

Spacecraft Engineer (Structure and Thermal) at STAR@NUS

The Satellite Technology and Research Centre (STAR) focuses on building miniaturized satellites that could fly in multiples for formation and constellation flying. It is envisioned that this will open up new potential applications such as collaborative sensing for the environment, more timely and scalable communication services. Satellite missions of these applications will in general require advanced technologies such as active propulsion control of the satellites, highly precise inter-satellite navigation, advanced attitude control etc.

Presently, STAR is developing satellites in the range of 20-50kg for multiple satellite missions using STAR's own-patented configuration for small satellites. We are looking for passionate Structural and Thermal engineers to join our development teams to bring innovative ideas and solutions to our satellite programs.

About the job

- Pioneer development of space structure and thermal systems from research through to production.
- Perform structural analysis and space orbital thermal analysis with computational software.
- Provide recommendations to mechanical design team to improve structural and thermal management aspect of the spacecraft.
- Engage in space qualification through vibration, shock, thermal cycling and thermal vacuum testing.
- Solve problems across multidisciplinary teams to ensure smooth integration and testing of satellite subsystems.

What we look for

- Bachelor's or Master's degree in Mechanical/Aerospace Engineering from a reputable university.
- 2 years of experience in conducting structural and/or thermal analysis using finite element method. Fresh graduates are also welcome to apply.
- A strong understanding of structural dynamics (modal analysis, resonance, damping, and random vibration).
- A strong understanding of thermal management, heat transfer and computational techniques.
- Experience in dynamics analysis using Femap, Nastran or similar finite element analysis software.
- Experience in thermal evaluation tools such as Simcenter 3D Space Systems Thermal, Thermal Desktop, ESATAN or other similar software.
- Advanced knowledge in both structural and thermal design for space systems will be a plus.
- Team-oriented individual with good inter-personal skills.
- Fluent verbal and written communications in English.

Benefits

- Participate in the development of satellite projects at a world-class research facility.
- Be involved in a multi-disciplinary program, conducting research/engineering work from concept to space-qualification.
- Exposure to spacecraft design and testing based on NASA/ESA standards.
- Opportunity to pursue a Master's or PhD degree concurrently.
- Opportunity for external training in relevant skillsets.
- Competitive salary. Singaporean males who have completed fulltime National Service will be considered as work experience.

Interested applicants may send their resume via email to:

Satellite Technology and Research Centre (STAR)

star@nus.edu.sg