

Faculty of Science and Technology

Position call: Senior University Researcher
Academic recruitment field: 07/C1 (Agricultural, forestry and biosystems engineering)
Academic discipline: AGR/09 (Agricultural machinery and mechanisation)

Position type: 3 year Fixed-term contract / tenure-track

Profile

The profile of the candidate must fulfil the following criteria:

- Holder of an equivalent academic position at the candidate's current foreign university – "Direct call from abroad" according to the Italian legislation
- Postdoctoral research in any field of Engineering, Information Technologies and Agricultural or Forestry Sciences, provided that it also has declared connections with the applications of Agricultural Engineering as a whole
- Documented excellent performance in teaching
- Research publications in the top journals and the A/A* class conferences (international and national)
- A good command of two of the three teaching languages of the Free University of Bozen-Bolzano (German, Italian and English) is required

Position

The position offered is at Senior University Researcher Level in Agricultural and Forestry Machinery and Mechanization, whose competences range from topics related to machinery and plants feature, energy management, technology selection and scheduling till their monitoring and management issues through digital components integrated into enterprise information systems. This is a 3 year fixed-term contract position with a teaching load of 60-120 hours/year in the bachelor and/or master courses.

The research activities will focus on the behavior of specific technologies (tractor units, fixed-point installations, logistics and forest transport systems) in contexts both related to their actual conditions of use and to controlled lab-environments to also meet machine and process certification purposes. Digitalisation will be the main transversal approach to all research activities. This will both concern: 1) the development of new highly automated solutions for the sector (mechatronic applications and robotisation); 2) and Knowledge Management applications, including the design of new conceptual models of information systems, to be adapted to the requirements of agri-environmental enterprises and suitable for integrating the management of highly automated machines according to Smart Agriculture logics.

It is a tenure-track position at Associate Professor level starting from the 4th year on, subject to a positive assessment, to the achievement of the Italian "National Scientific Qualification" (ASN - ex. art.16 of the law 30 December 2010, n.240) and the language certification of the three teaching languages (English, German Italian), two languages at C1 level and one at B2 level.

The working place is in Bolzano, both at the NOI-Techpark laboratories and at Central Campus.

The position offers a working opportunity in an international team of experts open to collaborate on innovative and cross-disciplinary projects. Also, various funding possibilities (European, provincial, third sector and internal funds) are at disposal. A multilingual working environment complete the position (including free language teaching support to reach the required certifications).

Research directions:

- Prototyping for agricultural and forestry operations in steep areas
- Systems for mitigating the environmental impacts of agricultural field processes
- Safety of agricultural and forestry machinery and plants
- Optimisation of energy consumption in agricultural and forestry processes
- Process planning and work organisation
- Automated monitoring of processes and crop status
- Product and process certification
- Interdisciplinary topics¹:
 - ⇒ Smart Agriculture and Forestry
 - ⇒ Conceptualization and development of new Farm/Forestry Information Systems
 - ⇒ Automation and Robotics

Expected starting date: by October 2023 (even earlier if conditions make it feasible)

Application procedure

Please send us the documents listed below in hard copy or by e-mail:

- Expression of interest
- Detailed Curriculum Vitae (attachment A – University Academic CV)
- List of publications
- Research statement – Research focus and research projects
- Description of the teaching experience and courses taught, plus final evaluations
- Statement about the current academic position

Application deadline: 15.02.2023

Please note:

- Only applications duly signed and dated on the last page will be accepted and considered as complete
- Only short-listed candidates will be invited for an interview
- The Free University of Bozen-Bolzano aims to increase the proportion of women in research and teaching and therefore strongly encourages female scientists to submit their expression of interest

¹ Experts in these areas are already present at the faculty and are eager to take part in a cross-disciplinary exchange

Mail address:

Free University of Bozen-Bolzano

Faculty of Science and Technology

Piazza Università, 5

I – 39100 Bolzano

Telephone: +39 0471 017000

E-Mail address:

recruitment_fast@unibz.it

More information

Position call: [Positions for Academic Staff / Free University of Bozen-Bolzano \(unibz.it\)](#)

Faculty website: <https://www.unibz.it/en/faculties/sciencetechnology/>

Description

AGR/09 (Agricultural machinery and mechanization/ Meccanica Agraria/ Agrarmechanik-Umweltenergiesysteme)

The sector brings together the research topics relating to machines and systems for the agricultural and forestry sector, for green areas and for the agro-industry, with particular regard to their design, construction, operational, functional, management and environmental, accident prevention and ergonomic aspects, process automation and control and the use of conventional and unconventional energy sources.

The training skills concern agricultural and forestry mechanics and mechanization, modeling, machines and systems for agriculture, for green areas and for the agro-food and wood industries, for the use of biomass and for the recovery of agricultural and agro-industrial wastewater, energy in agro-forestry and agro-industrial systems, automation, control, safety and ergonomics of machines and systems for the agricultural, forestry and agro-industrial sectors.

About the Faculty of Science and Technology

We are a young and fast growing faculty with a strong multidisciplinary and multinational dimension. In our staff we have nationally and internationally recognized experts.

We have a solid network of international collaborations and high-end research facilities, are expanding in many directions and open for new ideas.

New challenges are our daily routine and therefore people who like innovation and strive for top scientific goals are a good match with our culture.

Our main areas of interest are industrial engineering and automation, energy resources and energy efficiency, fundamental sciences for innovative applications, agricultural production and food technologies and dynamics and management of mountain ecosystems.

Those areas are further subdivided into smaller research groups, where scientists work/specialize on some concrete topic of interest.

We teach three bachelor courses, six master courses and four PhD study programs.

We carefully choose our academic personnel by hiring prominent scientists from abroad as guest/contract lecturers or tenured professors. We are a vital part of one of the world's rare universities that offers their students lectures in three languages of tuition, and, upon the conclusion of the study program, a trilingual qualification in English, German and Italian.

Both our students and professors are provided with the support of the Language Centre of the University. It helps them in finding the right method for the study of the language of interest and in achieving the desired level of language proficiency through its courses and language counseling.

Finally, it offers a preparation for internationally recognized language certificates. We further encourage our academics to improve their language skills by incentivizing financially those with B2 and C1 certificates in the second or third language.

We participate in research projects and our work is visible all over the province of Bolzano, as our interdisciplinary and hands-on approach resulted in many fruitful collaborations, with a strong support from the local community. In this context, ideas can be transformed into projects in a matter of months. We firmly believe that our researchers are our greatest asset and a competitive advantage on a market thirsty for innovation: responding to real life problems with the respect for the environment, creating eco-sustainable solutions and using the expertise from many scientific areas in getting a problem solved is what we are committed to.