

ISOGOMETRIC ANALYSIS AND SUBDIVISION SURFACES

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Subdivision surfaces [4, 3] play an important role in modelling and animation. Their popularity is mostly due to their ability to represent smooth surfaces with arbitrary manifold topology. Since subdivision surfaces produce water-tight models without any need for trimming or stitching, it has been recognised that these surfaces can be conveniently used to represent thin shells in finite element methods [1].

In this talk we will focus on the prospects of subdivision surfaces in the context of isogeometric analysis [2] with emphasis on numerical integration, conversion of trimmed NURBS models into untrimmed subdivision surfaces, and the integration of subdivision surfaces into analysis and simulation in general.

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