

FREE UNIVERSITY OF BOZEN-BOLZANO

SELECTION PROCEDURES

for the conferral of

11

fixed-time RESEARCH ASSISTANT CONTRACT

for

COLLABORATION at RESEARCH ACTIVITY

Rector's Decree

of 21.03.2019

no. 145/2019

FREE UNIVERSITY OF BOZEN-BOLZANO

RECTOR'S DECREE

no. 145/2019

Selection procedures for the awarding of 11 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 06.03.2019, no. 64/2019, requesting the awarding of 2 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/15 (Food Technology);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 65/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector AGR/16 (Agricultural Microbiology);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 66/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ICAR/02 (Hydraulic structures, maritime engineering and hydrology);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 67/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-IND/10 (Thermal engineering and industrial energy systems);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 68/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-IND/11 (Building Physics and Building Energy Systems);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 69/2019, 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 06.03.2019, no. 70/2019, 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 1 fixed-time research assistant contract for

collaboration at research activity in the disciplinary-scientific sector ING-INF/04 (Systems and Control Engineering);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 73/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-INF/04 (Systems and Control Engineering);

IN VIEW OF the deliberation of the Faculty Council of the Faculty of Science and Technology from 06.03.2019, no. 74/2019, requesting the awarding of 1 fixed-time research assistant contract for collaboration at research activity in the disciplinary-scientific sector ING-INF/04 (Systems and Control Engineering);

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

DECREES

Art. 1

Object of the selection procedure

The Free University of Bolzano, hereinafter referred to as University, announces 10 selection procedures for the awarding of 11 fixed-time research assistant contract for collaboration at research activity for the faculty and disciplinary-scientific sector hereafter indicated.

1. Faculty of Science and Technology

Number of places: 2

PIS: 146113 (POS 1) e 146114 (POS 2), TN2253

CUP: H36H19000000007

Acronimo progetto "Heumilch", Codice progetto "FESR1129"
Programma EFRE-FESR 2014-2020

Project responsible: Prof. Matteo Scampicchio

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

Competition sector: 07/F1 (Food Technology)

Title of research project: HEUMILCH - Analytical indicators in milk associable with silage in cow's forage

Description of the research activity:

The research aims to study the analytical markers in milk that can be associated with the use of ensilages in dairy rations.

The activities are those requested by the EU EFRE Project titled "*Heumilch - Analytical indicators in milk associable with silage in cow's forage*". This project deals with the determination of the authenticity of hay milk. Hay milk is produced from cows fed without ensilage. This practice is an innovative key to satisfy the growing needs of consumers. The renewal of ancient and traditional practices is a strategy that aims to valorize local products, respect natural resources and aiming at developing South Tyrol economy. Now, there are no analytical methods that allow the determination of herbaceous ensilage in the feeding of cows through the analysis of milk. Thus, the project HEUMILCH aims to set up a number of analytical techniques able to evaluate the presence of ensilages. This objective will be achieved through a methodological approach based on NIR spectroscopy, PTR-MS and high-resolution mass spectrometry.

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 Food Technology or Food Chemistry or equivalent foreign study title and have a proven track record in research activities or work experience in the field of food technology or food chemistry.

In particular, the candidate must show a good expertise in using NIR spectroscopy, PTR-MS and high resolution mass spectrometry.

Preferential title: PhD or equivalent foreign study title in Food Technologies.

Type of selection: Titles and exam

Assessment criteria (max. 50 points):

Academic degrees (max. 20 points):

- Master's Degree in Food Technology or equivalent foreign study title: max. **15 points**;
- Doctoral research (PhD) in Food Technology up to a maximum of **5 points**;

Publications (max. 5 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 in research institutions on the specific topic of the research project, demonstrated through scholarships (Erasmus, Marie Curie etc.) and research contracts.

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 Italian, English and German languages.

Language of the exam: English

Duration of the exam: 60 min

Object of the exam (max. 50 points):

The exam will cover:

- a) on the discussion of candidates' titles and publications;
- b) deepening the candidate's scientific and professional experience.
- c) the knowledge of the Italian, English and German languages.

