

# Efficient Processing of Large 3D Meshes

(Invited Talk)

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## Abstract

*Due to their simplicity triangle meshes are often used to represent geometric surfaces. Their main drawback is the large number of triangles that are required to represent a smooth surface. This problem has been addressed by a large number of mesh simplification algorithms which reduce the number of triangles and approximate the initial mesh. Hierarchical triangle mesh representations provide access to a triangle mesh at a desired resolution, without omitting any information. In this talk we present an infrastructure for discrete geometry processing, including algorithms for 3D reconstruction, curvature computation, reverse engineering, mesh reduction, interactive multiresolution modeling and progressive transmission of arbitrary unstructured triangle meshes.*