ARCSPACE

Sustainable & Performant Space Infrastructure

# Experienced engineer – Spacecraft Structural Engineer

## Full-Time position from March 2024

## Paris, France

**About ArcSpace**:

ArcSpace is a space industry startup whose mission is to accelerate the development of a new generation of space infrastructure, through the development of technologies enabling in-orbit structures assembly. Supported by CNES, ESA and multiple European partners, this solution has the potential to radically change the way space systems are designed and to enable unparalleled spacecraft performance and cost as well as pave the way for new applications such as Space-Based Solar Power and lunar infrastructure.

**Job description**:

As part of a ramp-up of its activities, ArcSpace wishes to strengthen its Engineering team with a Space Structure Engineer to accelerate R&T activities, Preliminary Projects and Industrial Development actions. You will be responsible for the implementation of new system architectures integrating ArcSpace's proprietary in-orbit assembly technologies. As such, you will follow the full design of space structures, assemblies, and components, from scratches to final assembly. You will take care of CAD design of all parts related to the company's spacecraft missions, including primary structures, secondary structures for electronics and appendages, mechanism and related components, MGSE tools and AIV jigs. Your task will also entail structural analysis against spacecraft environmental loads, thermal analysis of mechanical assemblies and kinematics analysis of mechanism, and manufacturability assessment of parts and assembly. You will also be required to follow the development of executive drawings to interface with external suppliers, coordinate with Systems Engineering requirements during the design of complex parts, and develop and manage technical documentation related to parts and assemblies.

In collaboration with the Engineering team and the CTO, your main responsibilities include:

- Conceptual design of parts and assembly starting from system requirements.
- Technical trade-off between architectures to identify best candidates that balance performance margins, resources and are within the programmatic constraints (risk, schedule, cost).
- Detailed design including components selection, mechanical tolerances, manufacturing assessment, and assembly integration procedure.
- Analytical and/or FEM structural verification of space structures against operational loads and launch loads, including quasi-static loads, sinusoidal vibrations, random vibrations, and shock.
- Kinematics analysis of mechanism and verification of actuation/non-actuation margins.
- Interface with system engineering area and iteration of design activities to achieve requirements.
- Develop and management of the complete documentation related to the part/assembly, including executive drawings, bill-of-material, work-cycle, technical specifications for special processes, etc.
- Develop Technical Reports at program milestones.

This position is based in Paris, France.

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**Your profile**:

Formal training in STEM, you have at least 3 years of experience in space system design and space systems engineering, applying engineering principles and techniques to identify and manage system design risks and mature concepts through trade-off analysis.

- Knowledge of Structural Mechanics and Structural Analysis.
- Experience in conceptual and CAD design (knowledge of Solidworks or other required).
- Experience in analytical and FEM structural verification tools (Abaqus or NASTRAN or similar for mechanical analysis, ESATAN-TMS or similar for thermal analysis desired but not essential).
- Experience in aerospace manufacturing standard and processes; knowledge of welding processes is a plus.
- Experience in product documentation management of parts and assembly, as well as with space development life cycle events and reviews (Proposal, MDR, SRR, PDR, CDR, TRR).
- Knowledge of space structure design, analysis and test philosophy as per applicable standards (ECSS, NTSS, etc.).
- Demonstrated technical leadership, analytical and problem-solving skills, willingness to learn.
- Ability to work in a team centered around a commonly shared objective.
- Demonstrated ability to work in autonomy and critically define/reassess target milestones.
- Very good command of English and French (technical writing ability).

**Why work at ArcSpace**:

- Company values: Fairness – Efficiency – Teamwork – Excellence
- Significant and visible personal contribution to a high-impact societal & environmental space project
- Work within the Paris-Saclay campus-cluster, the leading R&D center in France
- Autonomy in work and diversity of tasks
- Package of fixed income + equity
- One day of teleworking per week, flexible hours

**Overview of the recruiting process**:

- Send your resume & motivation email/letter to **Guillaume.mohara@arc-space.com**
- 30 min video interview with Guillaume, co-founder and CEO
- Physical interview and technical discussion with the CEO and CSO
- Background check