

Institut für Geometrie

FoSP-Kolloquium

Freitag 10.12.2010, 14:30 (Kaffee) 15:00 (Vortrag)

Hörsaal BE01, Steyergasse 30

Analysis and Manipulation of 3D Geometry

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Easy acquisition techniques and commonly available modeling tools have resulted in large collections of 3D polygonal models, digitally acquired from physical objects or modeled from scratch. Such low-level polygonal representations, however, do not make specific the characteristics and invariants of the underlying objects.

In this talk, we will discuss shape analysis strategies, specially for detecting object symmetries and arrangements. We use various priors to help recover meaningful high level information from incomplete or noisy data. We will discuss relations to statistical techniques, and the general question of establishing correspondence across allowable ranges of deformations. When successful, this allows us to create powerful shape representations that are easy and intuitive to handle.

We will demonstrate how such high-level shape invariants, extracted in the analysis phase, can be readily used in a range of applications including shape completion, smart geometry editing, motion visualization, shape abstraction.

For more details and information about collaborators, please visit <http://graphics.stanford.edu/~niloy/research/index.html>.