Total minimum score necessary for admission to the oral exams: 30

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

Maximum number of publications, that will be evaluated: 10

Place of work: NOI Techpark, Bozen-Bolzano

The gross annual remuneration: 24.000,00 Euro for each research assistant

Duration of the contract: 12 months, renewable for other 12 months, given the positive evaluation of the activity and the verification of the effective availability of the budget funds.

2. Faculty of Science and Technology

Number of places: 1

PIS: 146065 (TN2249)

CUP: I56C18001600006

Supervisor: Prof. Raffaella Di Cagno

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

Competition sector: 07/I1 (Agricultural Microbiology)

Title of research project: FUNBREW - Biotransformation of brewers' spent grain: increased functionality for novel food applications

Description of the research activity: FUNBREW aims at exploiting bio-transformed brewers' spent grain as a novel food ingredient enriched in functional compounds generating additional nutritional and economic benefits. In particular, the following activities will be carried out:

- Monitoring of foodborne spoilage and pathogenic bacteria as well as total fungal counts by routine assays;
- Study of the metabolic profile of lactic acid bacteria through a high-throughput phenotypic microarray;
- Analyses of the main microbial metabolites through metabolomics approach.

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

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

Type of selection: Qualifications and exam.

Assessment criteria (max. 90 points):

Academic degrees (max. 42 points):

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

Publications (max. 36 points):

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

Research and practical experience (max. 12 points):

Research experience acquired on the specific topic of the research project through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the

collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate.

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

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

Criteria for the evaluation for the interview:

The evaluation of the oral test comprehends:

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

Language of the exam: English

Duration of the exam: 30 minutes

Object of the exam (max. 10 points):

The exam will cover:

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: NOI TechPark – Free University of Bolzano

The gross annual remuneration: 29.000,00 Euro

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

3. Faculty of Science and Technology

Number of places: 1

PIS: 145874 (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. Optimization processes related to hydropower production, trade-off between environmental issues and production needs.

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 with 2D/3D models of different scenarios of morphological interventions in the riverbed, to be possibly coupled with the results of measurements both at laboratory scale and in the field. The optimization processes related to the production of hydroelectric energy will also be addressed with optimization techniques, trying to identify trade-offs between production needs and environmental mitigation.

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

Researcher with PhD: PhD or equivalent foreign study title in Mathematical Sciences, Hydrodynamics, Hydraulics or Environmental Engineering or in a related scientific area. Proven research experience and appropriate knowledge in the field of fluid-dynamic modeling of free-surface flows and eventually sediment transport in gravel bed flow, which is a prerequisite for carrying out the research activity that is the subject of the call.

Type of selection: Titles

Assessment criteria (max. 100 points):

Academic degrees (max. 40 points):

Master Degree in Mathematical Sciences or Environmental Engineering or equivalent foreign study title: max. **10 points** as follows:

- up to 100/110 = 0 points;
- 103/110 = 1 points;
- 105/110 = 2 points;
- 108/110 = 4 points;
- 110/110 = 6 points;
- 110/110 = 10 points

PhD or equivalent foreign study title in Mathematical Sciences, Hydrodynamics, Hydraulics or Environmental Engineering or in a related scientific area up to a maximum of **30 points**;

- relevance of the title with the topic of the research project 15 points
- relevance of the title with the scientific sector 10 points
- relevance of the title with a neighbouring sector 5 points

Publications (max. 50 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. 10 points):

Awards or tributes for the dissertation/dissertation activities up to 10 points.

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

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

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

Maximum number of publications, that will be evaluated: 10

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

4. Faculty of Science and Technology

Number of places: 1

PIS: 145535 (TN2247)

CUP: B51B17000860008, Codice di progetto FESR "FESR1104"

Project responsible: Prof. Stefano Cesco

Project supervisor: Prof. Marco Baratieri

Disciplinary-scientific sector: ING-IND/10 (Thermal engineering and industrial energy systems)

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

Title of research project: HB Ponics - Hydrothermal carbonization of Biogas digestate for hydroPonics: an innovative concept of bio-refinery

Description of the research activity: Characterization of the physico-chemical and thermal properties of digestates from anaerobic digestion plants selected in the Province of Bolzano. Evaluation of the effective range of variability of digestates.

