



Principal/Senior Stress Engineer – Loads & Aeroelastics

Sora Aviation

Job Title: Principal/Senior Stress Engineer – Loads & Aeroelastics

Location: Bristol, UK

Term: Permanent, full time

About us

Sora is Bristol, UK based start-up developing a 30-seat electric Vertical Take-Off and Landing aircraft (eVTOL) to deliver affordable, sustainable and scalable Advanced Air Mobility services. The S-1 is currently in preliminary design and Sora is rapidly growing its engineering team.

We believe in an open and honest culture that espouses freedom of expression and creativity from all of our employees. If you would like to be a part of an agile team at the cutting edge of zero emissions aviation, see below.

Role summary

The S-1 is a battery electric tilt-rotor aircraft with multiple tilting “proprotors” (combination propellers and rotors) and a predominantly carbon fibre composite airframe. We are looking for an experienced stress engineer who will lead the overall analysis and sizing of the S-1 airframe and structure.

This role is advertised at multiple experience levels.

Key responsibilities

- Generating and extracting flight and ground loads for aircraft structures and rotors including edge cases such as crash loads
- Define internal load paths and generate internal structural loads
- Lead preliminary sizing of overall composite airframe and substructure
- Perform stress calculations and carry out Finite Element Analysis on aircraft structures and rotors under different operating conditions
- Model aircraft structural dynamics for aeroelastic analysis and flutter prediction, including whirl flutter
- Support selection of materials, fasteners and manufacturing processes
- Support definition of overall vehicle architecture

Requirements

Essential

- Degree in Mechanical/Aerospace Engineering or other relevant field
- Experience in performing stress analysis (including FEA – preferably using Simcenter 3D/Nastran) and sizing composite aircraft structures across the lifecycle from conceptual to detailed design
- Detailed knowledge of structural loads and internal load paths for aircraft structures



- Proficient in CAD (preferably CATIA/3DEXperience) including sketching, surfacing, 2D drawing and 3D modelling with appropriate GD&T
- An innovative mindset and approach to problem solving focused on generating new ideas

Desirable

- Experience in working on helicopter/tilt-rotor systems
- Experience in working on electric aircraft (preferably eVTOLs)
- Knowledge of thermoplastic composite materials

Diversity and Inclusion

Sora is an equal-opportunity employer and we encourage you to apply even if you may not have all the experience listed above. We recognise that talent comes in many different forms and we are committed to providing opportunities that create an environment of growth, diversity, and inclusion for everyone. We proudly reject discrimination in all forms.

Apply

You will need the right to work in the UK to be considered for this role.

To apply, please email your CV and a cover letter to careers@soraaviation.com. Your data will only be used for the purposes of this application and will be used fairly and lawfully as required by the Data Protection Act 2018.