



Roberto Giovanni Sbarra

● ABOUT ME

PhD student in Aeronautic and Space Engineering at La Sapienza University in Rome, conducting research on **Digital Twin and Signal/Data Processing Framework for Space Systems**. My main interests lie in the application of **machine learning and artificial intelligence** to aerospace challenges. Highly organized, resourceful, and keen to tackle new challenges.

● EDUCATION AND TRAINING

MSC IN SPACE AND ASTRONAUTICAL ENGINEERING University of Rome La Sapienza

Thesis "Development of an automated modal parameters identification method in OMA: experimental application to the Pazy wing"

BSC IN AEROSPACE ENGINEERING University of Rome La Sapienza

Thesis "Analysis of the transferred power between structures, via friction phenomenon."

11/2023

PHD IN AERONAUTICAL AND SPACE ENGINEERING University of Rome La Sapienza

Field of study Digital Twin and Signal/Data Processing for Space Systems

● WORK EXPERIENCE

PHD RESEARCH & ACADEMIC CONTRIBUTIONS

- Conducted research in **Digital Twin, Signal/Data Processing, and Structural Testing and Health Monitoring**.
- Supervised and guided thesis students in aerospace engineering topics.
- Presented research at international conferences

● PUBLICATIONS

DBSCAN-Based Approach for the Automatic Estimate of Modal Parameters

Experimental Investigation of a Very Flexible Wing

On the Use of Fiber Optic Sensors and OMA for Structural Health Monitoring in Aerospace Structures

Experimental Characterization of Flutter and LCO of a Very Flexible Wing

Analysis of the Experimental Properties of CubeSat-Class Satellites for the Simplification of the Launch Clearance Process

Experimental and Numerical Investigation of a Wing Structure

Experimental Investigation of the Flutter Behaviour of a Very Flexible Wing

● **CONFERENCES AND SEMINARS**

2024 Napoli
Internationa Operational Modal Analysis Conference (IOMAC)

2024
International Conference on Noise and Vibration Engineering (ISMA)

● **SKILLS**

TECHNICAL

- Machine Learning & AI Applications in Aerospace
- Digital Twin and Signal Processing for Space Systems
- Structural Health Monitoring & Modal Analysis

SOFT

- **Organisation & Planning:** Ability to prioritize tasks and meet deadlines efficiently.
- **Teamwork:** Experience in collaborative academic projects and laboratory environments.
- **Adaptability:** Developed resilience through off-site study experiences.
- **Critical Thinking & Problem Solving.**

● **SKILLS**

Python | MATLAB | Simulink | TestLab | ADAMS | MARC | NASTRAN | Microsoft Office Suite

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s): **ENGLISH**

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".