

Pozvánka

Katedra informatiky a výpočetní techniky
Fakulty aplikovaných věd Západočeské univerzity v Plzni

si dovoluje pozvat členy akademické obce i odbornou veřejnost na přednášku

Pointcloud Processing at ZEISS: Insights from Industrial Metrology Practice

kterou přednese

Dr. Christian Hörr

(Deputy Head of Development, Carl Zeiss Optotechnik GmbH)

Carl Zeiss Optotechnik GmbH is one of the leading suppliers of sensors used in optical metrology and non-destructive testing. With our fringe projection system COMET and the handheld laser scanner T-SCAN, we are able to digitize objects with very high accuracy and point density. Depending on the field of view and the workpiece size, we have to deal with hundreds of millions, sometimes even more than a billion 3D points. This poses several challenges at all stages of the acquisition pipeline, including but not limited to measuring time, processing time, and visualization.

In our presentation, we will provide insights into the process of computing a triangle mesh out of several high-resolution shots, which is one of the most time-consuming tasks at hand. Moreover, as the triangle mesh is considered the native output of industrial QA systems, we especially have to care about keeping the residuals to a minimum. After sharing some experience from more than 25 years of industrial scanning, we discuss our current algorithm. It relies on a volumetric data structure, which was recently proposed in the context of low-end scanning systems such as Microsoft's Kinect. We adapted and enhanced this class of approaches in order to make them suitable for high-quality mesh creation and coping with a couple of practical problems that are typically ignored in academic literature.

Datum konání: **27. října 2016**

Čas konání: **11:00**

Místo konání: **zasedací místnost UN 309, Technická 8, Plzeň (budova FAV)**

Přednáška je pořádána v rámci semináře Centra počítačové grafiky a vizualizace