Topic: **Structural Health Monitoring (SHM) of adhesively bonded joints**

**Description:**
According to ISO 9001, adhesive bonding is a special process that requires separate standardization, DIN 2304 - "Klebtechnik – Qualitätsanforderungen an Klebprozesse". Among other things, this classification is based on the fact that adhesively bonded joints cannot be tested 100% non-destructively. This fact is the basis for the approach to monitor adhesively bonded joints in order to ensure the structural condition and the associated guarantee of the bond. The ISF is researching innovative approaches to solve this challenge. The fields of application of these methods range from automotive to wind energy, from aerospace to civil engineering.

**Tasks:**
- Familiarization with the state of the art – adhesive bonding technology and SHM
- Practical manufacturing of adhesively bonded test specimens, including sensor application
- Execution of static and dynamic tests
- Evaluation of measurement data (testing machine and sensor data)
- Discussion and documentation of the results

**Your Profile:**
- Student of mechanical engineering
- Experience in adhesive bonding technology, e.g. private activities or joining technology IV/ adhesive bonding technology (desirable)
- Independent and goal-oriented work

**Offers:**
- Intensive supervision
- Fast processing is aimed for
- Co-Authors at Scientific Publications

**Are you interested in? Do not hesitate to contact me!**

**Contact:**
Name: Josef Weiland, M. Sc.
E-Mail: weiland@isf.rwth-aachen.de
Phone: 0241 80 - 96275
Room: EL 102