

Master-IT: Project Work WS 2010 / 2011

Topic: Adaptive Error detection in surfaces

Area: Industrial Image Processing

- Start: September 2010
- Partner: Industry Project

- Tool: Matlab/Simulink
- Prerequisites: Programming know-how in Matlab's m-language

Description:

The surface inspection accords a high importance in industrial production, because the product quality depends on the visual representation apart from the reliable functionality. Especially in the area of mass-production there is a general need for fast and automated surface inspection.

The aim of this project is to localise errors in homogeneous and slightly granular surfaces. The algorithm has to be adapted to the surface by estimating the main spatial frequencies in the images and afterwards using this information to cluster the surface structure and topology. The defect detection is done by calculating local statistics based on the probability density without the need for training specific references.

Tool: Matlab/Simulink

Prerequisites: Programming Know-how in Matlab m-language

Contact:

- Scientific Assistant: M.Sc. Karl Voth (karl.voth@hs-owl.de)
- Supervisor: Prof. Dr.-Ing. Volker Lohweg