



PhD in INGEGNERIA MECCANICA / MECHANICAL ENGINEERING - 38th cycle

Research Area n. 3 - Engineering Design and Manufacturing for the Industry of the Future

THEMATIC Research Field: **ACTIVE3: DESIGN OF ADVANCED MEASUREMENT SYSTEMS
FOR REHABILITATION**

Monthly net income of PhDscholarship (max 36 months)

€ 1325.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

**Motivation and objectives of the research
in this field**

Regular physical activity helps prevent several diseases and contributes to psychological well-being by reducing the sense of loneliness, improving the quality of life of the person. Despite this, the population is less and less active with negative impacts on the health of the individual, on health systems, on the community and on the quality of life of an increasing number of people. The project **Active3 - PD22RIST01.PD22RIST03** funded by Fondazione Cariplo and Regione Lombardia (**CUP C13C21000200005**) aims to address the determinants of lack of activity and/or inclusion, where the technological element becomes an enabling factor for overcoming barriers to inclusive motor practice and an active lifestyle for all. The candidate will focus on the development of technological and instrumental solutions to promote active lifestyle and motor the human activity.

**Methods and techniques that will be
developed and used to carry out the
research**

Action will be taken in 2 work packages of the Active3 project:

1. Development of technological tool for children at the primary school to support health and psycho-physical well-being in paediatric age.
3. Design of instruments for the evaluation of elders' performances in outdoor activities.

The candidate will revise the state of the art in order to



	assess the methods for the evaluation of children and elders performances with simple exercises that can be performed in schools or outdoor.
Educational objectives	In this specific activity, the candidate will focus on the design of measurement systems for the quantification of human performances in ecologic environments. In a more general sense, we provide doctoral candidates with high-level scientific training, fostering and refining research and problem solving abilities by focusing on both theoretical and experimental skills. A PhD in Mechanical Engineering will be able to layout, draft and carry on original research, by leading a research group or working in a team.
Job opportunities	Our last survey on MeccPhD Doctorates highlighted a 100% employment rate within the first year and a 35% higher salary, compared to Master of Science holders in the same field.
Composition of the research group	3 Full Professors 5 Associated Professors 2 Assistant Professors 10 PhD Students
Name of the research directors	Prof. Marco Tarabini

Contacts	
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Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	662.5 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
Financial aid is available for all PhD candidates (purchase of study books and materials, funding



for participation in courses, summer schools, workshops and conferences) for a total amount of euro 5.401,42.

Our candidates are strongly encouraged to spend a research period abroad, joining high-level research groups in the specific PhD research topic, selected in agreement with the Supervisor. An increase in the scholarship will be applied for periods up to 6 months (approx. 660 euros/month - net amount).

Teaching assistantship: availability of funding in recognition of supporting teaching activities by the PhD candidate. There are various forms of financial aid for activities of support to the teaching practice. The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.