

Master Thesis - “Image Analysis Methods for Additive Manufacturing applications.” (30 credits/20 weeks – 1 student)

Project Background

Interest for additive manufacturing (AM) are constantly increasing in many industries. In the aerospace industry, AM is particularly interesting due to its ability to fabricate complexed near-net-shaped components in small series. As opposed to traditional subtractive manufacturing techniques, AM produces components layer-by-layer from 3D models which reduces material waste and lead time. The key to the success of AM is to understand the relationship between process variables, microstructure, and mechanical properties. Image analysis is a powerful tool to evaluate the microstructure from AM produced components.

Assignment Description

The thesis work will focus on

- Literature review
- The focus of this master thesis is to investigate suitable image analysis softwares for aerospace applications
- Metallographic evaluation of microstructure of AM produced components
- Evaluation of existing script for defect measurements.
- Development of new script for image analysis

The thesis work will be supported by appropriate material engineers.

Qualifications

- Master in mechanical engineering, material engineering or similar
- Interest in metallic materials.
- Previous experience in image analysis is recommended
- The student(s) should be capable of taking initiatives on their own, especially while gathering data from departments
- GKN would prefer if the student(s) can perform most of the work on site at the R&T organization in Trollhättan, Sweden

Apply by

Send your resume and cover letter to Daniel Leon, Daniel.leon2@gknaerospace.com.

Last date for application: 2019-12-26. Interviews will be held continuously and the position could be filled prior to the last application date.

