. 185/2018, 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 19.09.2018, no. 186/2018, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-IND/16 (Manufacturing Technology and Systems);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from

19.09.2018, no. 187/2018, 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 19.09.2018, no. 189/2018, 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 19.09.2018, no. 188/2018, 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 19.09.2018, no. 190/2018, requesting the awarding of 2 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 12 selection procedures for the awarding of 12 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

Session: V 2018

Number of places: 1

PIS: 138860 (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's Degree in Mechanical Engineering, Energy Engineering or equivalent disciplines.

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: by qualifications

The assessment criteria (max. 100 points):

- Master's Degree in Mechanical Engineering, Energy Engineering or equivalent foreign study title (Degree of Graduation): max. **15 points**;
- Masters (postgraduate certificates of one/two-year course programs), postgraduate specialization courses in Mechanical Engineering, Energy Engineering or equivalent disciplines, or consistent with the curricular requirements and the aims of the project; max. **15 points**;
- Research Doctorate consistent with the sector for which the research fellowship is activated (max. **15 points**)
- Research experiences in the project area (internal combustion engines, in particular engines installed in agricultural machinery, biofuels and related problems); qualifications linked to the service, contracts, scholarships and assignments in national, foreign or international research organizations, or at private institutions or consortia that carry out duly certified research activities, whit documented date and duration of the activity, as well as other titles, duly documented, suitable to qualify the candidate's professionalism; mastery in using CAD, statistical or simulation software. (max. **40 points**)
- Publications: the total number of publications, their quality and their relevance to project research activities will be evaluated (max. **15 points**)

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

It is assumed that authors contributed equally.

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

Place of work: Bolzano-Bozen

The gross annual remuneration: 21.800,00 Euro

Duration of the contract: 12 months

2. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS 1: 138796: WEQUAL (TN2223): 6 mesi

PIS 2: 138799: ALPITec (TN820A): 6 mesi

CUP: I52F16000840005 (TN2223 - WEQUAL)
B83G13000420003 (TN820A – ALPITec)

Acronimo progetti:

“Wequal”, Codice progetto “FESR1001” - Programma EFRE-FESR 2014-2020

Supervisor: Prof. Fabrizio Mazzetto

Disciplinary-scientific sector: AGR/09 (Agricultural Machinery) – Pos. 1

Competition sector: 07/C1 (Agroforestry Engineering and Biosystem Engineering)

Title of research projects: WEQUAL - WEb Service Centre for a QUALity multidimensional design and teleoperated monitoring of Green Infrastructures; ALPITec - Alpine Technologies (Development of a Technological Network)

Description of the research activity: The ENVmonitoring research has the objective of developing a standard concept of technological platform able to support hardware and software tools for the monitoring of agro-environmental contexts, i.e. natural areas or sites subject to anthropic pressures deriving from agricultural activities.

The hardware technologies are based on remote/ground sensing with optical sensors equipped on terrestrial or air carriers (UAV), while the software technologies will focus both on the development of algorithms for the interpretation of the data acquired in monitoring activities, and on the development of decision-making tools based on multidimensional evaluation processes (multi-attribute and multi-criteria analysis).

The research will support two distinct projects: a) in the first six months of activity will refer to the work of the Wequal Project, with particular reference to (i) the development of a conceptual model for multidimensional monitoring and analysis related to works for realizing Green Infrastructures (GI) in fluvial contexts of various kinds, (ii) the definition and identification of technical, economic and environmental indicators to be used in multidimensional assessments for GI, and (iii) the execution of environmental monitoring activities on areas of interest for the GIs with remote sensing solutions to be performed with teleoperated vectors (UAV) with relative analysis and interpretation of the collected data; b) in the remaining period of the project, will instead refer to work for the realization of a new Agroforestry Innovations Lab (Capacity Building - Alpine Technologies) with particular reference to (i) the development and development of tools for crop monitoring in orchards, with related field-test activities and interpretation of results, and (ii) development of a multi-criteria analysis platform for the selection of technologies related to Precision Agriculture applications.

