



## Master's Thesis Student (m/w/d)

A study on non-linear effects during sine vibration testing of large deployable reflector antenna

Embark on a groundbreaking journey into the depths of space technology with our research opportunity for a Master's thesis student. Are you ready to take your expertise to new heights? Join our team as a Master's thesis student and contribute to cutting-edge research in the space industry. We're seeking a passionate individual to delve into the complexities of non-linearities in low-frequency vibration tests of large space reflector antennas.

### Your Activity

- Investigate the effects of non-linearities during low-frequency vibration tests of large space reflector antennas.
- Quantify non-linear mechanical parameters using advanced identification techniques.
- Develop simplified non-linear mathematical models (analytical beam-like and/or FEM) to replicate experimental data accurately.
- Enhance prediction of frequency and amplitude down-shifts, optimizing vibration testing approaches.
- Expected research duration: 6 – 9 months.

### Your Profile

- Strong background in linear structural dynamics and vibration mechanics.
- Understanding of sources of non-linearities in dynamics.
- Ability to work independently and organize research activities effectively.
- Maximum of 1 academic exam pending for optimal focus during the research period.
- Proficiency in MATLAB programming and MS Office tools (Word, Excel, PowerPoint).
- Familiarity with Simulink is advantageous.
- Good level of English for technical communication.

### Join us now!

Apply now to become a valuable member of our research team in the field of space technology. Your contributions will play a crucial role in our ongoing projects, shaping the future of space exploration. Send us your CV and a short motivation letter to [career@largespace.de](mailto:career@largespace.de) or scan the QR-Code on the right.

Scan the QR-Code to apply!

