

Master/Bachelor thesis

Optimizing the determination of optical resolution based on slanted-edge MTF method in MATLAB

Description:

Modulation transfer function (MTF) is a very popular and widely used tool to measure the optical performance of an imaging system. Slanted-edge method is one method to calculate MTF, which is simple and fast. In order to measure the MTF, an in-house MATLAB program has been developed, which is based on ISO 12233 slanted-edge MTF standard. The program needs to be optimized and more robust against certain parameters.

Tasks:

- Comparison the effects of changing different variables on MTF
- Troubleshoot the causes of offset from theoretical MTF
- Comparison to other MTF measurement tools

Requirements:

- Good MATLAB skills
- Interest in image processing

Language:

- Deutsch/English

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