In both cases, the candidate's role will also concern data collection for the preparation of documentation for specific case studies, as well as support for the coordination of project activities, especially in relation to external companies/institutions that in each research line for various reasons.

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 Mechanical Engineering, Civil, Electronic, Computer Science, Environmental, or equivalent qualification; or Degree in Agricultural, Forestry or Environmental Sciences or equivalent qualification
- Proven experience in the use of software for the processing and analysis of experimental data (eg Matlab)
- Proven experience in the use of GIS and / or CAD software, even on open packages:

Preferential title: PhD in disciplines related to civil-, mechanics-, electronics-, agricultural- or forestry-engineering, or equivalent foreign academic qualification

Type of selection: Titles and exam

The assessment criteria: 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: English

Duration of the exam: 45 minutes

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:

25% (of the max. scorable)

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

50% (of the max. scorable)

Place of work: Bolzano-Bozen (with temporary stays on the experimental sites of the project)

The gross annual remuneration: Euro 23.490,00

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.

3. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138808 (TN2243)

CUP: I56C18000060009

Acronimo progetto "Brotweg", Codice progetto "FESR1089"

Supervisor: Prof. Fabrizio Mazzetto

Disciplinary-scientific sector: AGR/09 (Agricultural Machinery) – Pos. 2

Competition sector: 07/C1 (Agroforestry Engineering and Biosystem Engineering)

Title of research project: Brotweg - The bread road map in alpine environments: new technologies for the cereal transformation chain in high mountain

Description of the research activity: The Brotweg project wants to develop radical and incremental innovations for the cultivation of cereals in extreme mountain contexts, on very steep slopes (70%) where cereal cultivation is today precluded to any form of mechanization, with consequent abandonment due to the high demands of labor. The need to identify new models of development for mountain agriculture, complementary to the prevailing zootechnical ones, re-proposes in the foreground the alternative of the "cereal supply chain" (cereal-flour-bread), compared to the "dairy supply chain" (hay- milk-cheese) for the considerable advantages that the former entails in terms of reduction of labor and annual workloads, investments and environmental impacts. But the cereal supply chain first requires the solution of problems that hinder the adoption of suitable technological solutions for field mechanization and conservation in small farms.

The project, therefore, provides for the development of prototypes for: a) cultivation, with new machines suitable for the steep slopes in the most critical operations (sowing and harvesting); b) post-harvest and storage of the grain directly on the farm; c) transformation, with micro-lines of bread making. All this, following integrated approaches that take into account economic and operational performance, safety conditions for operators, control of erosive phenomena and landscape protection, levels of sustainability of the entire supply chain.

The research activity will concern all the key points of the project, with high interactions between the various partners participating in the project itself (machine builders, plants, experimental farm).

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 Mechanical Engineering, Civil, Electronic, Computer Science, Environmental, or equivalent qualification; or Degree in Agricultural, Forestry or Environmental Sciences or equivalent qualification
- Proven experience in the use of software for the processing and analysis of experimental data (eg Matlab)
- Proven experience in the use of GIS and / or CAD software, even on open packages:

Preferential title: PhD in disciplines related to civil-, mechanics-, electronics-, or agricultural-engineering, or equivalent foreign academic qualification

Type of selection: Titles and exam

The assessment criteria: 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: English

Duration of the exam: 45 minutes

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:

25% (of the max. scorable)

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

50% (of the max. scorable)

Place of work: Bolzano-Bozen (with temporary stays on the experimental sites of the project)

The gross annual remuneration: Euro 23.490,00

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.

4. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 137897 (TN820C)

CUP: B83G13000420003

Supervisor: Prof. Matteo Scampicchio, Tutor: Prof. Emanuele Boselli

Disciplinary-scientific sector: AGR/15 (Food Science and Technology)

Competition sector: 07/F1 (Food Science and Technology)

Title of research project: Innovative applications of processing and analytical techniques for the wines produced in South Tyrol (STOEN)

Description of the research activity: The research activity consists in the application of new processing technologies and high resolution analytical methods to the wines produced in South Tyrol.

