



## Do you want to disrupt in-space propulsion together with us? Then this job add is for you!

Space business is booming: the space market is growing rapidly, new market segments are opening, and disruptive changes are taking place. As consequence of this rapid growth, the number of satellites and spacecraft is strongly increasing – and each spacecraft needs a propulsion system to perform its specific task.

Here ISPTech's propulsion technologies come into the play. Based on more than 10 years of research and development at the German Aerospace Centre (DLR), ISPTech's founders developed propulsion technologies that work with green (non-toxic) propellants. Our propulsion systems are characterized by a high efficiency, reliability and allow significant cost reductions.

By using these advanced propulsion technologies, ISPTech will satisfy the desperate demand for affordable, green and robust propulsion technologies and propel the whole space ecosystem.

ISPTech's relevance for the NewSpace market is backed by renowned deep tech investors.

ISPTech is developing a 4U propulsion system for CubeSats based on the HyNOx technology. Core component is the propellant tank. Crucial for the development is the fracture control analysis, showing safe operation for the pressure cycles occurring during the mission.

To further develop, test and optimize our HyNOx CubeSat propulsion system, we are looking for a

## Intern/Thesis Student Fracture Control Analysis (F/M/X)

With a lean team and fast decision-making, you will have the opportunity to demonstrate a problem-solving approach and work closely with others. You will have a large degree of freedom to operate and get hands on experience on the analyses and processes required for launching propulsion systems into space.

### Your main responsibilities and working fields

- Identification of necessary fracture control analyses according to different standards based on previous work
- Literature research of relevant material parameters
- Identification of critical features/geometries
- Investigation of critical features/geometries using the NASGRO crack-growth simulation software
- Definition of regions of highest interest for non-destructive testing
- Trade-off between design modifications and applied loads

### Your Qualification

- Studying Aerospace engineering, mechanical engineering or related field
- Hands-on mentality, not afraid of getting hands dirty and approaching new fields of work
- Interest in space sector and space hardware
- Fluent in English, fluent in German is a plus
- Ideally: experience with CAD tools (e.g. Catia, Inventor, Fusion or similar)
- Ideally: experience in finite-element analysis
- Ideally: experience in fracture control analysis, fatigue analysis



## Your Benefits

- An exciting work environment encompassing the whole process from the development, building and launch of space propulsion systems
- Flexible working time
- Combination of working in the office, at home, and on the go
- Professional skills development through a broad base of responsibilities and freedom
- Engage directly and actively participate in the end-to-end development processes of an expanding NewSpace start-up

## Location

At the moment, we are based in Hardthausen am Kocher, specifically at the DLR Institute of Space Propulsion, which is around 70 km north of Stuttgart.

End of 2024, a second site in the greater Stuttgart area will be opened.

## Contact

Do you want to build something from scratch and really make an impact – then you should definitely join our team! If there are any uncertainties, don't hesitate to reach out at any time.

**Dr.-Ing. Lukas Werling** (CEO and co-founder) and **Robert Rödinger** (Propulsion Systems Engineer)

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