

Carlo Lefevre

Aerospace Engineer, INAF - IAPS, Rome, Italy

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Professional Profile

Researcher and technologist at INAF-IAPS with continuous experience since 2007 in high-precision space instrumentation, accelerometry, payload design, system engineering, thermal engineering, calibration, and mission operations. Strong track record in technical interfaces with ESA teams, industrial partners, and multidisciplinary groups.

Core Skills

- Space payload system engineering and technical coordination.
- Thermal engineering for space instrumentation.
- High-sensitivity accelerometers and calibration (ground and in-flight).
- Precise orbit determination and non-conservative force modeling.
- Test planning, requirement management, and interface control.
- Mechanical design.

Work Experience

Aug 2018 – Present, INAF-IAPS

Role: Permanent Researcher (Level III).

- System engineering, mission operations support, and technical-scientific coordination.
- Lead responsibilities in payload calibration procedures and integration.

Feb 2013 – Aug 2018, INAF-IAPS

Role: Fixed-Term Researcher (Level III).

- Technical responsibilities on mission activities and calibration campaigns.

May 2007 – Jan 2013, INAF-IFSI / INAF-IAPS

Role: Research Fellow.

- R&D on precision instruments for fundamental physics and accelerometry.

Selected Projects

LISS / PNRR EMM

2023 – 2026

Role: System Engineer.

- Integration of mechanical, electronic, and thermal requirements for lunar seismometer development.

2023 – Present

Role: System Engineer.

- Requirements definition, interface management, and TRL5 demonstration pathway.

SWEATERS

BepiColombo Mission

2016 – Present

Role: Operation Manager.

- Coordination with ESA/ESOC, Airbus, and Thales for operations and technical constraints for the ISA accelerometer.

Galileo for Science

2016 – Present

Role: Technical-Scientific Coordinator.

- Supervision of FEM and ray-tracing models for high-precision orbit determination.

IXPE Mission

2017 – 2021

Role: Thermal Engineer.

- Designed the instrument calibration sources.
- Coordination and supervision activities among industrial partners within the international consortium.

Education & Training

- **M.Sc. Equivalent in Aerospace Engineering** – Sapienza University of Rome (2005).
- **Turning and Milling Operator Certification (Traditional + CNC)** (Nov 2024).
- **Certified Mastercam Training Course** (2024–2025).
- **Specialized ISA-MTGSE Training (Thermal-Vacuum Calibration)** (May 2025).
- **Keyence Digital Microscopy Training** (Jul 2025).

Scientific Output

47 publications and 51 conference/workshop contributions.

Languages

Italian (native), English (C1 in listening, reading, speaking, and writing).

Rome, March 25, 2026