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, Food Sciences, Biological Sciences or related sciences
- Experience with high resolution chemical-analytical methods especially applied to wines
- Good knowledge of English language

Preferential title: PhD or equivalent foreign study title in Food Science, Agricultural Sciences, Biological Sciences or related sciences

Type of selection: Based on qualifications and interview

The assessment criteria:

The criteria will be defined by the evaluation commission at the first meeting

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

The criteria will be defined by the evaluation commission at the first meeting

Criteria for the evaluation for the interview:

The criteria will be defined by the evaluation commission at the first meeting

Language of the exam: English

Duration of the exam: 45 minutes

Object of the exam:

- Discussion of the qualification and research experience of the candidate
- General questions about enology
- Evaluation of the knowledge about high resolution chemical-analytical methods especially applied to wines

Total minimum score necessary for admission to the oral exams:

Will be defined by the evaluation commission at the first meeting.

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

Will be defined by the evaluation commission at the first meeting.

Place of work: Free University of Bolzano-Bozen, Faculty of Science and Technology

The gross annual remuneration: 23.576,26 Euro

Duration of the contract: 12 months. The contract may be extended for 6 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.

5. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138927 (TN200G)

CUP: I56C18000890005

Supervisor: Dr. Lorenzo Brusetti

Disciplinary-scientific sector: AGR/16 (Agricultural microbiology)

Competition sector: 07/F2 (Agricultural microbiology)

Title of research project: WoodMicroNet - Disentangling the Network of Wood-Decomposer Microbial Community in a Montane South Tyrolean Forest

Description of the research activity:

- Understanding the relation between bacterial, fungal and archaeal community in different logs from diverse decaying stages.
- Assess the correlation between the diversity of the microbial community on decaying logs and those of the surrounding forest soil.
- Reconstruct the metabolic network of the microbial communities during the decaying stages, with specific attention to the main nutrient cycles.
- Understanding the topology of log degradation through cytometry and advanced microscopy.
- Assessing if the nitrogen aerial fertilization could modify such dynamics.
- Isolate some fungal and bacterial strains and study their ecological interactions in terms of competition and antibiosis.

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 in Microbial Ecology or equivalent study title in a related scientific area.

Type of selection: Titles and interview

Assessment criteria (max. 70 points):

Academic degrees (max. 32 points):

Master's Degree in Natural Sciences or equivalent foreign study title: max. **5 points**;

Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **2 points**;

Doctoral research (PhD) in microbial ecology up to a maximum of **25 points**;

Publications (max. 15 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:

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 and Italian

Duration of the exam: 30 minutes

Object of the exam (max. 30 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: 50

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

Place of work: Free University of Bozen/Bolzano

The gross annual remuneration: 22.610,00 €

Duration of the contract: 24 months

6. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138521 (TN2082)

CUP: I52F16000940005

Supervisor: Prof. Maurizio Righetti

Disciplinary-scientific sector: ICAR/02 (Hydraulic structures, maritime engineering and hydrology)

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 possible way to study the hydropeaking-induced ecological implications is the coupling of hydrodynamic models with habitat suitability models, where hydrodynamic parameters are generally used to describe the physical habitat of target species. The proposal seeks to analyse the differences in habitat suitability assessment between 2D and 3D fluid dynamics simulations, used as inputs for the CASIMIR habitat suitability model, in the presence of solid transport induced by hydropeaking in gravel bed.

The research activity will focus on fluid dynamics modelling of different morphological intervention scenarios with 2D/3D models, possibly coupled with the results of both laboratory and field measurements.

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 Civil and Environmental Engineering or equivalent foreign study title and have a proven research experience and appropriate knowledge in the field of fluid-dynamic modeling of free-surface flows and sediment transport in gravel bed flow, 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 Hydrodynamics, Hydraulics or Environmental Engineering or a relating scientific field.

