



Kolloquium zur Bachelorarbeit

Maximilian Bason, TU Clausthal

Dehazing in Realtime on Android using Dark Channel Prior

Haze is a natural phenomenon caused by atmospheric particles. Outdoor images captured in foggy and hazy scenes suffer from noticeable degradation of contrast and visibility. Also the color can be shifted. Dehazing does not only produce more visually pleasing images but also can be used to obtain the depth of a scene. Many computer vision algorithms assume clear scenes under good weather condition. Addressing this problem via dehazing algorithms is therefore of practical importance. Dehazing is highly beneficial for these algorithms. In this thesis the dark channel prior is used. The most time consuming part of this method is the filtering of the transmission map. The originally used filtering method for the transmission map is not suited for real-time performance. Therefore other edge-aware filters have to be used. This work compares the Guided Filter and the Cross-Bilateral Filter in terms of speed and quality. The implemented method is able to reach up to 20 frames per seconds at Full HD resolution on a mobile GPU and produces the best result using a Cross-Bilateral Filter.

Mittwoch, 12. Dezember 2018, 13:45 Uhr,
Besprechungsraum 106, IfI (D3), Julius-Albert-Str. 4.