Performing of HTC tests on selected substrates, varying process conditions and characterizing the products obtained from the process. Identification of the most significant properties of hydrochar and liquid obtained for the use of the products in hydroponic systems.

Evaluation of post-treatments necessary to obtain products suitable for their utilization in hydroponic systems.

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 Environmental-, Civil-, Energy-Engineering, or equivalent title.
- Proven experience in the development, design and monitoring of pilot systems.
- Proven experience in the use of lab equipment, in particular in gas, tar and char analysis.

Preferential title: PhD in the Engineering field or equivalent foreign study title.

Type of selection: Based on qualifications

Assessment criteria (max. 100 points):

Academic degrees (max. 30 points):

- Master Degree in Environmental-, Civil-, Energy-Engineering, or equivalent foreign study title: max. **15 points**;
- Doctoral research (PhD) in the Engineering field or equivalent foreign study title up to a maximum of **15 points**;

Publications (max. 40 points):

- Originality, innovativeness, methodological rigor and relevance of each scientific publication;

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

Research and practical experience (max. 30 points):

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

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: Bozen-Bolzano

The gross annual remuneration: 26.000,00 euro

Duration of the contract: 12 months. The contract may be extended until the end of the project, 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

Number of places: 1

PIS: 145755 (TN820B)

CUP: B83G13000420003

Supervisor: Prof. Andrea Gasparella

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

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

Title of research project: Experimental and numerical analyses of indoor air quality and ventilation in the built environment

Description of the research activity: The researcher will deal with the study of air quality in the built environment, with particular focus on offices and schools. He will carry out both experimental investigations and numerical analyses. As for the experimental research, the researcher (1) will be involved in the design and construction of test environments for the verification of pollutant emissions by materials commonly used for surface finishing and furniture; (2) he/she will carry out measurements related to the efficiency of the systems for intake, distribution and extraction of air in the confined environments through measurements in the laboratories under construction at NOI TechPark and in situ; (3) he/she will participate in campaigns to detect the perception of air quality in confined spaces and perform statistical analyses of the collected data. With regard to numerical modelling, he/she will take care of the CFD simulation of the studied environments,

with the specific objective of improving the air distribution, the ventilation of the environments and, consequently, the perceived quality.

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

Master Degree in Engineering or Architecture or equivalent Italian or foreign study title.

Scientific profile: Robust scientific experience, outcome and publications in the field of indoor air quality, air ventilation and distribution systems in the built environment.

Preferential title: PhD in Building Physics and Building Energy Systems or equivalent study title in a related scientific area.

Type of selection: Based on qualifications

Assessment criteria (max. 100 points):

Academic degrees (max. 40 points):

- Mark of the final exam of Master Degree: max. 10 points;
- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, scholarships and research grants and awards, max. 15 points;
- Doctoral research (PhD) thesis in ING-IND/11: 15 points;

Publications (max. 36 points):

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

Research and practical experience (max. 24 points):

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

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: Bolzano

The gross annual remuneration: 25.000,00 EUR

Duration of the contract: 12 months, possibly extendable until 31.12.2020 if necessary for the conclusion of the project, premise a positive evaluation of the activity carried out and the verification of the effective availability of the budget funds.

6. Faculty of Science and Technology

Number of places: 1

PIS: 143616, TN2235
CUP: I53C17000400005

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: E-EDU 4.0 - NETWORK TRANSFRONTALIERO DI FORMAZIONE 4.0.
Programm Interreg Italia-Austria 2014-2020
Codifica locale ITAT3018-E-EDU 4.0

Description of the research activity: The research activities comprise the supervision and support of the E-EDU 4.0 project. The project aims to build up a network of training and further education partners in the Italy-Austria region and to develop and offer innovative training courses in connection with Industry 4.0. Specifically, the research fellow is developing new seminars and training courses as well as demonstrators for the application of Industry 4.0 technologies and machine learning for students, companies and schools in the Smart Mini Factory Laboratory of the Free University of Bozen/Bolzano as a learning factory 4.0.