Type of selection: Titles and oral exam

Assessment criteria:

They will be determined by the Commission of selection in the first meeting

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

They will be determined by the Commission of selection in the first meeting

Criteria for the evaluation for the interview:

They will be determined by the Commission of selection in the first meeting

Language of the exam: Italian and English

Duration of the exam: to be determined by the Commission of selection in the first meeting

Object of the exam: Interview to verify candidates' knowledge of the required curricular requirements

Total minimum score necessary for admission to the oral exams:

to be determined by the Commission of selection in the first meeting

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

to be determined by the Commission of selection in the first meeting

Place of work: Free University of Bolzano-Bozen, Faculty of Science and Technology

The gross annual remuneration: Euro 24.000,00

Duration of the contract: 12 months

7. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138934 (TN200J) „Assist4Work“

CUP: I56C18000950005 (Assist4Work)

Supervisor: Prof. Dominik Matt

Disciplinary-scientific sector: ING-IND/16 (Manufacturing Technology and Systems)

Competition sector: 09/B1 (Manufacturing technology and systems)

Title of research project: Social sustainability in production through age-appropriate and disability-friendly workplace design using assistance systems (ASSIST4WORK)

Integration on the project: Industry 4.0 for SMEs: Smart Manufacturing and Logistics for SMEs in an X-to-order and Mass Customization Environment (SME 4.0)

Description of the research activity: Research activities are carried out in the ASSIST4WORK project and for support of the complementary SME 4.0 project.

The research assistant's activities include the following tasks: a) reviewing the literature and market status b) interviewing target groups and stakeholders c) developing the conceptual design of a prototype assembly workplace for older and disabled people d) implementing the prototype workplace e) carrying out tests with various assistance systems at the prototype workplace f) preparing publications and e) supporting the organization of events to disseminate the results.

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 mechanical or industrial engineering or equivalent foreign study title.

Initial work experience in an industrial environment and experience in the field of innovative methods or assistance systems for Industry 4.0 are an advantage.

Preferential title: PhD or equivalent foreign study title in mechanical or industrial engineering or a relating scientific field.

Type of selection: Qualification and test (oral interview).

Assessment criteria (max. 90 points):

Academic degrees (max. 42 points):

Master's Degree in mechanical or industrial engineering or equivalent foreign study title: max. **40 points**;

Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **1 points**;

Doctoral research (PhD) in mechanical or industrial engineering up to a maximum of **1 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 following languages: English, German and Italian.

Language of the exam: German, Italian, 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

Total minimum score in order to declare the candidate suitable for the position: 45/90

Place of work: Bozen-Bolzano

The gross annual remuneration: 22.500 Euro

Duration of the contract: 12 months – renewable for other 22,5 months, given both the positive evaluation of the activity and the availability of the project budget.

8. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138624 (IN2204)

CUP: I52F16000670006

Supervisor: Prof. Werner Nutt/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 degree in mechanical or civil engineering or industrial engineering or equivalent foreign title.

Preferential title: PhD or equivalent foreign academic qualification

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

Place of work: Bolzano-Bozen

The gross annual remuneration: EUR 25.000,00

Duration of the contract: 12 months: the duration can be extended by up to 6 months if there is a need for it to conclude the research project, depending on a positive evaluation of the work delivered and on the verified availability of the necessary funds.

9. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 139136 (TN3002)

CUP: /

Supervisor: Prof. Paolo Lugli

Disciplinary-scientific sector: ING-INF/01 (Electronic Engineering) – Pos. 1

Competition sector: 09/E3 (Electronic Engineering)

Title of research project: Design and realization of electronic components on flexible substrate.

Description of the research activity: Objective of the project is the development of simulation and printing techniques for the design and fabrication of electronic components on flexible substrates (e.g. plastic). The research activity will focus on the modeling of components such as sensors, transistors and solar cells using commercial or in-house simulators, as well as on their fabrication via printing technologies.

