Job Title: Space Electric Propulsion Senior Structural Engineer
Location: Munich, Germany

Company Description:
Our company is a rapidly growing startup in the space industry based in Munich. We are building a revolutionary new form of high power Space Electric Propulsion called Applied-Field Magnetoplasmadynamic (or AF-MPD) propulsion. It will be a game-changer in both near-earth space missions and wider space exploration. Our team is passionate about pushing the boundaries of what is possible and we are looking for like-minded individuals to join us on this exciting journey.

Job Description
Working with a small engineering team, we are looking for a Senior Structural Engineer to undertake the overall mechanical and structural design of our new space AF-MPD thruster.
Candidates should have a good familiarity with existing space electric propulsion thrusters such as conventional Hall Effect or Gridded Ion thrusters. Our new AF-MPD thruster initially is likely to have a similar overall mechanical envelope to these devices with a view to being compatible to existing spacecraft structures and available on board “real estate”.
There will be crucial internal differences of course, which are at the heart of this new technology. As we progress, some versions will incorporate electro-magnets powered by high-temperature Superconductors, together with a complex thermal management system. We can confidently predict you are unlikely to have ever designed anything quite like this before!
If this prospect excites you, please read on…….

You will be reporting to the CTO, who in turn reports to the CEO of the company. The CTO will be supporting you personally along with other space electric propulsion engineers currently being recruited. Crucially, you will have the services and support of a thermal engineer to understand the key heat transmission paths, which will influence the physical structure design (The plasma exhaust temperature is typically 2500 degrees C). As you will already know, the structure must withstand the high levels of launch vibration experienced on route to orbit in space. You will also be responsible for other structural engineers and give guidance and direction for the design of sub-assemblies and piece parts which you designate as required. Experience with the most appropriate CAD design packages used for space structures is of course expected.

Responsibilities:

- Perform thermo-structural analysis of propulsion components and systems to ensure they can withstand high-temperature operation and the launch environment
- Design and validate components and assemblies that meet structural, thermal, and acoustic requirements
- Develop robust structural designs incorporating the propulsion performance critical dimensions supplied by the electric propulsion engineers whilst mitigating heat transfer to critical components
- Collaborate with other engineers to ensure that robust structural designs are integrated into propulsion systems
- Prepare technical reports, publications, and presentations for internal and external audiences
- Ensure that structural designs meet all safety and reliability requirements as required by the space industry
- Stay up-to-date with the latest developments in thermal and structural space engineering and incorporate new advancements into designs

Qualifications:

- Bachelor's or Master's degree in Aerospace Engineering, Mechanical Engineering, or related field
- Minimum of 7 years of experience in thermo-structural analysis and component design
- Strong knowledge of heat transfer and experience with high temperature operation
- Experience with assembly and sub-assembly design and ensuring matching interfaces, tolerance control etc.
- Strong problem-solving and analytical skills. In-depth experience in the space or aerospace industry is essential.
- Excellent communication and teamwork skills
- Ability to work in a fast-paced environment and manage multiple projects simultaneously

For the right candidate, this is a once-in-a-lifetime career opportunity for a senior space engineer to come in at the ground floor and, together with a supportive team, build a major new technology for the entire space industry.

Interested applicants should be EU citizens or with long term permits to work in the EU. Excellent English language skills, both spoken and written, are essential. Support to relocate to the area around Munich can also be considered for the right applicants.

The remuneration package will be competitive and will include shares in the company.

Please send your detailed CV (including software design packages you have used) plus a covering letter telling us why you are enthusiastic to be part of our team!

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