

The Polymer Competence Center Leoben GmbH (PCCL) is the leading Austrian center for cooperative research in the field of plastics technology and polymer science. Together with companies from the plastics industry and numerous scientific institutions, around 100 highly qualified employees work on R&D projects for innovative plastics solutions in a wide range of applications (from automotive, aviation and packaging to solar and photovoltaic applications). To strengthen our team, we are looking for

Student Simulation Engineer (Fixed-Term): Battery Component Tensile Testing (JOB ID 20251003(f/m/x))

Tasks

- **Literature Review:** Conduct an in-depth research of battery component properties under tensile testing, focusing on thin polymer films, thin metal foils, and multilayer structures (porous active material and metal foil)
- **Simulation of Tensile Tests:** Model tensile test geometries in LS-Dyna utilizing 2D and 3D geometries.
- **Development and Refinement of Material Models:** Choose and refine material models by aligning simulations with experimental tensile test configurations.
- **Verification of Material Models:** Design and execute verification experiments and simulations to ensure model reliability and accuracy
- **Optimizing the Simulation Models for ANNs:** Define and implement optimized output data structures to facilitate the creation of training datasets for surrogate material models based on neural networks.

Requirements

- Applicants should be enrolled in a Master's or diploma program in Physics, Polymer Engineering, Material Science or a related field
- Proficiency in mechanical simulation techniques with a focus on finite element (FE) analysis or related methods
- Strong mathematical skills to comprehend material models and FE solvers
- Basic programming skills in Python
- Demonstrated initiative, reliability, responsibility, and effective teamwork and communication skills for collaboration with interdisciplinary researchers.
- Excellent skills in English; German skills are a clear advantage
- Previous experience with LS-Dyna is an advantage

We offer

- Opportunity to pursue a **master's thesis** based on the tasks' outcomes. The work's scope and direction can be adapted in collaboration with an academic supervisor from the student's home university.
- Collaboration in a highly-motivated multi-disciplinary team with excellent contacts to industry as well as to national and international research organizations
- We value diversity and therefore welcome all applications – regardless of gender, identity, nationality, ethnic and social origin, religion/belief, disability, age or similar
- A **four-month, part-time (20 hours / week)** fixed-term contract with a competitive **gross monthly salary of €1,300**
- *Start of employment:* Immediate start with a flexible start date to be mutually agreed upon.
- *Place of employment:* Leoben, Austria

Contact

Please send your application (letter of motivation, CV, references) to jobs@pccl.at, quoting Job ID 20251003.
Contact person: Dr. Johannes Macher