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**UNIVERSITÄT
BERN**

Digital 3D Geometry Processing
Exercise 13 - Processing of Scanned Model

Handout date: 28.05.2019

Submission deadline: 04.06.2019, 13:00 h

Goal

The goal of this homework is to deepen your understanding of the geometry processing algorithms you have implemented so far by running experiments on your own scanned models. This will also give you an opportunity to review the covered material in preparation for the final exam.

Geometry Processing Operations

For each of the processing tasks listed below we expect screenshots of your processed model under a few different parameter settings (if applicable) and a short text describing in general what are the advantages of each specific method and what are possible shortcomings. If possible, illustrate any issues or artifacts you experience on your own data set with screenshots. Provide short explanations for why these issues occur. Formulate your own thoughts on how the problems could potentially be alleviated.

- Curvature Estimation (mean and Gaussian)

- Poisson Reconstruction

- Smoothing (explicit and implicit)

- Feature Enhancement

- Remeshing

- Parameterization (if necessary, create a suitable boundary)

- Deformation