Virtual element methods on non-planar polygons

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The virtual element method (VEM) was devised as an extension of the finite element method for meshes with polygonal or polyhedral cells of coinciding geometric and topological dimension. It can likewise be used for surface meshes embedded in 3D with planar polygons. In this talk, we present various approaches to extend the VEM to non-planar polygonal meshes and discuss their advantages and shortcomings.

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