The following activities are planned: a) development of physical models and their integration in simulators; b) fabrication of sensors (bio, gas, temperature and humidity), transistors and/or solar cells on flexible substrates; c) characterization and simulations of the built components

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 relating 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. **15 points**;

Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **5 points**;

Doctoral research (PhD) in Electronic Engineering or Physics 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: 30

Place of work: Bozen-Bolzano

The gross annual remuneration: 29.000,00 Euro

Duration of the contract: 24 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

Session: V 2018

Number of places: 1

PIS: 139134 (TN3002)

CUP: /

Supervisor: Prof. Paolo Lugli

Disciplinary-scientific sector: ING-INF/01 (Electronic Engineering) – Pos. 2

Competition sector: 09/E3 – Electronic Engineering

Title of research project: Printing technologies for electronic components 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 relating 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. **15 points**;

Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. **5 points**;

Doctoral research (PhD) in Electronic Engineering or Physics 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: 30

Place of work: Bozen-Bolzano

The gross annual remuneration: 29.000,00 Euro

Duration of the contract: 18 months

11. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138966 (TN3002)

CUP: N/A

Supervisor: Prof. Angelika Peer

Disciplinary-scientific sector: ING-INF/04 (Systems and Control Engineering) – Pos. 1

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

Title of research project: Action, plan and intention understanding for supporting decision making in human-robot collaboration

Research activity: Recent trends in robotics aim at developing robotic systems that are capable of sharing their workspace with humans to ultimately assist them in performing tasks. Such robots, however, need to be endowed with capabilities of action, plan and intention understanding to understand what the human agent is doing, why and to what end such that the robot can then reason and decide about own actions to be taken under a certain context. A major challenge is consequently to research and develop computational models that allow a robot to understand current and to predict next manipulation and locomotion actions of a human subject based on identified intentions, plans, and context.

In the context of this work, an existing biologically-inspired action understanding system of the group, which is based on a fully dynamic approach in contrast to classical probabilistic approaches, should be extended towards capabilities of plan and intention recognition and new modules for the context-based decision making on action sharing and complementation should be developed.

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

- Applicants must demonstrate that they have sufficient knowledge of the research topics described above, both theoretical and technical- methodological (in particular experience with dynamical systems) ideally supported by a sufficient number of scientific publications.
- Master degree in Electrical Engineering, Mechanical Engineering, Computer Science, Robotics or Human-Machine Interaction

Preferential title: PhD in robotics, control, mechanical engineering, electrical engineering, computer science, physics or equivalent foreign study title.

Type of selection: based on qualification and exam

The assessment criteria (max. 75 points):

1. Possession of a PhD degree (or equivalent) in a field consistent with this announcement (max. 10 points);
2. Mark of the diploma degree (max. 5 points)
3. Other titles (max. 5 points):
 - a) Post-graduate diplomas;
 - b) Post-graduate specialized courses;
 - c) Qualifications related to service contracts, scholarships and appointments in national, foreign or international research institutions, or in private institutions or in consortia, which are engaged in research activities, duly certified and showing the period and the duration of the activity, as well as other qualifications, duly documented, which are able to classify the candidate's professionalism.
4. Track record of academic conference and journal publications in the relevant area of the advertisement (number of relevant publications, originality; scientific significance; diffusion within the scientific community; number of authors; relevance of methods employed in the publications to the research field of the advertisement) (max. 15 points).
5. Track record of publications and projects that demonstrate expertise in the areas of dynamic system control as well as experience with designing, implementing, and performing human-human as well as human-robot experiments (max. 15 points).
6. 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).
7. 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).
8. Proof of projects carried out in a team as well as evidence of existing professional networks in science, industry and public life (maximum 5 points).
9. Proof of project responsibility with respect to the management of own workload and those of other project participants, as well as the management of research resources (maximum 5 points).
10. Proof of supervised student work and courses on research methods and the use of research equipment (maximum 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 will be considered equally weighted.