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 in Mechanical Engineering, Industrial Engineering or Computer Science.

Experience in the field of Industry 4.0, machine learning and/or artificial intelligence as well as computer vision are necessary.

Preferential title: PhD in Mechanical Engineering, Industrial Engineering or Computer Science or equivalent foreign study title.

Type of selection: Qualification and oral exam

Assessment criteria (max. 90 points):

Academic degrees (max. 42 points):

- Master's Degree in mechanical engineering, industrial engineering or computer science 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 point;
- Doctoral research (PhD) in mechanical engineering, industrial engineering or computer science up to a maximum of 1 point;

Publications (max. 12 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. 36 points):

Professional and research experience acquired on the specific topic of the research project, of Industry 4.0, of machine learning, of artificial intelligence through stages, research projects, 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.

Language of the exam: English

Duration of the exam: 30 minutes

Object of the exam (max. 10 points):

The exam will cover:

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: Bozen-Bolzano

The gross annual remuneration: 21.000,00 Euro

Duration of the contract: 12 months. The contract may be extended until 31st October 2020, whereas such an extension of the contract is necessary to complete the project and is subject to a positive assessment of the activity performed, as well as the availability of financial resources.

7. Faculty of Science and Technology

Number of places: 1

PIS: 145962 (TN2251) – POS 1

CUP: B51B18000810007

Supervisor: Prof. Paolo Lugli

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

Competition sector: 09/E3 (Electronic Engineering)

Title of research project: "STEX - Smart textile for monitoring muscles activity". Printing technologies for sensor systems based on nanostructures.

Description of the research activity: The general objective of the project is to develop printing techniques for the realization of electronic components on flexible substrates. 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 physical and biological sensors 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 degree in Electronics or Engineering physics with specialization on electronic devices, and/or Solid-state physics or Engineering or equivalent foreign study title and have a proven track record in research activities or work experience in the field of Printing technologies for electronic components based on nanostructures.

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

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

Type of selection: by qualifications

Assessment criteria (max. 100 points):

Academic degrees (max. 30 points):

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

Publications (max. 45 points):

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

Research and practical experience (max. 25 points):

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

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: Bozen-Bolzano

The gross annual remuneration: 29.000,00 Euro

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

8. Faculty of Science and Technology

Number of places: 1

PIS: 138966 (TN3002)

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

Maximum number of publications, that will be evaluated: 10

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 and the verification of the effective availability of the budget funds).

9. Faculty of Science and Technology

Number of places: 1

PIS: 145976 (TN2252)

CUP: B11B18000580007

Acronimo progetto "RobuSinter", Codice progetto "FESR1113"
Programma EFRE-FESR 2014-2020

Project responsible: 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 the research project: RobuSinter - Optimisation of the robustness of compression presses in powder metallurgy through adaptive press control.

Description of the research activity: To achieve a high process robustness of compaction presses in powder metallurgy manual quality checks and manual adjustments of production parameters are currently required in regular intervals, requiring also long training times for personnel. These checks and adjustments currently represent one of the major bottlenecks in achieving a more cost-efficient and environment-friendly production. In this EFRE project and in collaboration with the industrial partner GKN Sinter Metals we consequently aim at developing new methods and tools for achieving such process robustness. For this i) main influencing factors of the process and thus, also the quality of the work piece, should be identified and based on them ii) the compaction process be modelled. Finally, with the help of this model, an optimal parameterization of the process should be derived and set by means of adaptive control.

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 a technical field or natural sciences or equivalent foreign study title.

Preferential title: PhD in a technical field or natural sciences.

