

Berliner Colloquium für wissenschaftliche Visualisierung

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Splines on Meshes with Hanging Vertices

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Zuse-Institut Berlin (ZIB), Takustraße 7, 14195 Berlin
Hörsaal (Rundbau, Erdgeschoss)

A constructive theory is developed for polynomial spline spaces defined on mixed meshes consisting of triangles and rectangles.

These meshes include triangulations with hanging vertices as well as T-meshes. Such meshes are useful in both CAGD and the FEM method. In addition to dimension formulae, explicit basis functions are constructed, and their support and stability properties are discussed.

The approximation power of the spaces is also treated.

