

*PhD Thesis Position*

**Scale-up of a Fractionation Process**

Understanding the flow behavior of suspensions, i.e., particles dispersed in a continuous fluid phase, is of key importance in various scientific disciplines, like medicine (e.g., blood flow) or chemical engineering (e.g., particle separation or pulp processing). Specifically, a new fractionation process for pulps is in the current focus of our working group. For this process we are now aiming on applying the separation principle (already demonstrated on a lab-scale) to a pilot-scale process.

The thesis' work will focus on (i) the mechanical design of a pilot-scale device, (ii) optimization studies on the existing lab-scale device, (iii) managing the ordering and manufacturing process, (iv) performing unit and system tests (i.e., pilot-scale experiments) in Graz and at relevant industrial plants, as well as (v) scientific exploitation of the results (i.e., publication work).

**Requirements**

- excellent background in particle or pulping technology, specifically in the field of separation or fractionation of suspensions, including a relevant Master degree that allows entering TU Graz' PhD studies
- profound CAD skills (AutoCAD, Inventor or similar), including first experience in the detail design of mechanical components,
- motivation to conduct state of the art research (mostly experimental), as well as following a PhD degree at TU Graz, and
- excellent communication skills (oral and written) in English; a basic knowledge of the German language is necessary.

**We offer**

Participation in a large national research project, access to state of the art experimental and analytical devices at the institute and within the project, scientific advice with respect to literature and experiments, position as a project assistant at our institute, financing (gross payment 2,600 €/month, 14 times per year; budget for the experimental setup).

**Contact**

Dr. Stefan Radl  
Graz University of Technology  
[radl@tugraz.at](mailto:radl@tugraz.at); 0680 / 12 22 168

**Start Date**  
as soon as possible

Please send applications per Email (including a specific motivation letter, CV, as well as contact details of a reference person in academia or industry). **Please use the keyword "PhD Fractionation" in the header of your Email.**