

DESIGN, DEVELOPMENT AND QUALIFICATION OF ADVANCED MEASUREMENT SYSTEMS



Research group:
Prof Alfredo Cigada, Bortolino Saggin, Emanuele Zappa, Paola Saccomandi



Description of the subject

This project aims at the development of i) new sensing solutions based on modern low-cost and low-power hardware, to obtain efficient and reliable measuring nodes; ii) data processing strategies to obtain information on the monitored system by synergic analysis of data from several sensors.

Goals

The main goal is the optimization of the measuring approaches and data analysis to obtain a reliable representation of the monitored system or process. Joint analysis and optimization of the data acquisition and data processing for a network measurement will be a key point of the research.

Period abroad: foreseen

DEVELOPMENT AND QUALIFICATION OF MEASUREMENT SYSTEMS FOR HUMAN-CENTERED APPLICATIONS



Research group:
Prof Paola Saccomandi, Marco Tarabini

Description of the subject

This project is aimed at the development and metrological qualification of measuring solutions for networked sensors and big data manipulation, intended for scientific applications for human-centred applications.

Goals

The main goals of the research include the optimization of the measuring approaches, based on the comparison and choice of the optimal sensors for the specific use, and data analysis to obtain a reliable representation of the monitored system or process.

Period abroad: foreseen

DEVELOPMENT OF INSTRUMENTS FOR SPACE EXPLORATION



Picture: launch of the space mission JUICE to Jupiter

Research group:
Prof Bortolino Saggin

Description of the subject

The research will focus on the design of optomechanical structures and thermal models' validation for space exploration.

Goals

The main goals of the research are the feasibility and advantages of automatic systems based on optomechanical structures and thermal models' will be investigated. The study will be applied to systems and test data available from instruments recently developed or currently under design in the laboratory.

Period abroad: foreseen