



OH B Italia SpA is acknowledged as one of the leading medium size companies in Europe for space systems integration. It is part of a cluster of European enterprises operating in the aerospace business. Founded in 1981, with headquarters in Milan and excellence centres in Italy, the company employs more than 180 qualified engineers & physicists.

OH B Italia has consolidated expertise, resources and facilities to carry out manufacturing, integration, qualification and flight certification, with a role of Prime Contractor in different fields of activities.

Its success is due to a combination of technical expertise, innovative technologies and low cost solutions, which allow to give customers easy access to space.

The company operates both on the institutional and commercial markets.

Its main customers are space agencies, space authorities and large industrial groups.

OH B Italia is seeking for its Satellites Department in Milano for immediate start a

MASTER OF SCIENCE student (m/f) for the following master thesis work:

Improvement of methodologies for thermo-elastic prediction and verification for an ESA earth observation satellite structure designed and developed by OH B ITALIA

Background

Predictive capability of thermo-elastic analyses for distortion (stability) and strength is not satisfactory any more, especially for the most challenging space mission in terms of satellite pointing requirements.

The thermo-elastic behavior is not usually correlated by ground test, hence the performance verifications are limited to analyses and - for this reason- an unacceptable/unquantified levels of uncertainty remain. As a result, prediction and verification of thermo-elastic distortions of Spacecraft structures are two important sources of errors in meeting the performance objectives of Scientific, Earth Observation and Telecommunications missions.

The state of the art in this domain is not always adequate to provide reliable verification of typical spacecraft and instrument strength and alignment stability requirements. In particular, the adequacy of numerical models is often questionable. Improving the prediction and verification of these distortions are of primary importance for the success of such missions.

Your Tasks

- To learn from past experiences about predictive capability of thermo-elastic analyses and their possible validation by test.
- To identify, elaborate and implement methods which improve end-to-end prediction and verification, including analysis and test, of thermo-elastic behavior (strength and stability) of spacecraft structures.

- To demonstrate the performance and potential of the methods on an application case representative of the complexity and size of a typical spacecraft element
- Structural (FEM) and Thermal (ESATAN) modelling
- Technical reporting.

Your Qualifications

- M.Sc student in Aeronautical, Aerospace, Space and Mechanical engineering
- Good Knowledge of finite difference and finite element method of modelling
- Maximum of three exams to finish the M.Sc course
- Fluent English

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Become part of our team! Apply by sending your updated CV via E-Mail to job@cgspace.it

www.ohb-italia.it

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