Your thesis

The production of fiber-reinforced plastics (FRP) usually requires a lot of expert knowledge possessed by individual workers. To further improve and automate this process, this knowledge needs to be accessible in a digital form. In a collaboration between the institutes for textile engineering (ITA) and visual computing (VCI) of RWTH Aachen University, we want to address this problem using an Augmented Reality (AR) application. This application should allow users to record, label and classify errors during various production steps and trace these errors through the production chain.

The goal of this thesis is to evaluate AR user interfaces and visualizations for error labeling and classification in the context of production of FRP. The thesis should include the implementation of a prototypical application running on AR hardware.

Required skills:

- Very good knowledge in interaction design
- Good knowledge in computer graphics
- Good programming skills
- Excitement for AR and production technology
- Previous knowledge on production is a bonus but not necessary

You will work closely with experts from both ITA and CVI, to get valuable insights into the work of a practical computer scientist, working with experts from a different field.

Contact Persons:

Hannah Dammers, M.Sc.  
Tel. 0241 / 80 22095  
hannah.dammers@ita.rwth-aachen.de

Florian Brillowski, M.Sc.  
Tel. 0241 / 80 27662  
florian.brillowski@ita.rwth-aachen.de

Martin Bellgardt, M.Sc.  
Tel. 0241 / 80 24899  
bellgardt@vr.rwth-aachen.de