

The **Faculty of Science and Technology** at the Free University of Bozen-Bolzano intends to fill **permanent full or associate positions** in following scientific areas

Permanent full or associate professor:

Fluid machinery - ING-IND/08

The scientific sector of the professorship subject to this call studies the fluid machines (gas, vapour, water and wind turbines, internal combustion engines, pumps, fans and compressors) as concerns thermodynamics, fluid-dynamics, technological, energy and environment aspects. Fluid Machines covers in particular the design, managing, diagnosis, control, environmental impact and testing of machines and considers the insertion of those machines within power generation systems, propulsion systems and in industrial and civil applications. In particular, teaching and research activities will focus on design aspects of hydro and wind energy exploiting systems (hydro and wind turbines) with specific attention to the exploitation of local resources and to the environmental impact mitigation.

The professorship is intended to develop an interdisciplinary approach, interacting with colleagues of technical physics, production systems, industrial mechanical plants and mechanics of machines.

For more information please contact Prof. Andrea Gasparella, e-mail: andrea.gasparella@unibz.it

Permanent associate professor:

Mechanical design and machine construction - ING-IND/14

The scientific sector of the professorship of this call focuses on the mechanical design of structures and mechanical systems, covering all aspects of the product life cycle: from the definition of the initial concept to the executive design, with special focus on manufacturing. Moreover, the sector investigates the structural performance of most advanced and innovative materials (such as modern metal alloys, composites, nanomaterials, ceramics, and more) for their safe use. Also, the study of several technologically related aspects of industrial processes are in the scope of the sector.

Among the specific areas of interest: conceptual, functional and structural design, mechanics of solids, fatigue and fracture mechanics, mechanics of materials, strain and stress assessment, numerical and experimental analysis methods, dynamics analysis, multi-physics numerical modelling and computation, structural optimization, diagnostic methods for structural integrity of mechanical components.

The professorship should develop an interdisciplinary approach, interacting with the colleagues of the engineering area, particularly of the same sector, of mechanics of machines, of production systems and technologies, and of industrial mechanical plants.

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