

*PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE AWARDING OF NO. 1 GRANT LASTING 12 MONTHS FOR CONDUCTING RESEARCH IN ACCORDANCE WITH ART. 22 OF LAW OF 30.12.2010 NO. 240 AT GITT - CENTRE ON INNOVATION MANAGEMENT AND TECHNOLOGY TRANSFER OF THE UNIVERSITY OF BERGAMO ACADEMIC RECRUITMENT FIELD 09/A3 – INDUSTRIAL DESIGN, MACHINE CONSTRUCTION AND METALLURGY - ACADEMIC DISCIPLINE ING-IND/14 – MECHANICAL DESIGN AND MACHINE CONSTRUCTION AS PART OF THE PLAN FOR EXTRAORDINARY RESEARCH CALLED ITALY® (TALENTED YOUNG ITALIAN ®ESEARCHERS) - YOUTH IN RESEARCH INITIATIVE FOR THE YEAR 2016 - TRANCHE II – (CUP: F12I14000230008) – TYPE C.*

*announced with decree of the Rector Rep. no. 231/2017 of 27.04.2017 and posted on the official registry of the University on 27.04.2017*

### **RESEARCH PROJECT**

***“Analysis of the mechanical behavior of systems, machines, components and materials with high strength-to-mass ratio”***

#### **Objective of the fetch program**

Machine design and computational mechanics of high strength to weight ratio components and systems under the guidance of prof. Sergio Baragetti, SSD ING-IND/14. Tensile and fatigue strength, contact fatigue, stress corrosion cracking and corrosion fatigue will be analyzed. The acquired knowledge will be used to design structural components of machines and systems, with particular reference to the structural and functional mechanical design activities of the company NOVA Ltd. which is committed to co-finance the project.

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#### **Result of the search**

The research will have in the short to medium term impact in the field of constructive and functional mechanical design. The development of components with high strength-to-mass ratio is extremely topical and useful because it aims to increase machine performance and reduce energy consumption. The projects aims at improving the performance of mechanical systems and eco-sustainability.