Criteria for the evaluation for the interview:

The oral exam will evaluate (max. 25 points):

- the ability of the candidate to substantiate, support and critically reflect on the selected solutions and the chosen research methods and research topics
- the methodological rigor
- the clarity of the explanations
- existing scientific knowledge in the advertised area
- the mastery of research methods and tools
- 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:
 - o Interdisciplinary research
 - o Work with human subjects

- the knowledge of the language provided for in the call for tenders.

Language of the exam: English

Duration of the exam: 1 hour

Object of the exam:

- a) Discussion of titles, projects and publications
- b) Detailed discussion of the didactic, scientific and professional experience of the candidate.
- c) Discussion of scientific knowledge in the field of the advertisement
- d) Discussion of programming knowledge and software usage
- e) Discussion of soft skills
- f) Discussion of organizational and management skills

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

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 (renewable for another 2 years given a positive evaluation of the performed activity)

12. Faculty of Science and Technology

Session: V 2018

Number of places: 1

PIS: 138967 (TN3002)

CUP: N/A

Supervisor: Prof. Angelika Peer

Disciplinary-scientific sector: ING-INF/04 (Systems and Control Engineering) – Pos. 2

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

Title of research project: Dynamic Models for Emotion Estimation from Physiological Signals

Description of the research activity: Current efforts in human-machine-interaction aim at finding ways to make interaction more natural. In this, knowledge of the user's emotional state is considered an important factor. Methods of automatic and reliable estimation of affective states from various modalities has therefore received much attention lately. In particular, emotion recognition from physiological signals is expedient, since it taps the pure, unaltered emotion in contrast to modalities like facial expressions, which can be faked.

To date, emotion recognition, however, has mostly been carried out using static machine learning methods, while recent developments of emotion theory pointed out the dynamic nature of emotions.

This work concerns itself with the extension of our preliminary developed gray-box framework for dynamic emotion estimation that incorporates findings from appraisal models, specifically Scherer's Component Process Model to model dynamic processes of emotion quality and intensity changes. More specifically the aim is to extend the so far existing emotion model for intensity estimation to more emotion qualities to

measure and to model intensity transitions between them next to intensity changes. This will require the design of proper subject experiments, the capturing of physiological signals as well as the post-processing of this data. Further, the available emotion estimation model will have to be extended to include additional dynamics and layers and system identification/machine learning methods will have to be applied to the dataset to derive model parameters.

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

- Applicants must demonstrate that they have sufficient knowledge of the research topics described above, both theoretical and technical- methodological (in particular experience with methods of optimization, system identification, modelling and machine learning) ideally supported by a sufficient number of scientific publications.
- Master degree in Electrical Engineering, Mechanical Engineering, Computer Science, Robotics or Human-Machine Interaction

Preferential title: PhD in robotics, control, mechanical engineering, electrical engineering, computer science, physics or equivalent foreign study title.

Type of selection: based on qualification and exam

The assessment criteria (max. 75 points):

- 1) Possession of a PhD degree (or equivalent) in a field consistent with this announcement (max. 10 points);
- 2) Mark of the diploma degree (max. 5 points)
- 3) Other titles (max. 5 points):
 - a) Post-graduate diplomas;
 - b) Post-graduate specialized courses;
 - c) Qualifications related to service contracts, scholarships and appointments in national, foreign or international research institutions, or in private institutions or in consortia, which are engaged in research activities, duly certified and showing the period and the duration of the activity, as well as other qualifications, duly documented, which are able to classify the candidate's professionalism.
- 4) Track record of academic conference and journal publications in the relevant area of the advertisement (number of relevant publications, originality; scientific significance; diffusion within the scientific community; number of authors; relevance of methods employed in the publications to the research field of the advertisement) (max. 15 points).
- 5) Track record of publications and projects that demonstrate expertise in the areas of dynamic system modelling, system identification, optimization and machine learning as well as experience with designing, implementing, and performing human subject experiments (max. 15 points).
- 6) Track record of publications and projects or certificates that demonstrate expertise with programming in C/C++, Python, Matlab/Simulink (max. 5 points).
- 7) 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).
- 8) Proof of projects carried out in a team as well as evidence of existing professional networks in science, industry and public life (maximum 5 points).
- 9) Proof of project responsibility with respect to the management of own workload and those of other project participants, as well as the management of research resources (maximum 5points).
- 10) Proof of supervised student work and courses on research methods and the use of research equipment (maximum 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 will be considered equally weighted.