Type of selection: based on qualification and exam

Assessment criteria (max. 75 points):

Academic degrees (max. 15 points):

- Doctoral research (PhD) in a field consistent with this announcement up to a maximum of 5 points;
- Master's Degree in a field consistent with this announcement or equivalent foreign study title: max. 5 points;

- Masters (postgraduate certificates of a one/two years course program), postgraduate specialization courses, max. 5 points;

Publications (max. 10 points):

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

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

- Research experience in the scientific sector of the call acquired through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate (max. 10 points).
- Proof of projects carried out in a team as well as evidence of existing professional networks in science, industry and public life (max. 5 points).
- Proof of project responsibility with respect to the management of own workload and those of others as well as the management of research resources (max. 5 points).
- Proof of activities of documentation, communication and dissemination of research results in the scientific world, industry, and the public (number and variety of activities, e.g. (invited) lectures at conferences/workshops, reporting activities in the framework of research projects, organization of workshops, special issues, editorships of books, organization of exhibitions and events such as open house, industrial workshops etc.) (max. 5 points).
- Proof of supervised student work and courses held on research methods and the use of research equipment (max. 5 points).

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

- Track record of publications and projects that demonstrate expertise in the areas of dynamic system modeling and system identification as well as optimization and adaptive control (max. 15 points).
- Track record of publications and projects or certificates that demonstrate expertise with real-time operating systems as well as programming skills in C/C++ and Matlab/Simulink (max. 5 points).

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

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

Criteria for the evaluation for the interview:

The evaluation of the oral test comprehends:

- the ability of the candidate to substantiate, support and critically reflect on the selected solutions and the chosen research methods and research topics
- the clarity of the explanations
- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge of the specific disciplinary sector for which the research grant has been tendered and their actuality
- existing soft skills in terms of communication and working in teams as well as networking ability
- existing organizational and management skills
- the interest for the following subjects:
 - Dynamic system modelling
 - Optimization
 - Adaptive control
- the knowledge of the language(s) mentioned in the call.

Language of the exam: English

Duration of the exam: 1 hour

Object of the exam (max. 25 points):

The exam will cover:

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: Bozen/Bolzano

The gross annual remuneration: 29.000,00 Euro

Duration of the contract: 12 months, renewable for other 2 years, given both the positive evaluation of the activity and the availability of the project budget.

10. Faculty of Science and Technology

Number of places: 1

PIS: 145505 (TN3002)

Project responsible: Prof. Angelika Peer

Disciplinary-scientific sector: ING-INF/04 ING-INF/04 (Systems and Control Engineering) – Pos. 3

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

Title of research project: Dynamic Emotion Models

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. To date, the field of emotion recognition and modelling is dominated by the application of static machine learning methods, while recent developments of emotion theory point out the dynamic nature of emotions.

This work concerns itself with the modelling of emotions as dynamic process by incorporating findings from appraisal models, specifically Scherer's Component Process Model to model dynamic processes related to changes in emotion quality and intensity. This will require the design of proper subject experiments, the capturing of physiological signals, the post-processing of recorded data as well as the analysis of the data with the help of system identification/machine learning methods 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:

Researcher without PhD: Master's degree in a technical field or natural sciences or equivalent foreign study title.

Preferential title: PhD in a technical field or natural sciences.

Type of selection: based on qualification and exam

Assessment criteria (max. 75 points):

Academic degrees (max. 15 points):

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

Publications (max. 10 points):

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

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

- Research experience acquired through contracts, scholarships and assignments in domestic corporations, international or foreign corporations or at private institutions or companionships which perform attested research activity, as long as the beginning and the duration of the collaboration is evidenced as well as other qualifications that attest the evidenced professionalism of the candidate (max. 10 points).
- Proof of projects carried out in a team as well as evidence of existing professional networks in science, industry and public life (max. 5 points).
- Proof of project responsibility with respect to the management of own workload and those of others as well as the management of research resources (max. 5 points).
- Proof of activities of documentation, communication and dissemination of research results in the scientific world, industry, and the public (number and variety of activities, e.g. (invited) lectures at conferences/workshops, reporting activities in the framework of research projects, organization of workshops, special issues, editorships of books, organization of exhibitions and events such as open house, industrial workshops etc.) (max. 5 points).
- Proof of supervised student work and courses held on research methods and the use of research equipment (max. 5 points).

