Massively Parallel Geometry Processing

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**Abstract**

Traditional geometry processing is almost always based on sequential algorithms and corresponding data structures for neighbourhood queries. However, if one considers the parallel processing of polygon meshes, it quickly becomes clear that some of the techniques of traditional algorithms have to be questioned.

In this talk, the problems and possibilities of transferring sequential polygon mesh algorithms and data structures to parallel computing architectures will be examined. The advantages and challenges of parallel processing will be discussed using the example of compression, generation and simplification of triangle meshes.

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