Criteria for the evaluation for the interview:

The oral exam will evaluate (max. 25 points):

- the ability of the candidate to substantiate, support and critically reflect on the selected solutions and the chosen research methods and research topics
- the methodological rigor
- the clarity of the explanations
- existing scientific knowledge in the advertised area
- the mastery of research methods and tools
- 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:
 - o Emotion research
 - o Interdisciplinary research
 - o Work with human subjects
- The knowledge of the language provided for in the call for tenders.

Language of the exam: English

Duration of the exam: 1 hour

Object of the exam:

- a. Discussion of titles, projects and publications
- b. Detailed discussion of the didactic, scientific and professional experience of the candidate.
- c. Discussion of scientific knowledge in the field of the advertisement
- d. Discussion of programming knowledge and software usage
- e. Discussion of soft skills
- f. Discussion of organizational and management skills

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

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 (renewable for another 2 years given a positive evaluation of the performed activity)

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 didactic contracts with Universities and institutes in Italy or abroad, except as provided in Art. 5, paragraph 3 of the 'Regulation of the research assistant contracts according to Art. 22 of the law 240/2010', and 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 person responsible of the research project.

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=2018>

within November 9th, 2018.

- 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. 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).

The University disclaims liability for possible postal mis-deliveries.

- 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 two fixed-time research assistant contracts 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 prove 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.
- 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 assessment is to be carried out by a Commission of selection, to be constituted of three members belonging to university staff from Italy or abroad.
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.
- 2) The interview may be performed also by videoconference, if the commission of selection approves it.
- 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 scientific responsible, 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 may be allowed a limited teacher-centered didactic activity (lessons, exercises, laboratories) for a maximum of 60 hours per academic year, provided that this activity does not interfere with the research activities. The hours of teacher-centered didactic are separately remunerated according to the "*Regolamento tariffario per i docenti a contratto, i supervisori e responsabili di tirocinio e i collaboratori linguistic*" in force.
Teacher-centered didactic activity may be decided by the Department, upon consent of the research assistant contract holder and upon authorization of the person responsible of the research project.
- 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 concerned or elsewhere, if expressly authorized by the person responsible for the scientific activity the research assistant contract holder belongs. If the research assistant contract holder authorized to perform research activity externally must undertake duties in connection with the research, he/she has the right of refund of expenses according to the rules and conditions set out by the "Regulation concerning service missions of teaching and research staff".

Art. 16

Person Responsible of the research activities of the research assistant contract holder and entrusted tasks

- 1) The Department the research assistant contract holder belongs nominates a professor or researcher or a fixed-time researcher as scientific responsible for the research activities, guiding and directing the research activities undertaken by the research assistant contract holder.
- 2) The person responsible of the research project must collect and assess the concise and the final relation. He/she further must report to the Responsible of the Department and to the Personnel Office 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) The Department the research assistant contract holder belongs, at the conferral of the research contract and periodically, determines, on proposal of the scientific responsible and after having heard the interested person, the research programs and his/her relevant tasks.

Art. 17

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

- 1) 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 person responsible of the research project 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 responsible of the project, 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 person responsible of the research project 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 person responsible of the research project, 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 instalments. 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=2018> 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, 08.10.2018

Decree no. 546/2018

The Rector

Prof. Paolo Lugli