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

- Track record of publications and projects that demonstrate expertise in the areas of dynamic system modelling, system identification, optimization and machine learning as well as experience with designing, implementing, and performing human subject experiments (max. 15 points).
- Track record of publications and projects or certificates that demonstrate expertise with programming in C/C++, Python, Matlab/Simulink (max. 5 points).

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

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

Criteria for the evaluation for the interview:

The evaluation of the oral test comprehends:

- the ability of the candidate to substantiate, support and critically reflect on the selected solutions and the chosen research methods and research topics
- the clarity of the explanations
- the methodological rigor
- the degree of knowledge of the subject matter of examination
- the degree of knowledge of research topics
- the level of knowledge of the specific disciplinary sector for which the research grant has been tendered and their actuality
- existing soft skills in terms of communication and working in teams as well as networking ability
- existing organizational and management skills

- the interest for the following subjects:
 - Emotion research
 - Interdisciplinary research
 - Work with human subjects
- the knowledge of the language(s) mentioned in the call.

Language of the exam: English

Duration of the exam: 1 hour

Object of the exam (max. 25 points):

The exam will cover:

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

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

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

Maximum number of publications, that will be evaluated: 10

Place of work: Bozen/Bolzano

The gross annual remuneration: 29.000,00 Euro

Duration of the contract: 12 months, renewable for other 2 years, given both the positive evaluation of the activity and the availability of the project budget.

Art. 2

Requirements for admission

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

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

Italian citizenship is not required.

Art. 3

Accumulation prohibition

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

Art. 4

Incompatibility and compatibility

- 1) The following cannot be holder of research assistant contracts:
 - a) the personnel of the University, of public research and experimentation institutions and bodies, of the Agency for the New Technologies, Energy and Sustainable Economic Development (ENEA) and of the Italian Space Agency (ASI), as well as of institutions whose degree of scientific specialization has been recognized as equipollent to the qualification of research doctor following Art. 74,

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

Art. 5

Conditions for presenting the application for participation and publications

- 1) To participate in the present selection procedure candidates must fill in an application form in unstamped paper, according to the model of attachment 'A' and available on the web page of the University: <https://www.unibz.it/en/home/position-calls/positions-for-academic-staff/?group=18&year=2019> within **April 23, 2019**.
- 2) The application, duly dated and handwritten signed at the last page, must be addressed to:
Free University of Bozen – Bolzano
Personnel Office Academic Staff (call)
Piazza Università, 1 - C. P. 276
39100 Bozen-Bolzano

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

The University disclaims liability for possible postal mis-deliveries.

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

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

- 3) On the package the candidate, in addition to the requirements mentioned in paragraph 2, must affix the inscription: "Application: selection procedure for the awarding of a fixed-time research assistant contract for collaboration at research activity" and accurately indicate the faculty, the initials and the denomination of the disciplinary-scientific sector, the title of the research project and the candidate's name, surname and address for the present selection procedure (the address for the present selection procedure is the candidate's elected domicile for the receipt of the communications relating to this procedure).

