

Trimming in isogeometric analysis : an unfitted approach

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During this talk, I will present recent results for numerical methods based on the use of splines as main tool for representing both geometric models and unknowns, in the so called isogeometric analysis framework.

As often happen in geometric modelling, geometries are described implicitly as the result of boolean operations between spline/NURBS or Bézier patches. This definition strategy is often called trimming in geometric modelling.

The computational domain and the unknowns are then described via splines or NURBS living on trimmed geometries, i.e., on meshes that are unfitted to the geometry itself. We will describe our numerical approach to solve PDEs on such trimmed geometries, within the isogeometric paradigm.