

Job offer

AC2T research GmbH



Master's Thesis (m/f/d)

Development of an Algorithm for Compensation of Rigid Body Movements in 3D Laser Doppler Vibrometer Measurements

As the **Austrian Competence Centre for Tribology** (www.ac2t.at), we have been developing technical-scientific solutions around the topics of **friction, wear and lubricant** application for about 20 years.

Technologies and methods in the field of vibration technology and machine dynamics should comprehensively supplement our research activities in the future. The focus is on the further development and optimization of vibration measurement and evaluation methods.

ACTIVITIES

Tribometers are used to investigate the frictional and wear properties of model systems, such as a pin against a disc.

In oscillating tribometers, the respective mechanism can cause significant displacements of rigid bodies, which need to be compensated for in vibration measurements using a 3D laser Doppler vibrometer.

The objective of the scientific work is to develop a control system for the deflection mirrors of the measurement heads of the 3D laser Doppler vibrometer, in order to track and compensate for the rigid body movements of the test objects. Furthermore, measurements will be conducted on a suitable oscillating tribometer and verified and validated using high-speed camera recordings.

REQUIREMENTS

- Excellent knowledge in control engineering and trajectory tracking.
- Strong interest in vibration technology
- Keen interest in technical and scientific work

OUR OFFER

- Full-time (40 hours per week), temporary for the duration of the Master's thesis project at the Wiener Neustadt location, Civitas Nova, TFZ.
- Gross minimum salary based on full-time employment: €1,400 per month. Any potential overpayment is dependent on relevant professional experience and/or qualifications.

Contact

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