- 4) On the application (see attachment 'A') the candidate must clearly indicate her/his name and surname and must declare, under own responsibility:
- a) the date and place of birth;
 - b) the code of personal identification (fiscal code);
 - c) the residence, with the indication of the street, the street number, the town, the province, the postcode;
 - d) the possessed citizenship;
 - e) the municipality on whose electoral lists she/he is registered or the reasons for the non-registration or cancellation from such lists.
Foreign nationals must declare to enjoy civil and political rights in the country on which they belong;
 - f) not having been convicted of criminal offences;
 - g) not having pending criminal suits or received criminal sentences and not currently undergoing criminal proceedings (otherwise to indicate);
 - h) to have viewed the advertisement to which this selection procedure refers and accepts all its provisions;
 - i) that the content of the digital copies of all documents produced correspond to the content of the copies produced on paper;
 - j) that the publications on the data carrier conform to the original
 - k) not to be a university professor of the first and second rank or a researcher employed with open-ended contract, even if ceased from service in Italy;
 - l) to be employee at the following public administration...
 - m) that everything in the curriculum vitae (CV) that has been attached to this application is true and s/he gives the person in charge of the selection procedure the permission to undertake any checks on any substitute declarations that have been presented by the undersigned for the purposes of this selection procedure;
 - n) not to exceed the superior limit of twelve years, also non continuous periods, therefore considering the total duration of the contracts under Art. 22 (Research grants) and Art. 24 (Fixed-time researchers) of the law 30th December 2010, no. 240, also between different universities, public, non public or telematic ones, and with bodies as provided in Art. 22, paragraph 1 of the law no. 240/2010, as well as the duration of the contract according to the present call;
 - o) not to exceed the total duration of 6 years of the contracts under Art. 22 of the law 30th December 2010, no. 240 as amended (Research assistant contracts) including renewals and contracts between different universities/bodies, as well as the duration of the contract of the present call (the period of a Research assistant contract during a PhD study place with grant does not count within the regular study period);
 - p) not having family or kinship relation, up to the fourth degree, with a professor of the Department making the proposal of the activation of the contract, with the Rector, the General Director or with a member of the University Council;
 - q) not having been dispensed or dismissed from the employment by a Public Administration for persistent insufficient performance, not having been declared lost from other public employment according to art. 127, paragraph 1, letter d) of the T.U. regarding provisions concerning the charter of civil servants, approved with D.P.R. 10th January 1957, no. 3, not having gained the employment through production of faked documents or vitiated by not amendable invalidity, and not having had an employment relationship by a Public Administration which has been terminated for disciplinary reasons, included those provided in art. 21 of the legislative decree 29/1993;
 - r) the position concerning the fulfillment of the military duties;
 - s) the address chosen for the receipt of communications relating to the selection procedure she/he has applied for (address with postcode, telephone number, possible e-mail-address or fax number) and the commitment to inform the University in case of possible subsequent variations of those data;
 - t) to have received the data protection instructions as per art. 13 GDPR (2016/679) and to know that the supplied data, as well special categories of data (sensitive and judicial data) will be used exclusively for this selection procedure and the possible conclusion of the contract as per GDPR.

- 5) Candidates with recognized disabilities must expressly specify in their application any aid needed in relation to their handicap and the possible necessity of further time for the performance of the exams, according to art. 20 of the law 5th February 1992, no. 104.
- 6) Any variation of the candidate's data according to paragraph 4 of the present article must be immediately communicated in writing to this Administration.
- 7) The University accepts no responsibility for cases in which candidates are untraceable or when the communications are undeliverable due to imprecise indication of the address, or belated or lack of notification on the part of the candidate regarding a change of the address declared in the application. The University also disclaims liability for mail going astray, whether third parties are to blame, or whether it is attributable to mishaps, or to *force majeure* and which, in any case, is in no wise ascribable to the University. It accepts no blame when the return delivery slip indicating receipt of the application, of documents or of communications relating to the selection procedures fails to arrive. If the candidate's address differs from that of her/his place of residence, again the University is exempt from responsibility should a registered letter with notification of receipt arriving at the place which the candidate had specified as his address during the period of selection, fail to reach her/him.

Art. 6

Presentation of qualifications

- 1) Considered that, in accordance to the present call, by 'qualifications' are intended those scientific, didactic and artistic ones and the publications, and for 'certificates' any document proving the possession of a certain qualification, the candidate must enclose at the application for participation in the selection procedure in unstamped paper:
 - a) 1 copy of a valid identity document and the fiscal code;
 - b) 1 photocopy of the curriculum vitae regarding the didactic and scientific activity and drawn up according to the model of attachment 'C';
 - c) didactic and scientific qualifications believed useful for the comparative assessment;
 - d) 1 photocopy of the numbered list of the publications believed useful for the comparative assessment and drawn up in accordance with article 7 paragraph 3 of this call;
 - e) 1 photocopy of the list of all documents enclosed at the application [generic list of those materially inserted in the envelope, or the documents required by letters a), b), c) and d) of the present paragraph].
- 2) The qualifications indicated in paragraph 1, letter c), of the present article, if issued by Italian Public Administration, must be produced in one of the following forms:
 - a) in copy corresponding to the original as certified by substitutive declaration of the deed of notoriety according to art. 47 of the D.P.R. 28th December 2000, no. 445. In that case the candidate must produce:
 - 1 copy of each qualification;
 - 1 declaration drawn up according to the model of attachment 'B', signed and dated at the last page, where the candidate, under own responsibility, declares that the copies of the enclosed qualifications, exactly described, and in particular with regard to the date of attainment, place and Administration issuing the qualification, correspond to the original. That declaration at the same time serves as list of the qualifications, in which case the latter ones do not have to be produced;
 - 1 copy of an identity document;
 - b) in form of a self-declaration according to the model of attachment 'B' (substitutive declaration of certification according to art. 46 of the D.P.R. 28th December 2000, no. 445), where the candidate, under own responsibility, declares to possess the qualifications, exactly described, in particular with regard to the date of issue, place and Administration issuing the qualification. In that case the candidate must produce:
 - 1 copy of the attachment 'B', signed and dated at the last page, which at the same time serves as list of the qualifications, in which case the latter ones must not be produced;
 - 1 copy of an identity document.

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

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

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

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

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

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

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

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

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

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

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

- 10) Any certificate or diploma drawn up in a language different than Italian, French, English, German and Spanish, submitted by Italian, EU or non-EU citizens, must be enclosed, according to paragraph 3 of Art. 33 of the D.P.R. 28th December 2000, no. 445, the correspondent Italian translation, which is certified conform to the original text by the competent diplomatic or consular representation or by a official

translator. The certificates or diplomas drawn up in a different language than those above mentioned, in case of lacking translation, will not be assessed by the Commission of selection.

Art. 7

Sending of the publications

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

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

The translated texts must be produced in typewritten copies with the text printed in the original

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

- 10) For selection procedures concerning linguistic matters publications may be produced in the language or languages the selection procedure relates, even if different of those indicated in paragraph 9 of the present article.
- 11) The publication must be produced in any case, even in case they have already been submitted by this or other Administrations for participation at other selection procedures.
- 12) The missed sending of the publications within the provided date is not considered as renunciation of participating in the selection procedure. Nevertheless, the Commission of selection assesses the candidate only on the basis of the curricula and can therefore not assess the scientific works even if they are personally known by its members.

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

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

Art. 8

Exclusion from participation at the selection procedure

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

Art. 9

Renunciation of participation

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

Art. 10

Commission of Selection

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

The members of the Commission of selection must be active in the relevant research area or in the

disciplinary area the research project or the research activity refers.

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

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

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

Art. 11

Selection of the candidates

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

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

- 4) At the end of its work, the Commission of selection, on the basis of the scores assigned for the qualifications, publications and the examinations, if provided, compiles the merit ranking of the suitable candidates. Minority positions should be recorded, indicating, in relation to the number of research assistant contracts to confer, the candidates which the research contracts are conferred.

Art. 12

Publicity and transparency of the selection procedure

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

Art. 13

Validity of the ranking according to merits

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

Art. 14

Formalization of the relationship

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

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

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

Art. 15

Rights and duties of the assistant researchers

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

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

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

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

Art. 16

Supervisor and entrustees tasks

- 1) The Department the research assistant contract holder belongs nominates a professor or researcher or a fixed-time researcher (if the contract is longer than the contract of the research assistant) as supervisor for the research activities, guiding and directing the research activities undertaken by the research assistant contract holder.

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

Art. 17

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

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

Art. 18

Loss and withdrawal

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

Art. 19

Attendance of research doctorate courses

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

Art. 20

Economic and fiscal treatment, social security

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

Art. 21

Return of publications

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

Art. 22

Protection of personal data

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

Art. 23

Person in charge of the procedure

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

Art. 24
Referring provisions

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

Bozen-Bolzano, 21.03.2019

Decree no. 145/2019

The Rector

Prof. Paolo Lugli

